The need for implementing total quality management in education

Jaideep Motwani
Department of Management, Seidman School of Business, Grand Valley State University, Michigan, USA

Ashok Kumar
Department of Management, Seidman School of Business, Grand Valley State University, Michigan, USA

Introduction
There is a consensus that the quality of the US education system is deteriorating. This deterioration is evidenced by declining test scores, graduates with inadequate basic skills, increasing dropout rates, and a widening gap between industry needs and student capabilities (Fisher, 1993; Schargal, 1993). Society, on the other hand, has responded to this decline by demanding higher test scores and greater financial accountability, and by implementing their own educational programmes (Shalala, 1993). But if change is needed, how can our educational institutions go about affecting this change?

Many institutions are looking to industry for ideas. Like our educational institutions, American industry has experienced a decline in its long-held competitive advantage. To regain and strengthen their advantage, many US industries are turning to total quality management (TQM) for the answers. But is TQM the answer to our industrial and educational problems, or is it just the latest fad? And if TQM is a valuable tool for US industry, can it be applied to our educational institutions? This paper will look at the applicability of TQM in education and some of the concerns addressed in the literature. We will also explore the techniques used by some of the leading institutions and propose a process for implementing TQM at an institution. The suggested five-step model is applicable to any university that plans to implement TQM.

Review of the literature
Applicability of TQM to academia
TQM has been applied primarily in the manufacturing sector. Given this, there is some question regarding its applicability to educational institutions. The literature indicates that there is indeed considerable scepticism regarding the use of TQM in educational institutions. This scepticism revolves around a variety of issues. First is a lack of acceptance of the need for change. Ewell (1993) contends that, even though there is substantial focus on the decline of America’s education system, institutions do not always accept the need for change. Because the decline has been slow, the visible problems creep up and are accepted as the status quo. Without a strongly felt need for change, real change is unlikely to occur. In order to overcome this complacency, Fisher (1993) contends that strong, inspirational leadership is a must. This recommendation is consistent with Deming’s call for leadership and constancy of purpose. In fact, many authors (Horine et al., 1993; Marchese, 1993; Merron, 1994) cite leadership and top management support as key elements in TQM efforts. This argument could support TQM as both a valuable tool and a fad. If the vision of top management is consistent with the TQM philosophy and there is strong leadership, TQM can be a valuable tool. If TQM is being adopted as a quick fix without genuine, heartfelt support from the top, it is likely to go out of fashion with the newest buzzword. Recognizing a strong need for change will then be dependent on the selection of the organization’s top executives.

Another reason for scepticism is the threat to the faculty’s individual autonomy (Sheridan, 1993). Operating as individual experts, faculty have been given extensive control over their courses. TQM’s requirements of customer involvement and teamwork are viewed as a threat to this autonomy (Fisher, 1993). This threat becomes very real when faculties and institutions have long operated under what is termed functional-silo syndrome (Sheridan, 1993). Functional-silo syndrome refers to the extensive specialization of many faculty members in narrowly-defined areas. Given that other faculty members and customers may not find these specialities of any value in the current business environment, these faculty members risk obsolescence. At the Third Annual Symposium on Quality in Action in Academe, this very issue was considered one of several key issues. The members of the symposium felt that, in order to implement TQM, faculty individualism would at a minimum need to be recognized (Godbey, 1993). Godbey does not offer any advice on how to achieve this, but this stance is consistent with Deming’s exhortation to drive out fear (Marchese, 1991).
A third argument against the usefulness of TQM is that while it may improve existing processes, it cannot foster radical change (Fischer, 1993; Marchese, 1993). Fischer contends that by focusing on processes, and not people, there is no emphasis on individual performance. He also believes that TQM’s current popularity supports this, since, if performance were at issue, fear would prevent its widespread adoption. Believing that radical change is needed, Fischer is sceptical as to whether a TQM organization will be able to sacrifice many of its sacred cows. He believes that the only way to effect radical change is through inspirational leadership. This aspect is of course consistent with TQM ideals. However, his argument against TQM seems to be founded in an organization that is gripped in fear. If fear can be overcome, his argument may no longer be valid.

