CARFAX

# Higher education and total quality management

JAMES V. KOCH[1] & JAMES L. FISHER[2]
[1]*President, Old Dominion University, Norfolk, VA 23508-1720, USA &* [2]*President, James L. Fisher, Ltd, Baltimore, MD 21230, USA*

**Abstract**  *Those who advocate the use of total quality management (TQM) in higher education issue strong promises that it will unite campuses, increase employee satisfaction and improve nearly any process that it touches. Unfortunately, the empirical evidence in favor of TQM in universities is mostly anecdotal and surprisingly sparse. The evidence that does exist relates primarily to administrative tasks such as bill collection, check writing, financial aid and registration. But, the truly significant problems facing higher education today relate to the nature of the curriculum, uses of faculty time, how to restrain cost increases, distance learning and the use of technology, cooperative relationships with business, and governance and leadership arrangements. TQM has precious little to say about these things and even erects subtle roadblocks to change in these areas because of its strong emphasis upon meetings, consensus and process over product. Further, it turns out to be a costly approach to decision-making because it is so time-intensive. Thus, while TQM appears to have been quite helpful to some business firms, it is only marginally useful in the rapidly changing, indeed revolutionary, environment that universities inhabit today.*

## Introduction

Good ideas are often oversold, and then the world settles down to reality (Main, 1994).

All decisions ... are inherently qualitative (White, 1974).

Marc Antony, in his famed oration at Caesar's funeral, pithily observed that "I come to bury Caesar, not to praise him" (Shakespeare, 1979). We find ourselves in a similar situation—we do not intend to praise the influence of total quality management (TQM) in higher education, even in this journal, but rather to point out its frequent lack of relevance to the most critical problems facing universities today. While our intent is not necessarily funereal, we will issue a set of caveats concerning the use of TQM by universities that we believe should cause readers to question its applicability within academe and diminish the sometimes exaggerated claims made on its behalf.

We realize that our message will not appeal immediately to most of the readers of this journal. None the less, metaphorically speaking, we may fulfill the role of the castor oil that determined mothers traditionally forced their children to drink; it does not taste good, but it is good for your health. Our hope is that these observations will spark reconsideration of TQM's relevance to higher education and, in the process, sharpen its usefulness to universities.

## The nature of the problem

Who can argue with a management system that promises increased customer satisfaction through quality services achieved by customer focus, continuous improvement and employee involvement? TQM makes those promises, and therefore it is not startling that it has become somewhat the rage in higher education. Burkhalter (1996) reported that 160 universities in the US were actively involved in TQM and 50% of universities had established the equivalent of quality councils.

TQM's advocates typically issue strong promises that TQM will unite campuses, increase employee satisfaction and improve nearly any process that it touches. Unfortunately, as we shall see, the empirical evidence in favor of TQM in universities is essentially anecdotal and surprisingly sparse, particularly in view of its vogue today. Consider the paper "Quality in higher education: a survey", by Owlia and Aspinwall (1996). This survey does not contain any rigorous empirical evidence on the effects of TQM, only opinions and process indicators. Nor do succeeding articles by Divoky and Taylor (1996), Goh (1996), Billing (1996), Schargel (1996), or Morris and Haigh (1996) cite hard empirical evidence or cost–benefit studies, especially those that relate to learning and academic achievement at the university level. For, as Owlia and Aspinwall (1996) point out, "most of what has been done is related to the administrative tasks".

The problem with TQM is not the goal—increased efficiency and greater employee and customer satisfaction—but the process, a process already being abandoned by some of its earliest advocates in industry. Witness the *Wall Street Journal* asserting on its front page that "Many Companies Try Management Fads, Only to See Them Flop" (Bleakley, 1993), or Professor Daniel Jones of the Cardiff Business School in Wales observing in *Fortune* that "Many . . . companies . . . have actually been through these different movements—total quality management, business process reengineering—and they didn't work" (Jones, 1996). Any university president who aspires to real change or who has serious concerns about costs should approach TQM cautiously. The number of institutions that have actually implemented TQM successfully in any meaningful way is comparatively small, and the gains generated in these institutions often appear to have been overshadowed by the time and effort expended. (TQM advocates frequently ignore the opportunity cost of participants' time.) Cost–benefit analyses of TQM campaigns are almost universally lacking.

