

Teaching Tip

The Introductory MIS Course: Using TQM To Tame The Widow-Maker

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ABSTRACT

This paper describes how Total Quality Management (TQM) can be used to teach the Introductory Management Information Systems (MIS) course. The results provide some insight into the use of a managerial philosophy in an academic setting. Applying TQM concepts can enhance pedagogy if used properly.

Keywords: Pedagogy, MIS Course, and Total Quality Management (TQM)

"I began to think that the MIS course, at least as I envisioned it at the time, is a widow maker (Kroenke, 1988)."

1. THE WIDOW-MAKER

Peter Drucker says that when a company has a job that defeats "two people in a row" it has a "widow-maker" on its hands. "Abolish the job," asserts Drucker (Drucker, 1985). MIS veteran David Kroenke claims the MIS course is just such a "widow-maker." Should we take Drucker's advice and abolish the course? Not hardly -- but neither can we continue to pile up the carcasses as if the supply is unlimited and the consequences are irrelevant.

Kroenke contacted seasoned MIS instructors around the nation and was astounded to find that nobody was claiming reliable success in teaching this course (Kroenke, 1988). There are several reasons why this is true. First, the course is a survey course, which covers many topics. Second, it is primarily a lecture course. Third, the course is oftentimes required for majors other than Computer Information Systems majors; therefore, students have diverse backgrounds. Some of the students are only taking the course because it is required. Fourth, since the course is typically taught in the Computer Information Systems Department, many of the students expect it to be a computer class. They expect and desire that they will be required to use software packages.

2. TOTAL QUALITY MANAGEMENT DEFINED

These problems can be addressed by using Total Quality Management (TQM) to teach the MIS course. Total Quality Management is actually a managerial philosophy about quality in which everyone in the organization from the chief executive officer down becomes committed to, and involved in, a never-ending quest to improve the quality of goods and services.

2.1 Key Features of Total Quality Management

In order to incorporate Total Quality Management concepts into a given atmosphere, one must implement several features. Firstly, have a complete customer focus. This implies finding out what the customer wants. Typically, this involves the use of surveys, focus groups, interviews, or some other technique to integrate the customer's voice in the decision-making process. Secondly, design products and services that meet or exceed the quality expectations of the customer. Thirdly, design a production process that facilitates doing the job right, the first time. Fourthly, continuously try to improve the system. Fifthly, extend these concepts to suppliers and distributors. Sixthly, engage in competitive benchmarking, that is, identify companies or other organizations that are the best at something and then model your organization after them. Seventhly, empower employees. Give workers the responsibility for improvements and the authority to make changes to accomplish them. This provides strong

motivation for employees and puts the power to make important decisions into the hands of those who are closest to the job and have considerable insight into problems and solutions. Eighthly, use a team approach. The use of teams for problem solving and to achieve consensus takes advantage of group thinking, gets people involved, and promotes a spirit of cooperation and shared values among employees. Finally, train everyone in the organization in the use of quality control and improvement tools (Stevenson, 1996).

3. IMPLICATIONS FOR THE MIS COURSE

3.1 The Student as the Customer

Using TQM principles in an introductory MIS course has many implications. First, instructors teaching the course should have a complete student focus. The students should be made aware that the professor has a customer or student-focus and is applying TQM principles to the classroom. Surveys should be distributed about a third of the way through the course to determine if changes need to be made to the course. For example, the professor could simply ask the student to respond to two questions:

1. What do you like best about this course?
2. What one thing would you change if you could change anything about this course?

A simple survey such as this one will prevent the students from feeling as though responding would be too time-consuming and the professor from feeling overwhelmed. A professor may also solicit input from small groups of students. A professor might begin by asking a small group how their classes are going and later narrow the discussion to focus on the MIS course. The professor should be ready (and willing) to make changes immediately in the course after asking for student input/feedback. In an article published in *Innovative Higher Education*, Gilbert et al. note that TQM does not allow students to prescribe teaching methods but simply solicits input from them for improving class processes (Gilbert et. al., 1993).

A very important aspect of using TQM in the classroom is designing the course to exceed the expectations of the students. The students should be made aware of the fact that the course is primarily a lecture course and that there are many important concepts that they need to learn that are far more important than learning software packages. However, the students should still feel that they have received hands on experience by requiring the students to prepare laboratory assignments to illustrate certain concepts. For example, students could be required to use spreadsheets when decision support systems are discussed. The spreadsheets could be set up to illustrate what-if and goal-seeking analyses. It is also integral for an instructor to tell her students that she expects them to pursue excellence and that they are very bright and serious-minded. Often a professor's expectations can become a self-fulfilling prophecy.

Effectively extending the concepts of TQM to "suppliers and distributors" in academia is a far-reaching task. MIS instructors must work with administrators and staff to extend TQM concepts to high schools, the placement center and to potential employers.

MIS professors are able to engage in competitive benchmarking by identifying other colleges and universities that have strong MIS courses and model their MIS courses after these.

