



REVIEW ARTICLE

TOTAL QUALITY MANAGEMENT IN EDUCATION

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ABSTRACT

After Second World War the United States of America was forced to improve the production of Quality of goods and services. Total Quality Management (TQM) concept was developed by an American W. EDWARDS DEMING. Still 1980s the Japanese only were concentrating in TQM concept where they dominated in world markets. There is a myth the use of TQM which is applicable only in Business and Industry where the production process are being made but the new concept of TQM is also applicable to Academics. Many educators strongly believe that the Deming concept provides guiding principles to make reform in educational system. Also Mr. John Joy Bonstingl, an educationalist outlines the TQM principles. Hence the authors of this paper strongly believe the TQM principles are most relevant to education.

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INTRODUCTION

In any organization when the term "Quality Management principle" first it must focus on its suppliers and customers. In a TQM organization, everyone is both a customer and supplier; this confusing concept emphasizes "the systematic nature of the work in which all are involved". In other words, teamwork and collaboration are essential. Traditionally, education has been prone to individual and departmental isolation. However, according to Bonstingl, this outdated practice no longer serves us: "When I close the classroom door, those Kids are mine!" is a notion too narrow to survive in a world in which teamwork and collaboration result in high quality benefits for the greatest number of people. The application of the first pillar of TQM in education emphasizes the synergistic relationship between the "suppliers" and "customers".

The concept of synergy suggests that performance and production is enhanced by pooling the talent and experience of individuals. In a classroom, teacher-student teams are the equivalent of industry's front-line workers. The product of their successful work together is the development of the student's capabilities, interests, and character. In one sense, the student is the teacher's customer, as the recipient of educational services provided for the student's growth and improvement. Viewed in this way, the teacher and the school are suppliers of effective learning tools, environments, and systems to the student, who is the school's primary customer. The school is responsible for providing for the long-term educational welfare of students by teaching them how to learn and communicate in high-quality ways, how to access quality in their own work and in that of others, and how to invest in their own lifelong and life-wide learning processes by maximizing

opportunities for growth in every aspect of daily life. In another sense, the student is also a worker, whose product is essentially his or her own continuous improvement and personal growth.

Continuous Improvement and Self Evaluation

The second pillar of TQM applied to education is the total dedication to continuous improvement, personally and collectively. Within a Total Quality school setting, administrators work collaboratively with their customers: teachers. The foundations of "Scientific Management" were fear, intimidation, and an adversarial approach to problem-solving. Today it is in our best interest to encourage everyone's potential by dedicating ourselves to the continual improvement of our own abilities and those of the people with whom we work and live. Total Quality is, essentially, a win-win approach which works to everyone's ultimate advantage. According to Deming, no human being should ever evaluate another human being. Therefore, TQM emphasizes self-improvement process. In addition, this principle also laminates to the focusing on students' strengths, individual learning styles, and different types of intelligences.

A System of Ongoing Process

The third pillar of TQM as applied in education is the recognition of the organization as a system and the work done within the organization must be seen as an ongoing process. The primary implication of this principle is that individual students and teachers are less to blame for failure than the system in which they work. Quality speaks to working on the system, which must be examined to identify and eliminate the flawed processes that allow its participants to fail. Since systems are made in the quality of those processes largely determine the quality of the resulting product. In the new paradigm of learning, continual improvement of learning outcomes replaces the outdated "teach and test" mode.

Leadership

The fourth TQM principle applied to education is that the success of TQM is the responsibility of top management. The school teachers must establish the context in which students can best achieve their potential through the continuous improvement that results from teachers and students working together. Teachers who emphasize content area literacy and principle-centered teaching provide the leadership, framework, and tools necessary for continuous improvement in the learning process. Evidences show same Business forms like American Express, Ford, IBM, Motorola, Procter & Gamble, and Xerox hired university Graduates who are

literate in TQM. They said in an open letter published in 1991 in the Harvard Business Review with bringing total quality to higher education. Contrary to instruction and research practices in the university. TQM is team-based. However, Faculty members, are notorious independents. So students are it's dog-eat-dog in the classroom. Also, TQM calls for cross-functional thinking, planning, and doing. Faculties and curricula are highly specialized and professors avidly protect their turf. We might add that universities are tradition-bound, whereas TQM trumps for continuous change. Infact, TQM initiatives are appearing here and there in academia. There are a few good reasons why this may continue, though perhaps fitfully. They have to do with opportunities to innovate and explore new instructional and research horizons, which have strong appeal for most academics. Business, economics, engineering and related tool disciplines (information systems and mathematics/statistics), plus other professional schools, are particularly affected by total quality management.

