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ABSTRACT

Running a university is fast becoming more challenging than managing a large corporation, in part due to greater quality demands by more groups in the face of shrinking resources and budget cuts. This paper argues against universities conducting business as usual in the face of societal change and increasingly greater challenges, and presents ideas on how a multi-campus public university can use Total Quality Management to meet quality goals. It is suggested that the President of the institution must first ask for volunteer faculty and staff to establish a quality think-tank on campus. This group's responsibilities would include: developing a vision statement, articulating a mission, developing procedures, training, providing a forum for groups to report their experience, and being "on call" to answer questions. When using the many tools used for quality measurements (check sheets, control charts Pareto diagrams, etc.) care must be taken to consider the school's special needs and to ensure that the tools are not used inappropriately. Cost and benefit analyses for various projects are also important to control any serious long-term negative consequences for campus and student well-being. Employee empowerment in conducting continuous improvement contributes in making quality a discipline. (GLR)

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## TQM IN A MULTI-CAMPUS PUBLIC UNIVERSITY

### Introduction

There are many similarities between an educational institution for higher learning and a corporation providing goods or services. Universities, like their counterparts in industry, have departments for payroll, human resources, accounting, purchasing, public relations, and maintenance to name a few, and these departments exchange services from within and without the university. The universities have customers too: these are students, the faculty and staff, the local community, employers, and other universities and colleges to which our students may transfer.

Today institutions of higher learning, like manufacturing and service organizations, are subject to limited resources and competition. Their "customers," both internal and external, are becoming more sophisticated and demanding. Achieving or maintaining credibility as a reputable institution of learning requires management techniques similar to those which enable manufacturing and service organizations to grow and excel. Thus, the concepts and tools used to achieve quality in such industries are applicable to higher education as well.

As all successful businesses understand, customer satisfaction is the main component of success. Achieving it means providing goods and services economically, on time, with quality that consistently surpasses the customer's expectations and eclipses that of the competition. With that said, it behooves us to consider who a university's customers are and what goods and services are offered them.

### The Clients in a University System

The students are not only are our largest body of consumers but our raw material and finished product as well. And as such, universities must pay special attention to them.

To fulfill our promise of providing well-rounded, well-qualified persons to communities and employers, we must begin with quality raw materials: we must procure students with the potential to succeed. Ergo, we must ensure that our students are "pre-processed" correctly when they come to us from high schools and community colleges, perhaps through a program similar to the supplier rating and certification programs that some of the more progressive corporations have. This alliance, if you will, with sources of student supply, i.e. highschools and community colleges, would serve to minimize and hopefully in the long run eliminate the "special causes" of variation in the process that is education, these being students who come to us un- or mis-prepared. The "common causes", variations which are inherent and unavoidable in any population, must also be understood by universities and dealt with by providing a responsive and robust educational process capable of handling the changing demography of today.

But students are also consumers of the curricula we offer and as such deserve courtesy, service and a quality education. Although the bulk of students' contact is with professors, from the time they apply for admission to the university to the time they graduate, students come in contact with almost every office on campus. Both routine inquiries and involved problems must be addressed with care and a high degree of professionalism. The cost to the customer and to society as a whole due to substandard service is, as the late Dr. Deming said, "unknown and unknowable," but it is

undoubtedly great. Good service is possible only if the providers of the service, be it in Admission and Records, the Housing Office, Testing or the Financial Office have the right training for and knowledge of the job and appreciate the importance of their services in the overall scheme of the system.

Our students are also the "finished product" we offer our other customers. The performance of these student-products and how they stack up against graduates from other universities are "tested" on the job every day. The students are expected to perform a variety of tasks, including some outside of their discipline, with efficiency, reliability, and a sense of ethics. Students are expected to be multi-dimensional: performers, trainers and ready learners capable of adapting to changing work environments. "One-dimensional" graduates, those who are good at only one thing, will have a rough time in today's global job market. This new challenge calls for closer cooperation among universities, industry, government and the public. Internally, universities must begin by benchmarking, forming new or expanding upon existing advisory board activities, strengthening the mentor and co-op programs and encouraging faculty to do joint projects with industry. These are necessary to and in line with the philosophy of customer satisfaction: find out from the market what it needs and supply it.

The complexity of these current demands necessitates a change in the way universities, as businesses, are run.

#### **The Urgency of the Need for Change**

Running a college or a university is fast becoming even more challenging than managing a large corporation. State-supported institutions especially, such as the campuses of the California State University (CSU) must grapple with the limited resources, budget cuts, public and legislative demands, and regulatory and bureaucratic constraints inherent in any large organization. To survive, this cluster of campuses, like any other organization, must be efficient in all aspects of its operation. Strategic management is required to articulate a vision, a clear direction, a mission statement. Each university must make explicit the reasons for its existence and identify those whose needs it is trying to fulfill. To this end, systematic procedures must be designed, developed and implemented to reach pre-set goals. Qualified human resources must be sought for the numerous and sundry tasks at hand. An environment conducive to continuous improvement must be maintained. The flexibility to cope with change, both foreseen and unforeseen, must be a required attribute of the system.

In short, institutions of higher learning must no longer be content to languish as ivory towers. Today, they are fair game for scrutiny by and criticism from students, employees, and public and governmental agencies, much as the previously inviolate health-care industry has become. Therefore, to succeed as a viable institution, tasks at the university must be performed correctly the first time and every time, economically, and in a timely fashion. In other words, some change is in order.