TQM and its close relatives such as continuous quality improvement (CQI), however, are well worth studying in an academic setting, if for no other reason than they are so frequently cited as solutions to many of higher education's problems. Undeniably, TQM is a concept with some momentum. To wit: private industry has been outspoken in urging campuses to adopt TQM; TQM is viewed by many as a solution to campus conflicts and financial problems; national higher education associations have endorsed its application; and foundation, endowment, tax and student fee dollars have been utilized to fund its use.

The major disciples of TQM, such as Juran, Crosby and Iami, are featured speakers and writers for the conventional mainstream in higher education. National higher education organizations such as the American Association for Higher Education distribute TQM materials free and sponsor societies such as the Academic Quality Consortium. Expressions such as "culture of quality", "quality is everybody's job" and "teamwork" easily fit within the accepted jargon of higher education and have become bywords of university conversations. The implication is that TQM, applied conscientiously, can solve nearly any campus problem.

The inroads of TQM have been particularly significant in the US in tax-supported institutions such as Oregon State, Wisconsin-Madison, Colorado State, Maryland, Minnesota, Clemson and Georgia Tech, but also now include wealthier private institutions such as Harvard, Penn, Carnegie Mellon, Lehigh, Chicago and Miami. In the UK, a variety of

institutions, including Birmingham and Westminster, have climbed aboard the TQM wagon. It is accurate to state that TQM or one of its hybrids is being implemented or considered in some form by hundreds of institutions today. While TQM is not without its achievements, we fear that the piper is playing.

## Some background

When, in the 1970s and 1980s, many firms experienced economic difficulties and found themselves becoming less competitive with a variety of foreign competitors (most visibly, automobile and consumer electronics producers from Japan), many of them turned for advice to Deming, Juran and other disciples of the "quality movement". Undeniably, many firms had lost the international competitive edge they enjoyed in the 1950s, and all too frequently their operations were characterized by some combination of bloated costs, slothful product development, a certain insensitivity to (and even disdain for) the desires of customers, nonsensical labor contracts and rules, declining product quality, administrative proliferation, and sclerotic leadership that exhibited a striking lack of vigor and vision. The almost inevitable result was declining market shares, sustained losses, unemployment, and massive soul-searching by firms that ranged from General Motors and Harley Davidson to Xerox and Motorola. The "de-industrialization of the West" was said to be imminent.

Astute readers will recognize that only minor changes in this rhetoric are needed to describe the higher education world of the 1980s and 1990s. Is it not true in the US that college tuition and fee charges have increased consistently more rapidly than the rate of inflation for almost two decades? (Arenson, 1996). Are not universities in most of the developed world frequently described by their critics as being bloated with administrative fat, bedeviled by archaic work rules such as faculty tenure, insensitive to student consumers, unresponsive to changing markets, living in a world of out of control costs, and hampered by timid and unimaginative leaders? Whether or not one agrees with these characterizations, they are often made and public opinion polls indicate that the citizenry largely believes them to be true (Brown, 1995).

In such an environment, TQM is a 'natural' for higher education. It is a process-oriented, egalitarian approach to increasing productivity, decreasing costs and improving quality. It stresses teamwork, finding better ways to do things, sharing responsibility and dramatically improving institutional cultures. The essence of TQM is group activity and the 'democratic' sharing of responsibility among managers and workers alike, including those who work in very different aspects of production. All of these notions fall well within the value set of many modern universities and their faculties. Indeed, as the leadership of many of the developed world's universities has gradually been assumed by individuals whose values where honed decades earlier, an increasing proportion of faculty members and administrators subscribe to Lackey and Pugh's almost romantic notion that "Today, the 60's generation's 'power to the people' mantra is realized through TQM; more power for the employees means more value for the customer" (Lackey & Pugh, 1994).

Many of the precepts of TQM are quite attractive to the denizens of higher education. Even anti-authority figures among the faculty who ordinarily bridle at notions such as 'measurement' that are central to TQM none the less find its egalitarian, democratic, 'violate the hierarchy, share the power' assumptions attractive. As a consequence, TQM has never spawned the instinctive opposition from most academics that once greeted other management panaceas such as strategic planning and management by objective.