Business and Economics

Colleges of business and economics include specializations in operations management, marketing, business policy and strategy, management accounting, corporate finance, financial accounting and auditing, human resource management, organizational behavior, and economics. TQM offers differing challenges and attractions for each.

Operations Management

TQM affects nearly all of the operations management agenda. A primary focus on modeling for efficiency gives way under TQM to planning and doing for and with the customer. The customer outlook in turn, calls for major overhauls in the operations management approach to scheduling, equipment selection, facility layout, maintenance, inventory management, and quality assurance. Briefly, schedules, equipment, layout, and inventory management must be geared for quick reaction to customer needs, not just to efficiency and utilization and process control must replace breakdown maintenance and delayed inspection. Operations

Management professors have a special reason for heading the call of TQM. They had failed to stay abreast of an important operations management movement called Materials Requirement Planning (MRP) that emerged in industry in the 1970s. The MRP juggernaut had become OM's leading edge in the real world of manufacturing, but for a decade OM text books and journals said little or nothing about it. To catch up and stay caught up, OM professors, in droves, joined the

professional societies, where they could keep an eye on fast –changing developments. And they began publishing heavily in practitioner periodicals, which they fought to elevate to tenure-class status. Then, when TQM and related topics made their appearance, Operations Management faculties were not far behind marketing. In TQM thinking, the customer is the object. Which university specialty has charged of customers marketing? TQM concepts load easily into topic outlines in marketing courses and into marketing research hypotheses. In practice, marketers and salespeople have carried the burden of having to cover up for their organizations' defects, late completions, and other customer service failings. As TQM kicks in with continuous improvement quality, timeliness, and so on, the burden is lifted somewhat. Each improvement is marketable—in proposals, in advertising, in sales promotions. For example, Ford Motor Company's slogan, now a decade old is, "Quality Is Job One". Putting a more positive face on their function holds appeal for marketing professors and students as well as practicing marketers.

Business policy and strategy

Such important TQM-oriented topics as benchmarking, quality function deployment, and customer-centered strategic principles need an academic home. These topics seem general enough to find their way into instruction in several disciplines. However, they deal specifically with matters central to the business policy/strategy area: directing internal resources toward enhanced competitiveness and customer retention. To a certain extent, total quality becomes strategy—and perhaps should be taught that way.

Management accounting

TQM does not permit cost, efficiency, and resource use to remain as primary operational measures of its performance. Quality in all dimensions dominates. Because management accountants have been the guardians of performance measurement, the challenge of reinventing performance management is largely theirs. Thus, a decade ago leading management accounting professors. Notably Harvard professor Robert Kaplan, began arguing that performance should be measured in non-financial terms, including quality, inventory levels and deliverability. Although some academics in management accounting may not welcome the idea of non-momentary measures, most have been easily caught up in the excitement of activity-based costing(ABC). ABC arose because just-in-time (JIT) production—the quick—response component of TQM—throws conventional costing into a tailspin. The old costing

system favored filling stockrooms, even with wrong models and substandard quality, to absorb overhead costs. JIT, however, puts the damper on stockroom filling, and total quality shrinks the production of lesser-quality goods. Such improvements show up perversely as bad performance(negative cost variances) in monthly cost reports. So ABC comes to the rescue. If done right, ABC will assign less overhead cost (rework, scrap ,stock management, and so on) to products undergoing continuous improvement – especially in cycle time. A few management accounting professors are finding still another challenge to pursue: working out ways of putting the cost of quality into financial statements. I have raised questions on the wisdom of this(Schonberger 1994).

Corporate finance

A related area ripe for research is how to give quality, responsiveness, flexibility, and customer satisfaction their due in capital budgeting instead of relegating such factors to the last page of the capital expenditure proposal under the heading "Intangible".

Financial accounting and auditing

In this TQM era, the financial side of accounting has not generated the same degree of dynamism as the management accounting side. This does not mean there is no awareness of deficiencies. Income statements and balance sheets have not served investors well. Too often yesterday's buy list becomes tomorrow's basket cases. The "financials," as required by generally accepted accounting principles, simply do not distinguish between the firm whose quality-related competitiveness is deteriorating and its continuously improving competitor. Though many academics, and legions of securities analysts, continually seek better ways of assessing the strength of a business, breakthrough ideas that recognize quality-centered competitiveness are not yet forthcoming.