#### **The Obstacles to and Impetus for Change**

Universities, especially research-oriented ones, are good at introducing new curricula and course materials, if often without sufficient proof that these are actually relevant to students' immediate and future needs. Developing and using new techniques in teaching has somewhat lower priority, but still gets done. What is lacking most sorely, then, is the will to move away from the status quo and towards a view of the university as a business unit.

This stems, shall we say, from some deep roots. That is, there are many universities which have been in existence for more than one hundred years and are still going strong without the benefit of such newfangled concepts as TQM, CQI, or reengineering. As there is no "apparent" extra cost involved in staying the course and the concept of sweeping change is always daunting, universities often regress to the romanticized past, and extrapolate inappropriately that old methods will continue to work in the future. The fancy term for this is "paradigm paralysis". And nor can we overlook the

natural reluctance of many educators to surrender to the chagrin of admitting that industry in the last few decades has been ahead of academia in implementing new managerial techniques, just as it has been in semiconductor technology. But for this very reason, implementing a quality program on campus has an added value: The knowledge gained can be transferred to the classroom and shared with industry and other campuses.

Finally, allocating resources for such projects during this time of "downsizing" is, though most appropriate, always difficult. All these factors contribute to the passive resistance of universities where new managerial strategies are introduced.

Business as usual, however, will be the undoing of universities. The impetus for change is growing stronger. The forces buoying it are: "(1) the challenge of survival in an increasingly competitive environment; (2) the escalation of the costs of doing business; (3) a trend towards holding organizations more accountable for their actions and the attendant outcomes; (4) a blurring of the distinction between products and services" (Seymour, 1993); (5) the awareness of people about quality and the many success stories in various industries, and finally; (6) students who demand to get their money's worth in this era of high tuitions and fees. Never before has there been such urgency for change and such widespread fervor among the populace for implementing systematic methods of improving quality. Colleges and universities would do well to join in and capitalize on this trend.

#### **A Simple and Affordable Approach**

The need for implementing quality is recognized by colleges and universities. How to do it, and who should be doing it, are still to be decided.

The "who" is thankfully simple: Universities, even those which do not offer degrees in quality (as SJSU does) usually offer courses in quality as either required or elective in various disciplines. Therefore, the expertise for launching a quality program does exist on most campuses.

The "how" is considerably more complex. To begin, instead of introducing committees, forming more task-forces and adding bureaucracy, the President of each university might ask for volunteer faculty and staff to establish a quality think-tank on campus. This group's responsibilities would be to:

- Develop a vision statement
- Articulate a mission
- Develop procedures
- Publicize the group and its purpose.
- Train the trainers, facilitators and practitioners of quality on campus
- Be a forum for groups (schools, colleges, department, etc.) to talk about their success stories, problems and frustration to other groups and the think-tank members.
- Be "on-call" to answer questions, give suggestions, help in any shape or form, and most importantly, *listen*. Be facilitators in the broadest sense of the word.

Adopting this approach will send a signal to the campus community that the need for improving quality is recognized and has the President's blessing and commitment. Yet it is done by the grass root and for the grass root. (The grass root in this case being any school, college, department, office, etc.) The think-tank would not have a line or staff authority per se, so there will be no intimidating squad of "quality police" to fear.

There are compelling reasons for keeping such programs at the "local," or university level. The twenty campuses of the CSU system, for example, differ in size and the demographical populations they serve. The functions performed on these campuses are similar in nature and purpose but emphases vary from one campus to another. To illustrate, at SJSU there are many departments which

are doing fine already, quality-wise, or need only modest improvement. (A case in point: the Purchasing Department has started its own TQM program and is seeing very positive results.) On the other hand, there are departments at all universities which may benefit from major quality overhauls. It seems most appropriate, then, that campuses develop their own quality models and share information and the experience gained in the process. Doing so will allow for more custom-tailoring of programs, ensure that those departments which need it will receive special assistance and provide that resources are not wasted on departments which do not need them. Furthermore, leaving it up to each department, college, and school on campus to join the movement if they see fit, to ask the think-tank persons for help if needed, and to share their successes and experiences with others via this Quality Think-Tank will serve to minimize any resistance to the idea.

### **Tools and Concepts**

The tools of quality - the check sheets, scatter plots, histograms, Pareto diagrams, control charts, cause and effect diagrams, process flow charts, experiment designs, quality function deployments, etc. can all be used in gathering and analysis of data needed for quality control and decision making in universities. Of course, care must be taken to consider a university's special needs and avoid haphazard and indiscriminate use of such tools: all too often quality tools successfully utilized in manufacturing settings, for example, are automatically and inappropriately used in service industries or in schools.

But many quality tools can be of use: a system of prioritizing can be established based on cost and benefit analyses for various projects and their associated expenditures. "Poor-quality cost" must be considered and estimated. The system should be capable of gathering and reporting costs and benefits to the university administration, the public and legislators as needed. All should be mindful that some short-term "apparent savings" have serious adverse consequences on the long-term well-being of the campus and the students. As President J. Handel Evans of SJSU put it in one of his speeches on the price of quality education, "you either pay it now or you pay it later." Indeed, the penalties for late payment are often quite severe. Proactive quality control is key.

Finally, it is not necessary to attach the labels of TQM, TQC, Reengineering, or so forth to this process. While it behooves us to take advantage of new opportunities to apply quality procedures given their current "fad-like" status, it is also wise to be mindful of the fact that the public's fickle fascination with the terms will fade. No matter: the lingo used to identify the process is inconsequential. The fact is that when employees are empowered, when continuous improvement is a way of life, when goals are achieved, new horizons are envisaged, and the "customers" are satisfied, what we are practicing is the very essence of Quality as a discipline.

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