Yet, it is precisely this broad acceptability and lack of opposition to TQM that should cause alarm bells to ring. Any organizational system that does not acknowledge painful

choice-making, which tends to disguise or deny opportunity costs, and fails to recognize the loss of alternatives that flow from decisions, is in the last analysis not a 'real' system. None the less, the perception that gains can be realized without sacrifice is at the very heart of TQM. Participants consistently are led to believe that all they have to do is to 'do things differently', that is, to reform their procedures and processes, and significant improvements will follow. No one need give up anything (except perhaps a bit of authority and ego involvement) in order to attain the promised land. Thus, TQM threatens few in higher education and it should not astonish us that it has proven to be popular.

### TQM in higher education: A closer look

Many institutions of higher education have committed themselves to TQM programmes. Thus far, however, the results are somewhat pedestrian, and include reformation of campus copy centers, better bill collection and check writing, more efficient handling of admissions and financial aid applications, and more productive scheduling of physical plant jobs. Valuable recent summaries of these achievements may be found in American Association for Higher Education (1993, 1994) and in this journal's April 1996 issue.

Of course, one should not sneer at such non-academic improvements, for they have the potential to release badly needed resources for other important tasks within the institution, and probably result in increased student satisfaction. None the less, there are three salient observations to make about these TQM improvements. First, the magnitude of resources (especially employee time, which most campuses ignore) required to generate these advances has typically been large. Second, these advances might well have been obtained by other methods quite unconnected to TQM. Third, there is a noticeable absence of things academic in these beneficent developments. We believe that the most significant long-term internal problems facing US higher education today relate to academic philosophy, standards and practices, not to the operation of copy centers and the collection of bills. Hence, the non-academic focus of TQM dramatically reduces its significance and impact in the world of higher education.

Very few TQM-oriented campuses have utilized the process to change the fundamental nature of their academic life or curriculum. An exception to that rule is Babson College, which in 1993 invited a wide range of its constituents, including members of the business community, to a 3-day session designed to result in an overhaul of its curriculum. Student and business sector feedback was used extensively to guide this process. Other campuses, public and private, have attempted to implement the '1-minute paper' notion of K. Patricia Cross that asks students, at the end of each class, to write a 1-minute paper describing the core ideas that they derived from that day's classroom lecture or activities. This exercise is then used as a means to determine what students actually learn and what 'works'.

Lozier and Teeter (1996) cite the use of TQM methods in an introductory statistics class at Samford University in the US that resulted in higher student satisfaction. They also describe the use of TQM to improve homework completion in a statistics class at the University of Kansas, with the end result that student performance improved. Other examples reported by Lozier and Teeter (at Drexel, Samford, Belmont, Penn State and Georgia Tech) do not appear to revolve around the essence of TQM, but rather to involve simple teaching/ learning innovations such as collaborative group learning and work groups that can be, and have been, implemented in any regime, TQM or otherwise. Still other campuses have utilized TQM-type methods to develop improved assessment processes, or to benchmark (compare) certain of their academic practices with those of 'outstanding' institutions.

Notwithstanding these and other useful examples, it is manifest that Owlia and Aspinwall

(1996) were on the mark when they observed that the focus of TQM has been upon the non-academic side of institutions. Fundamental issues such as the nature of the curriculum and the allocation of faculty time have been extremely resistant to TQM campaigns, not the least because faculties usually cast a jaundiced eye on any development that threatens to loosen their grip over course and degree requirements, or their ability to allocate their own time. When many faculties express their pleasure with the advent of TQM, it is not because they accept the notion that it will change the curricula or majors, inspire new distance learning paradigms, result in new partnerships with business and government, or fundamentally alter how they allocate their time, say, between research and teaching. Reform of general education requirements or increased teaching loads are not part of the implicit understanding of what TQM is all about. Instead, the often sympathetic view that faculties hold of TQM reflects the notion that it will redistribute power away from administrators and towards them.