3.2 Employers of the University's Graduates as the Customers

It is also possible to take the position that the firms that hire a university's graduates are the customers. This perspective, too, has several implications, which may differ somewhat from the student's perspective. The student's, in this case, become the "product." TQM here is geared to ensuring high quality products. First, employers want team players. It is important for students to be able to communicate and collaborate with other members of an organization. In order to ensure this characteristic, the professor should assign team projects. Second, a good IT employee will have well-developed analytical skills. Most introductory MIS textbooks have real life case scenarios to illustrate certain concepts or ideas. Instructors should assign these cases. Students should be encouraged to research computer topics related to the cases using Infotrac, Nexis-Lexis, or other databases. Responding to case questions develops these analytical skills. Third, employers want employees with good oral and written communication skills. This implies an MIS instructor may improve this ability in his students by requiring oral presentations using PowerPoint or some other presentation software package.

4. ADVANTAGES OF TQM

There is considerable support for the use of TQM in teaching. Research findings indicate that the application of TQM principles enables the students to learn more and encourages them to engage actively with the course materials (Barnard, 1999). Traditionally, student evaluations are used at the *end* of each course to provide comments about instructor effectiveness. Although this process can be helpful to faculty for following terms, end-of-course evaluations do not address the need to make improvements in the course while it is still in progress, thereby benefiting the students who are making the evaluations. To make improvements while the course is in progress, instructors can apply TQM principles (Barnard, 1999). Barnard also found that employing TQM principles would frequently improve teaching evaluation scores.

TQM prepares students for today's workforce. Employers expect employees to be in a position to continuously suggest improvement for 1. the products or service the company provides, 2. business processes, 3. productivity and quality, and 4. satisfaction in customer service. Using

TQM practices in a classroom helps students to develop this competence.

5. DISADVANTAGES OF TQM

Although studies have shown that the application of TQM principles enables the students to learn more and encourages them to engage actively with course materials (Barnard, 1999), (Thomson, 1994), many educators do not feel comfortable with this method because it requires a redefinition of the teacher-student relationship (Gilbert, 1993). Total Quality management focuses on satisfying the customer and seeking customer input about processes. This focus on customer satisfaction and participation in planning causes faculty to view TQM with justifiable suspicion (Barnard, 1999).

The delivery of education services is very different from the traditional transactions where buyers are assumed to have sufficient information about the product to make fully informed decisions. Janet Barnard (1999, p.1) notes that, "higher education is a trust market where the relationship between instructor and student is more akin to a client relationship in which trust must exist because of the disparity of information between the parties. It is not education's purpose to please the customer, but to provide a learning environment that supports a mission of excellence in education." An instructor who incorporates TQM as her teaching method must be assured that she is still the "boss." Students are only making *suggestions* for improvement, not gaining the ability to implement change directly.

6. DISCUSSION

Using a two-question survey similar to the one described above, improvements were made to the course. As a result of student feedback several changes were made to the course. First, students were given opportunities to get extra credit by completing computer assignments. Second, all of the PowerPoint slides used during the lecture were placed on the University's intranet. Third, students were given class time to work on their team projects. These changes were made while the course was in session. This was a great advantage to the respondents to the survey (the current group of students).

Making these changes also improved the overall rating of the end-of-the-term teaching evaluations. The overall student evaluation ratings improved by an average of .2% over the previous term.

The use of TQM to improve student ratings is also found in the Information Technology educational literature. Barnard (Barnard, 1999, p. 4) found that instructors using TQM had higher student evaluation ratings. Thomson found that using TQM Principles to teach a senior level Current Topics in Information Systems course had a very favorable outcome. Students demonstrated creativity and lateral thinking, improved degree of self-satisfaction,

acceptance of individual responsibility, enhanced colleague interaction, communication, and understanding of consequences of behaviors and actions (Thomson, 1994, p. 1).

It should be noted that some of the responses to the question, "What one thing would you change if you could change anything about this course?" could not be used. For example, one student suggested that the projects be eliminated. This would not improve the course from a TQM perspective. It is important to acknowledge that the improvement in evaluations may be attributable to other factors than the TQM techniques. For example, the instructor's ability to explain the material improves each term. Also, each time the instructor teaches the course he/she has the feedback from the previous semester to use for improvement.

It is difficult to argue that instructors should have a complete customer focus. Students are important and can be seen as customers (the same can be said about employers). In the final analysis professors need to be in charge of the product and cannot give complete control over to either the student or the employer.

7. CONCLUSIONS

Efforts to adopt TQM have spread to colleges and universities (Barnard, 1999), (Thomson, 1994). TQM can enhance pedagogy if used properly. By using surveys, interviews, and focus groups, a professor is able to integrate the students' voices in the planning of a course while that course is in progress. The upshot is that not only are the following semester's students benefited, but also the current enrollees. Incorporating TQM principles into an instructor's teaching has been shown to improve ratings on end-of-the-term course evaluations and also the overall quality of the classroom experience for the students and the professor

8. REFERENCES

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