Total Quality Management (TQM) at the University Centers

by

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ABSTRACT

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The University Centers is looking for a quality management system that will ensure the highest level of customer service while providing a process that allows for employee participation with high levels of enthusiasm by the staff. Through TQM, the University Centers will show an increase of participation in their quality management system while improving morale for quality systems and improvement through training of basic quality management systems.

The University Centers started with an ISO 9000:2000 quality system implementation and moved into a TQM based quality management system with the hopes of a more positive experience.

The literature review provided an informational background on quality systems, TQM history, benefits, and negatives, and ISO 9000 history, benefits, and negatives. The goal of the literature review is to provide a well rounded discussion and review of quality systems in general and two programs used worldwide with success and failure.

The data collected did not reveal a higher level of participation in continuous improvement projects but did find some benefits of both the ISO 9000 and TQM quality systems. It also did not ensure higher levels of customer service. The results, however, did show that the staff at the University Centers would like to participate and improve professional training and development, implement stronger measures, goals, and objectives, and implement a usable continuous improvement program. These areas of improvement all fall in line with major themes and ideas of a TQM based system.

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This project has been very near and dear to my heart. I look forward to how the results of this process will be used and the benefits this study will bring to University Centers. Because this project was a success and my masters program is completed, I need to give thanks for all of those who helped in this wonderful journey.

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Chapter I

Introduction

Mehra, Hoffman, and Sirias (2001) state that the 1980's showed companies taking a serious look at the quality revolution and how to use it to attempt to bring about profitability, market share, and improvement. In that time, they explain there was no questioning of results that were achieved by quality systems and using any type of quality technique. As well, Mehra et al. (2001) goes on to explain, that persons, organizations, companies, etc. did not question the quality systems being used. "All quality improvement efforts were supposed to end in good results and nothing was expected to go wrong." (Mehra et al., 2001).

Total quality management started with Deming. (ASQ, 2006). With his revolutionary works in Japan in the 1950's, total quality management became a popular quality system. In 1987, ISO was first published and widely used as the international standard for quality management (ISO, 2006). Organizations of all types were using this system and continue to do so today. There are many types of quality management systems such as lean, six sigma, TQM, ISO 9000, Malcolm Baldrige (ASQ, 2004). The key to choosing the correct system that is best for your organization is not a small task and one that should be reviewed thoroughly (Mehra et al., 2001).

The Memorial Student Center at the University of Wisconsin-Stout houses the University Centers which are responsible for the management of University Recreation, Leadership and Involvement Centers, and the Service Center. General operations are included for the basic functions of a business. This group plays a vital role in providing safe, fun, and enjoyable activities and services for its students, staff, and faculty. The

student center and University Centers are the center of information, recreation, entertainment, and assistance for UW-Stout students, faculty, staff, and the surrounding community.

A consultant was hired and the implementation of an ISO 9000 quality management system was started. They completed a full implementation by June 2004.

While a compliant ISO 9000 system is in place, the perception of the employees working at University Centers shows that basic processes are either by-passed or not used at all. Based on informal employee responses, the system is not looked upon with the highest of respect or enthusiasm. The system was set up for what is normally a manufacturing environment making it quite difficult for a service team to use and embrace.

The University Centers in the past, with the endorsement of the university, has utilized Deming's Total Quality Management System. This group has chosen to use this platform in hopes of gaining a larger level of participation from its students and staff.

Statement of the Problem

The Total Quality Management (TQM) based quality system is the program that best applies to this organization because it will allow freedom of expression in improvement processes. The TQM quality system will replace the current ISO 9001:2000 quality system. The TQM process has a human element to it that other quality systems do not have. TQM will ensure a larger participation level from this organization and help increase morale of the employees working with this particular system.

Purpose of the Study

The University Centers is looking for a quality management system that will ensure the highest level of customer service while providing a process that allows for employee participation with high levels of enthusiasm by the staff. Through TQM, the University Centers will show an increase of participation in their quality management system while improving morale for quality systems and improvement through training of basic quality management systems.