Human Resource Management (HRM)

Human resource policies have traditionally favored specialization. Their aim is to narrowly specify jobs through division of labour, then hire people to fill the jobs, give them scant training, and keep them in that specialty for life. HRM has been taught that way and practiced that way. On the other hand, TQM requires cross-training, job improve it, or even communicate about it. Labour, long blamed for protection of work rules, is generally proving no to be the obstacle to their removal. One reason is that cross-training and learning add lines to one's resume, which is the key to work-life

security, (of greater concern today than mere job security). HR departments in superior companies are making the transition toward TQM-based practices featuring never-ending training and development for all employees.

Organizational behavior (OB)

At first, the community of OB scholars watched in amazement as TQM and floor distance. However, when TQM hit the back office and then the entire service sector the stampede began. Today, treatises on new TQM related topics have become common in OB academic journals. For example, *Organizational Dynamics* devoted its entire Spring 1992 issue to the theme. These topics include employee involvement and empowerment, non-hierarchical, non-functional organization structures, and debates about motivating continuous improvement. An additional pursuit is reformulation of conventional OB concepts such as team building, conflict resolution, and equity theory for use in TQM implementation.

Economics

In the early years of JIT, Economists thought it an anomaly that inventories kept falling instead of following the economic cycle. Now it is clear that the pattern is broken. Continuous improvement reduces the need for inventory protection, so inventories just go down. Economists have much to do to revise their models. More significantly, economists may need to expand their world view. In conventional economic thought management has no role, economic activity is a function of fiscal and monetary policies of government and business. Tinkering with taxation spending and a few other money-denominated factors explains everything. No more Economists must accept that management can make a difference. Japan's fixation on quality management is especially convincing, and now the same story repeats itself in other countries.

Tool Disciplines

Information systems and mathematics/statistics, indispensable tools for the end of aforementioned academic areas are also affected by TQM. Information systems practitioners can play an important role in their employers' partners-in-quality efforts with customers and suppliers. Computer-aided design networks, external bar-coding, point of sale scanning, electronic data interchange, automatic funds transfer and satellite communication with freight haulers are among the IS devices that help link firms with suppliers and

customers. These expanded uses of IS will naturally interest information systems academics.

Mathematics/Statistics

Near the core of TQM is a set of tools known as statistical process control (SPC). At the low end of the SPC methods are the "seven basic tools" easy to learn and essential in the daily work of every employee. For a time, universities looked the other way while the community colleges nearly 1400 strong in the US and Canada put together training courses in Statistical Process Control for business and industry. Now SPC is fully covered in operations management and industrial engineering textbooks, plus texts in management accounting, marketing and general management. At the high end drawing in the mathematics and statistics academics are advanced statistical methods, especially design of experiments and the related methods of Genichi Taguchi, an eminent statistician.

Professional Schools

All the professions from engineering to law have a mission to provide quality services. The management of the professions also must have quality as its mission.

Engineering

Quality control and reliability engineering are traditional teaching and research specialties. Industrial Engineering professors have their hands full propagating the old message (sometimes called little q) as well as expanded, new TQM concepts (big Q). Besides that, every department in the engineering school has the same twofold challenge: (1) teach team design, in which engineers work on project teams with other engineers, customers, suppliers, business functionaries, and the front-line employees who produce the engineered products; (2) teach the principles of design-for-quality and design-for-manufacture (DFM) and its derivatives. Related fertile research areas include design for safety, disassembly and the environment, quick design-to-market and elimination of disruptive post-production engineering changes. Some engineering professors and graduate students are already absorbed in these topics.

Conclusion

Public administration, teachers college, medical school, dental school, veterinary school, library school, and law school in each of the other professional schools, quality is or should be the foremost concern. All of the professional schools in the university can benefit from adding TQM as an instructional and research topic.

What about all the remaining academic areas? The opinion of the late W. Edwards Deming is instructive. Dr. Deming agreed to allow his name to be attached to Columbia university's Deming center for quality management. However, a condition was that the center should be multi-disciplinary. The project proceeded when the school of engineering and applied science and the department of statistics joined the graduate school of business in the endeavor.

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