When some reputable observers (Ford & Sheridan, 1992; Rozenzweig, 1992 (interview with the author, Koch); Trachtenberg, 1992 (interview with the author, Koch) scan the higher education environment today, they conclude that "faculties are the problem". As one wag has put it, faculties may vote for Karl Marx in the next election, but are profoundly conservative in their approach to their own bailiwick. Faculty comfort is usually a function of long familiar academic departments, highly specialized courses, credit hours, conventional lectures and academic terms such as semesters. Also, they elevate employment security mechanisms such as faculty or public servant tenure (*beamte* status in Germany) to almost mystical status, with the end result that significant change is difficult on most campuses. Campus leadership that questions these sacred cows is subject to attack, strikes and no confidence votes. Only the most optimistic individuals can believe that TQM has, or will, affect these fundamental power relationships in any meaningful fashion. Unfortunately, these relationships are at the very heart of the problems facing higher education in the developed countries today, and that is why TQM has proven to be so weak an instrument when real change is the order of the day.

None the less, industry generally has cast an approving eye on the advent of TQM in higher education. IBM, for example, has developed the "IBM-TQM Partnership With Colleges and Universities" that involves eight diverse institutions of higher education. While the object is to instill TQM in every aspect of the lives of these institutions, there is no evidence that IBM-related institutions have used TQM to address the fundamental challenges noted earlier.

The truth is that higher education institutions have excelled at announcing TQM campaigns, but typically have been incapable of implementing them fully or reaping significant benefits. Entin (1994) surveyed 10 Boston area institutions of higher education that committed themselves to TQM, often with great fanfare, early in the 1990s. By 1994, five of the 10 institutions had stopped, delayed, or were not implementing their TQM projects. Four more were carrying out TQM to a limited extent. Only one (Babson) was systematically continuing to attempt to implement TQM. And, of the group, only Babson appeared to be using TQM-based concepts in an attempt to engineer fundamental changes in its curriculum and academic life. Entin concluded that "This report raises serious questions about the future of TQM (or CQI) in higher education".

## TQM, budget cuts and costs

During periods of economic decline, budget reduction, and staff and programme cutbacks in industry, TQM environments often fail and result in conflict with management and within teams. Team values are replaced by feelings of betrayal, political and coercive strategies, and

sabotaging behavior. Because TQM traditionally does not place any emphasis on competition or individual accountability, there is no one to take responsibility as an organization flounders. In such a system, no one is accountable (except, of course, the chief executive officer (CEO), who initiated the programme in the first place). The direct analog of this situation is the parlous status of the curriculum on most campuses today; because the faculty in a corporate sense holds the authority, no one individual is accountable, and therefore little of curricular consequence tends to be accomplished. But, under TQM, such inertia and soft thinking can generalize to the entire institution.

Analogously, what does TQM do to costs? In industry, even TQM's most enthusiastic advocates do not suggest that TQM will maintain or reduce costs; in fact, TQM is known for increasing costs. As Entin (1994) noted in his survey of 10 institutions that have attempted to implement TQM, "TQM is not a tool or approach designed to lower budget deficits". One of the authors recently has acted as a 'restructuring' consultant to several business firms and academic institutions. Those involved in TQM invariably reported to him that "if we only had some additional funds, we could really improve performance and quality". All too often, TQM turns out to be an elaborate, time-consuming technique for justifying additional expenditures and budget increases. Although higher education TQM enthusiasts say TQM will reduce costs, they seem invariably to counter this by saying that one should not expect such results for at least 5 years. Yet, in 5 years, an institution can easily be bankrupt! Does anyone who has responsibility for a payroll really think that TQM will seriously influence the major sources of cost increases in higher education (where approximately three-quarters of all expenditures are on personnel)?

**The case of Motorola: some lessons**

Corporations ranging from Toyota and Allied Signal to General Electric and DuPont have adopted some variant of TQM, and all report at least some success. However, the most often cited example of the apparently successful implementation of TQM is Motorola, the electronics manufacturing firm whose sales have been doubling every 5 years, and whose goal is 'six sigma quality'—fewer than 3.4 errors per million units of output. Each year, thousands of 'wannabes' flock to Motorola for seminars on TQM. Motorola, in fact, copes with this demand by running its own continuing education operation (and satisfies much of its own higher education needs) via its own, highly regarded 'Motorola University'.

