Total Quality Management in Education

Abstract
Many institutions implementing Total Quality Management have located benchmarking as a strategy to enhance performance. This may not always work, however, if the scale established through benchmarking is perceived by the institution’s employees as unattainable. By setting goals too high, motivating change attempts in which efforts toward excellence are not sustained and goals directed behavior may be extinguished. In such cases, a strategy of shaping is necessary. Finally, shaping takes the form of setting attainable subgoals toward a benchmarked first goal resulting in incremental performance gains. As small gains are made, indifference toward the institution’s ability to improve and facilitate expectations of success. As such gains are made, indifference toward the institution’s ability to improve and facilitate expectations of success.

Total Quality Management (TQM), the current private-industry remedy for organizational ills, has been adopted in many educational institutions as a "magic bullet" for enhancing the institution’s accomplishments in such areas as employee relations, operating procedures, student satisfaction, and financial/budgetary performance (American Association of School Administrators, 1992; Schensker & Wilson, 1993).

An all-out commitment to quality is anything but simple. It requires schools to uproot entrenched habits and operational methods and virtually start over (Briscoe, 1992; Frase, 1994). One practice widely used in TQM is benchmarking. Xerox Corporation popularized benchmarking in the early 1980s, and the practice has attracted an increasing number of advocates in the last 15 years with many books providing recipes for its implementation (e.g., American Productivity & Quality Center, 1993). As originally defined by Xerox, benchmarking is the continuous process of measuring one’s own products, services, and practices against the world’s best and toughest competition in order to identify areas for improvement (Feed, 1993). Benchmarking has been recommended as a means of setting a target goal for organizational performance and "leads to profitable businesses that meet customer needs and have a competitive advantage" (Camp, 1989, p. 3).

Within an educational context, a number of authors have recommended benchmarking (Tiddley & Musser, 1991; Jurwok, 1993; Lush, 1993; Shaffer & Cotte, 1992). For example, Cornesky (1993) stated:

To create a 'total quality classroom,' it's crucial for you to benchmark your class with a 'world class' classroom. Take the best of several classrooms and capitalize on the strengths of each to make significant improvements in your classroom. Benchmarking against the very best will help you realize the potential for students as well as the challenges you and your students must face (p. 81).

Yet, it is seldom pointed out that no single formula works for everyone. In fact, simply playing "copycat," as benchmarking suggests in trying to apply the actions of world-class quality leaders such as Xerox, may be a waste of time and money. That is one insight uncovered by the International Quality Study, a two-year research project by Ernst & Young and the America Quality Foundation (1992). That study examined 455 management practices in 580 organizations in four industries on three continents (North America, Europe, and Asia).
Perhaps the major finding of the International Quality Study was that benchmarking produced positive results or bottom-line variables only in the best-performing companies. Companies rated medium- or low-performing demonstrated no improvement. The study showed that, "In fact, low performers who benchmark their marketing and sales systems can actually expect their performance to suffer" (Ents & Young, & the American Quality Foundation, 1992, p. 16).

In summary, benchmarking may facilitate school or classroom performance but this finding is not universal. Benchmarking can be effective when results in moderately difficult goals for the 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 obtain (Reger, Gustafson, Deldarke, & Maline, 1994). Hence, 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 International Quality Study (Ents & Young, & American Quality foundation, 1992) obtained these results. The best-performing organizations probably found the benchmarked levels of performance to be attainable. The gap between their current performance and their benchmarked goal was seen as challenging, but obtainable (Higgs, 1989). This difference may have helped to redefine employees' beliefs about the lower limits of achievable performance and provided more ambitious views of ideal organizational performance. Benchmarking also may have increased members to admit that their current beliefs about what is possible regarding organizational performance were inaccurate (Munroe-Faure & Macroe-Faure, 1992).

Conversely, many of the medium- and low-performers may have been overwhelmed by the significant discrepancy between their performance and that of the benchmark, resulting in the goal being viewed as impossible. A large body of research has demonstrated that impossible goals do not lead to performance enhancement (Locke & Latham, 1980).

It seems that the optimum situation for change is when the difference between current and ideal is large enough to create the stress necessary to motivate change (Hull, Huff, & Thomaz, 1992), but not so great that the goal is perceived as unreachable (Osgood & Tannenbaum, 1955). Asking for quantum leaps in performance, then, will only discourage the performer and displease the administrator and the institution making the requests.

Shaping

From a practical standpoint, what then can management do to help ensure that benchmarking will be an effective strategy in increasing institutional performance while minimizing its potentially negative impact? The answer lies in "shaping," a behavior change technique that promotes gradual improvement from a known, initial behavior to the desired goal (Grant & Ems, 1994). In shaping, reinforcement or reward is dependent on behaviors that are increasingly similar to the terminal or goal response, i.e., the benchmark. The key idea in shaping is to encourage gradual approximations to the desired goal. Shaping also has certain features of the children's game of "hot and cold" (Morgan, 1974). In general, the reinforcing consequence, saying "honor," occurs only when movement is closer to the object than previous movements. In this way, only those 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. Each successive step forward is rewarded. Most complex organizational behavior begins with a single step and successively builds upon it. Hill (1963) described how relatively simple behavior eventually may be shaped into more complex organizational behavior, 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. It is also necessary 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 organizational example of how shaping has been used successfully in a university involves a management instructor who wished to shape public speaking behaviors in administrators who feared speaking before groups. Although the students experienced much discomfort reading a prepared speech to others, they had much less trouble reading lists of unrelated words. Therefore, list reading was selected as the initial step in the shaping process and the instructor provided abundant praise when each supervisor successfully mastered the reading. Subsequent steps included reading a written paragraph to the class: "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 and so forth toward the desired goal of giving a 15-minute extemporaneous speech before the class. After each step in the process, the instructor complimented the listener and offered praise for the presenter from other classmates. As this example shows, administration must bemerisible in shaping a starting behavior and imaginative about how to shape 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, previous progress
may be "lost" and that behavior 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). Thus, shaping takes the form of setting subgoals toward the specified final outcome. In shaping new goal attainment, 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.