The last area regarding the application of TQM in educational institutions is its origin. The predominant examples of applied TQM come from manufacturing rather than the service sector (Coate, 1990). Although similar support functions, such as finance, facilities and purchasing, can be found in both manufacturing and service businesses, few models exist for applications within an academic system. Where TQM has been implemented in educational institutions, it is in its early stages so the model is just starting to take shape (Horne et al., 1993). University presidents also feel that implementing TQM is a big risk and only institutions that can afford to lose can take the risk of trying TQM. This is compounded by the fact that industry itself has not always achieved successful results with TQM (Goodman et al., 1994). Universities have experienced this cycle before. Industry has adopted a new concept, pushed it on universities and then discontinued the support in industry. Without successful models in academia and continuing support in industry, it may be difficult to maintain long-term support for the initial TQM vision. To maintain long-term support, it again appears that strong leadership will be a vital component in the TQM system.

TQM adaptation for an academic model

Once we accept the applicability of TQM to education, many issues regarding the mechanics of its operation still need to be addressed. Since TQM models typically revolve around a manufacturing orientation, adaptations for the key differences in service and academic systems need to be made.

Essential to the concept of TQM is a customer-centred culture. According to Deming, one key ingredient is creating a constancy of purpose. “Customer needs must be the driving force” (Thurmond, 1993) in determining this purpose. But in academia, who is the customer? Our first reaction might be to identify the student as the customer, since they are the direct recipients of the educational output. Although the concept of student as customer appears to be widely accepted, there is considerable debate as to whether students should be involved as a customer in shaping the educational output. Several authors (Brewer, 1991; Cloutier and Richards, 1994; Helms and Keys, 1994) believe that what students want from their educational institutions may not be what they need. They argue that by satisfying students, institutions may risk compromising the needs of society as a whole. They prefer a process that models a fitness centre where students define their long-term goals and the institution prescribes the programme for meeting those goals.

However, many authors (Brigham, 1993; Rubach and Stratton, 1994) believe that in order for universities to be competitive, students, as well as businesses, will need to be treated as customers. One concept that addresses this involvement process is the concept of co-production. “The theory of co-production is based on the notion that the person providing the service and the next-in-line customer receive the service” (Brigham, 1993). By definition, co-production would require the involvement of educators, students, and parents or businesses, depending on the educational level. In order to have continual improvement in quality education, the output must be clearly defined and measured, if possible. Since service organizations provide a product in direct contact with the customer, co-production must be an integral part of the TQM process (Brigham, 1993).

Another “mechanic” of applying TQM to academia is the process of measurement. Brigham (1991) states that the ability to establish appropriate measures of the system’s performance is one key element of success. Within the service sector, these measures tend to be less tangible and more difficult to define. However, appropriate measures can be developed through close interaction and careful attention to the customers. By constantly checking customer satisfaction against the internal measures, the appropriateness of these measures can be tested.

TQM implementation at other universities

The most difficult thing about applying TQM is the implementation process. In order to have continual improvement in quality education, output must be clearly defined and
measured if possible. This can sometimes be a hard task to accomplish in certain areas of education. Most universities do not know where to begin, what level to start at, how long it will take, and who will be involved in the process.

Some of the other universities who have implemented TQM have done so in several ways. The University of Chicago’s LEAD programme, where some 500 students work in ten groups called “cohorts”, are taking classes together and functioning as a social network. This is a way for a group of students to function as a team and to work towards a goal together. The teamwork concept is just one element of TQM that was used by the University of Chicago (Bruzzese, 1991).

At Northern Arizona University (NAU) the School of Hotel and Restaurant Management has taken a step forward to emphasizing TQM. NAU focuses on the following elements of TQM: customer focus, planning process, improvement cycle, daily process management, and participation. NAU is implementing TQM in three phases. Phase 1 consists of a one-year time frame to audit the situation and make some plans. This includes evaluating the current state of affairs, educating the key players, and mapping out the change process. Phase 2 of the plan entails establishing the TQM structure. The university plans for this stage to take one to two years. The stakeholders in the schools would be persuaded to buy into the TQM system, getting people involved in the transformation process, defining and distributing the long-term goals and objectives, team development and building better communication systems, and to make the policies and programmes more comprehensible. Phase 3 will take another one to two years and will be the actual implementation of TQM. This involves the school being completely immersed in the TQM system. It is at this time that the benefits would be present (Seymour, 1993).