While Motorola has recently encountered problems (Hardy, 1997), it must be classified as a successful corporation and it has made immense strides in improving the quality and reliability of its products. It appears that TQM has had something important to do with this. Further, it appears that some of Motorola's experience is transferable to a variety of processes in higher education that bear some resemblance to Motorola's activities. Admissions and financial aid processes, physical plant activities, work and class scheduling, campus health center and motor pool operation, and food service and copy center operations are among university processes that appear to be susceptible to TQM methods. These are important activities—without which most universities could not operate—and their improvement would necessarily improve any university. Yet, as noted already, they are not the core activities of an institution of higher learning. Teaching, scholarly activity and related faculty service are the centerpiece of a modern university, for they underpin the *raison d'être* of a university, the search for truth. Hence, it is in this arena that higher education rises or falls, not in its motor pool.

To put it another way, a university may boast the most efficient financial aid office in the world, and operate the continent's best copy shop; however, if it does not teach its

students effectively, and its faculty is not scholars, and its faculty and staff are not 'doing' their disciplines externally, then all is for naught. This university is a failure. Ultimately, that is why TQM is a failure on campuses: it simply does not address the core issues and problems of higher education often enough or effectively enough. Motorola's experience, while valuable, is not directly relevant to the most essential problems that higher education faces today.

There is a most important lesson, however, that higher education should take from the Motorola example. It is not TQM. Instead, it is that Motorola has dispensed with universities insofar as most of its continuing education and retraining needs are concerned. That development should terrify conventional faculty and administrators.

## How has TQM worked? A summary of the evidence

At this point, industry is the only place one can go to assess the long-term value of TQM because its impact upon higher education is still largely unknown. An estimated 80% of *Fortune* Magazine's largest 500 industrial firms in the US at one time or another have announced that they were initiating some type of a TQM campaign. However, as Graves (1994) has reported, a study performed by the consulting firm Bain and Company found that there is no correlation between the use of a management tool and a firm's financial performance. Main, the author of *Quality Wars: The Triumphs and Defeats of American Business*, observes astutely that "good ideas are often oversold, and then the world settles down to reality" (Main, 1994). Hence, there is growing recognition, both inside and outside higher education, that TQM is a nostrum that requires a major commitment of time and resources by an organization, but is likely to produce only modest results. Indeed, one perceptive college president recently suggested to one of the authors that TQM is a game that can be played only by those institutions that can afford to lose.

Recent reports from Japan show both that the country is encountering economic difficulties and that TQM has little relevance to this situation (Bremner & Takahashi, 1996). Similarly, many US companies are discouraged by what they once saw as a cure-all. Witness Douglas Aircraft, Florida Power and Light, and Alcoa, all of which have backed away from TQM. Even the Wallace Company, a winner of the Malcolm Baldridge National Quality Award, has abandoned TQM. A survey conducted by Roth and Strong of Lexington, Massachusetts, graded TQM's effects upon improving market share, reducing costs and making customers happy; most TQM companies received 'D' and 'F' grades. In an Arthur Little survey of 500 TQM companies, only 36% reported that TQM was having a significant impact on their ability to outdistance competitors. (See Fisher and Koch (1996) for a summary of this evidence.) A recent empirical analysis of the best (and worst) managed US corporations found TQM did not have any impact among CEOs and financial analysts (Koch & Cebula, 1994).

In many TQM companies, executives now complain of excessive paperwork, time-consuming meetings and a lack of accountability. While workers often find the egalitarian 'we're all equal' approach of TQM attractive, they complain in turn that the TQM emphasis on charts, graphs and reports takes too much time away from production and service. The fact that TQM has been adopted by government agencies and by paralyzed and bureaucratized universities and colleges is scarcely reassuring.

Experience suggests that any concept such as TQM that is embraced so suddenly by the status quo should be questioned. A secret of TQM's popularity is that it does not threaten any of major academic power blocs, including presidents, deans and conscientious bureaucrats. This is because TQM seldom addresses the really pressing issues facing higher education today. These include the nature of the curriculum, academic standards, the access

of students (especially 'non-traditional') to higher education, the uses of technology, how to increase learning 'efficiency', the appropriate role of research and scholarly activity, the uses of faculty time, how to restrain cost increases, the validity of economic development activities and, indeed, the very purpose of a university in the twenty-first century.