Attainability is clearly the key feature of shaping. Having many smaller subgoals instead of one large goal is not the distinguishing feature. Instead, the attainability of the subgoals and the reinforcement for reaching each is what defines shaping. For example, if people are performing at 75% percent efficiency and you set goals at 95 percent, 96 percent, and 97 percent, 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 positively reinforce even small improvement. Most of us are not highly skilled at identifying small improvements 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 previously believed to be unattainable now becomes reachable through a series of small incremental changes (Quinn, 1988).

A shaping strategy for administrators

To implement an effective shaping strategy, several specific steps should be followed (Luthans & Kreitner, 1979):

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 individual organizational members are capable of meeting the skill or ability requirements for the goal established. Train them in appropriate behaviors if needed.
4) Select potentially effective positive reinforcers on the basis of the institution’s history & members’ perceptions.
5) Make all positive reinforcement contingent upon successfully 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 in displayed, it must be continually monitored, managed, and reinforced.

To obtain a better understanding of the shaping process, it would be helpful to expand the steps listed above.

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

This initial step in the shaping process is similar to Management by Objectives (MBO, Drucker, 1954). It can be simply defined as setting behavioral objectives and appraising performance results. One thing that all MBO experts tend to agree upon is the need for specific, measurable objectives. The close parallel 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 of the shaping process is to divide complex behavior into sequences of observable behavioral events which observers could agree had occurred or not. We already have discussed the stepwise 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 institution needs to remain focused on each step before proceeding to the next.

What action should be taken in the event that the organization's behavior begins to deteriorate? Unfortunately, no hard and fast rules exist. In general, however, 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 teaching and instruction.

First, observe the institution’s behavior closely. If progress is consistent and satisfactory, we can assume that the step size and duration of remaining at each step is appropriate. If, on the other hand, progress begins to
level off or falter then the steps should be reexamined. If such goal levels are increased too rapidly, failure to earn reinforcement will cause progression to decline. The situation should be arranged so individuals are able to succeed much more often than they fail. The best mistake to make in shaping is to set the goals too low; if the goal is low, it increases the probability of success. If the goal is reached and success is celebrated, the motivation to do even more the next time is usually increased.

**Skill requirements.** The third step emphasizes that the administrator using a shaping strategy must consider all technical skill requirements which, if not mastered by the employee, could block the attainment of the target behavior. Managers are cautioned against using labels like "lazy," "lacks 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 help change the performance, it also produces blame with all the attendant problems associated with that process. The performer is criticized for being unmotivated, having a bad attitude, needing too much attention, or not having enough drive. Such labels put the individuals on the defensive and interfere with their cooperation with any change program. When an administrator 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. Skill deficits, conversely, can be overcome.

Select positive reinforcers. Just as the target behavior and its component parts must be identified, appropriate positive reinforcers must be specified as well. Analyzing individual histories of reinforcement and self-report instruments can be utilized. The critical point is to make sure that the most potentially powerful positive consequences are part of the shaping process. What is reinforcing for the supervisor may not be for the employee.

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 first positively reinforced and later not reinforced as the next behavior closer to the benchmark occurs. The new behavior is rewarded, instead. Hence, only the newest link or the latest behavior, closest to the target behavior is reinforced.

Celebrate results. Remember, you set goals in relation to present performance is critical, but an equally important consideration is the celebration of goal attainment. Acclaim makes reaching goals motivating. David McClelland, a Harvard psychologist, has studied achievement for decades (McClelland, 1961). His research determined that highest achievers in our society set moderate goals. Being high achievers probably means that these persons have high aims, but they set moderate goals to manage their day to day performance successfully. Employees are no different. They can operate at their best nearly every day. When we have to do is help them reach that benchmark, and do it one step at a time. "Goals that are celebrated are records waiting to be broken" (Daniels, 1994, p.124).

The foregoing six-step shaping strategy permits an administrator 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. Administrators using benchmarking strategies to set goals and improve institutional performance must be aware that the procedure can be helpful only when the goals established are perceived by faculty and staff as possible and attainable. Benchmarking that results in too great a discrepancy between the organization's current performance and its future benchmarked performance can backfire and lead to lower achievement.

The problem for educators is not that business models and techniques, such as TQM and benchmarking, respectively, are not appropriate for education as suggested by some individuals (see Kohn, 1993a, 1993b), but that occasionally the organizational models conceived in industry are somewhat oversimplified and this has direct consequences for other areas of application, including the public sector and education.

References
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