Another university that has implemented TQM is Oregon State University. It has developed a plan that spans nine stages which consist of:
1. exploring TQM;
2. pilot teams;
3. defining customer need through quality function deployment;
4. top management breakthrough planning (mission, customers, critical processes, vision, identify priority breakthrough items);
5. divisions do breakthrough planning;
6. form daily management teams;
7. cross-functional pilot projects;
8. cross-functional management and reporting;

Something we should take into consideration would be the six key points outlined by Edwin Coate of Oregon State University (Coate, 1990). Those are:
1. Support from the top.
2. Just do it!
3. The teams are everything.
4. You need a champion.
5. Breakthrough planning helps.
6. Try service first.

Northwest Missouri State University’s attempt to implement TQM started with the development of a TQM plan, called the Culture of Quality. Major accomplishments of the Culture of Quality programme included: the installation of the first comprehensive electronic campus in the USA; the semester was lengthened from 15 to 17 weeks; major writing assignments were increased by 72 per cent; and an assessment programme was initiated. Also, fewer and more sharply focused goals, clearer definitions of quality appropriate to the tasks on hand, fewer administrative layers, fewer programmes, and fewer evaluative metrics were developed (Hubard, 1994).

Finally, Iowa State University’s (ISU) TQM efforts began in the non-academic, functional units of business and administration. As ISU administrators became more committed to implementing TQM in the academic areas, ISU formally requested a partnership with industry for needed leadership, training, and educational support. Texas Instrument became ISU’s university partner in its pursuit of implementing TQM (Walker, 1995).

**Proposed implementation of TQM**

In this section, the issues which educational institutions should consider when implementing TQM programme from start to implementation are presented. The inputs for this model were generated from the review of literature. The proposed model consists of the following five phases: deciding, preparing, starting, expanding or integrating, and evaluating. The model is depicted in Figure 1.

In the first phase of the model, referred to as “deciding”, the top management (senior administrators) must develop a complete understanding of what TQM is and how they plan to achieve it. For example, why should the institution implement TQM? Would the university like to start the TQM process at the administration level or in a particular discipline?

Once the understanding and commitment is made, in the second or “preparing” phase of the model, the administration should:
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Administrators should take care to ensure that the organization's culture is suitable to foster TQM. Its culture has to agree with basic TQM values and visions.

In the third or “starting” phase, the administration should:

- name the process;
- state purpose through a new quality framework;
- provide training to all levels of personnel;
- conduct internal and external customer surveys to evaluate the current process and make necessary adjustments;

formulate a quality council to oversee and regulate the TQM process;

perform competitive benchmarking to compare its performance with that of other organizations;

form quality improvement teams; and

establish measures and quality indicators that validly measure the objectives and goals of the institution.

Recognition can be a valuable tool for improving employee morale, self-interest, and...
interest in TQM. The reward system, however, must be managed carefully. Remember that you are dealing with a highly educated staff, and that monetary rewards can and will be manipulated for personal gains without regard for the institution’s wellbeing.

The final or “evaluation” phase of the model should involve evaluating success or failure of the programme. This should be conducted annually. For example, if the programme is not achieving its goals, it should be redesigned.

Conclusions

TQM has already arrived in higher education, in dozens of institutions, notably research universities and community colleges. These institutions offer success stories of improved communication, higher employee morale, increased productivity, improved process efficiency, and reductions in defects and costs.

Through communication and sharing of ideas, more educational institutions will be able to implement similar programmes that produce stories of success. In this paper, we have suggested a five-step process for implementing TQM in educational institutions. We feel that these steps can be used as a framework for implementing quality improvements within the educational institutions.

References