To read TQM gurus, the problems of higher education center upon faulty processes, not upon values and people. Therefore, there is little emphasis on individual performance, accountability, costs, or leadership. The notion is that if the process is continually refined, then the organization will prosper, and the end result will be a relatively painless, non-competitive process. W. Edwards Deming, the grand TQM champion, took this to the extreme in one arena by unabashedly declaring that any kind of competition in an organization is bad: he even refused to grade students in his classes!

Yes, TQM is attractive in many areas, but it is surely as potentially disappointing as it is promising. For too many campuses, we fear, this new approach represents a quick fix, a universally acceptable solution; in reality, it may only be the most recent attractive way to forestall the conflict that inevitably comes from difficult decision-making, individual accountability and change.

### The real challenges in higher education and TQM's role

Only a brief review of the literature of higher education is necessary to reveal that the major problems facing universities today relate to curriculum, experiential learning, funding, the allocation of faculty time, teaching versus research, faculty status and tenure, student access, distance learning and the use of technology, the pricing of higher education, restraining cost increases, relationships with business and government, governance and leadership arrangements, faculty compensation and intercollegiate athletics. Those who doubt these themes need only read their newspaper, watch their television, or listen to their neighbors and legislative representatives (see Breneman, 1995; Fisher & Koch, 1996; Immerwahr & Harvey, 1995; Mahtesian, 1995; Massy, 1996).

Virtually no one disputes that these are the real, pressing problems facing higher education in most developed countries today; and nearly all observers agree that their solution requires significant, even revolutionary, changes.

What can TQM do about all of this? Unfortunately, TQM has little to contribute to the solution of these fundamental questions of value, direction and resource allocation. Again, it is evident that TQM can be of assistance in improving administrative service areas (registration, mail service, maintenance, billing, etc.), and that it has been used to enhance certain quasi-academic areas such as library services. This said, TQM offers little that smacks of amputation, risk-taking, or dramatic change. Strong, visionary leadership, painful choices and dramatic reallocations of time and resources are not part of the language of TQM, yet it appears that this is what is needed. TQM emphasizes teamwork and getting along, making process and consensus more important than results—even though almost revolutionary change may be in order. TQM makes minor changes in process a virtual certainty, but subtly erects roadblocks to major change.

TQM encourages colleges and universities to collect data that enable them to measure their progress in key areas—against themselves and against others. As a consequence, TQM campuses sometimes collect data describing miscellaneous phenomena such as the number of books checked out per student, square feet cleaned per day by janitorial staff, financial aid transactions completed per staff member and credit hours generated per faculty member. To be sure, accurate, timely and relevant data can be of great assistance in informing decision-making. More data ordinarily are preferable to fewer data. The administrator who does not

utilize appropriate, accurate data to inform decision-making is partially blind and his/her management will suffer. However, a data set is neither a value system nor a vision. Given adequate data, one must still decide what the data mean and what to do with them. In the last analysis, TQM can do little to improve an administrator who lacks values, purpose and a compelling vision. For example, of what long-term value to society is more efficient campus bill collection if academic standards are deficient, faculty contact with students is minimal and administrative ranks are bloated?

Realistically, TQM in higher education appears to be a process for doing what we do better; but what we often need is to do something different. Honest-to-goodness, real change (an actual change in paradigm) usually has no constituency. For understandable but usually unfortunate reasons, people like the status quo. What is required is inspirational, value-driven leadership that is supported by appropriate governance.

## Final thoughts

By our reading, most TQM programmes today in either industry or higher education are a far cry from the original pre-depression idea of Walter Shewhart, who proposed statistical controls to ensure quality in telephone manufacturing, or of Deming himself when he first sold the concept in Japan in the 1950s. Today, these extraordinarily original ideas seem to have degenerated into a rather dreamy listing of Peters- and Waterman-like promises. Simply put, the promise of TQM has never been matched by results. Today, the TQM movement is in need of TQM!

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