Assumptions of the Study

- All employees are knowledgeable of ISO 9000 and TQM quality systems.
- All employees at the University Centers are familiar with basic customer service skills.
- Participants in interviews will be truthful and honest and will find the interviews valuable.

Definition of Terms

Documentation

Information and its supporting medium. Examples include records, specifications, drawings reports, work instructions, and job aids (ISO, 2000).

Freedom of Expression.

The ability to solve problems with an 'outside the box approach'. Deming (2000) also explains freedom of expression through point thirteen – encourage education and self-improvement for everyone through new learning and education.

Human Element

TQM is the only system that ensures the employee/team member is made a priority in the quality system (Deming, 2000). He also describes human element through his points eight - drive out fear, nine – break down barriers between staff areas, and twelve – remove barriers that rob people of pride of workmanship.

ISO 9000

A set of standards that describe fundamentals of quality management systems and specifies the terminology for quality management systems (ASQ, 2000).

Non-Conforming or non-conformity

The non-fulfillment of a specified requirement (ASQ, 2000).

Participation (total employee involvement)

Following the processes, documenting action requests, communication about improvements, and involvement in training and development (Deming, 2000).

Procedure

The steps in a process and how these steps are to be performed for the process to fulfill customer's requirements (ASQ, 2000).

Quality Management System (QMS)

Management system to direct and control an organization with regard to quality (ASQ, 2000).

Total Quality Management

All members of an organization participate in improving processes, products, services and the culture in which they work (ASQ, 2000).

Limitations of the Study

- This is a case study so only one organization is being reviewed. It will be difficult to show any type of cause-effect analysis.
- TQM implementation is still taking place so true results of how well the system works might be skewed.

Methodology

The design for this research was a qualitative research design using a case study. It was the goal of the researcher to compare and contrast the ISO 9000 and TQM quality management systems and their use from June 2004 through May 2006.

Chapter II

Literature Review

Introduction

Quality control or quality management has a long and distinguished (Juran, 1995) history. Quality systems started back in very primitive days with hunters learning which type of wood was best for making bows and arrows. Juran describes the history of quality in this list below:

Primitive Man

The Village Marketplace-Labor

Growth of Commerce

Rise in Craftsmanship

Guilds

Apprenticeships

Rise of inspections

Government Involvement in Quality

Safety and Health of Citizens

Consumer Protection

The Mark or Seal

Quality Control Process

The Feedback Loop

Self Control and Inspection

The Industrial Revolution

The Rise of Quality Assurance

TQM Introduction

Quality systems have been in existence for many more years than realized. It was during 1945-1951 that Dr. Juran and Dr. Edward Deming traveled to Japan to give lectures on quality control systems. (Juran, 1995).

Total quality management was derived by Deming in the 1940's and implemented in Japan in the 1950's (Deming, 2000). At the time, the US was not interested in this type of quality control. The United States Navy used statistical process control (a part of TQM) during the 1950's and beyond. TQM was not used, however, in manufacturing or service industries. During the early 1980's, the US started to use the terms total quality management and truly began applying Deming's 14 points as a total quality management system.

The methods for implementing this approach come from the teachings of such quality leaders as Philip B. Crosby, W. Edwards Deming, Armand V. Feigenbaum, Kaoru Ishikawa and Joseph M. Juran (Total, 2006).

A core concept in implementing TQM is Deming's 14 points, a set of management practices to help companies increase their quality and productivity (Deming, 2000):

1. Create constancy of purpose for improving products and services.
2. Adopt the new philosophy.
3. Cease dependence on inspection to achieve quality.
4. End the practice of awarding business on price alone; instead, minimize total cost by working with a single supplier.

5. Improve constantly and forever every process for planning, production and service.
6. Institute training on the job.
7. Adopt and institute leadership.
8. Drive out fear.
9. Break down barriers between staff areas.
10. Eliminate slogans, exhortations and targets for the workforce.
11. Eliminate numerical quotas for the workforce and numerical goals for management.
12. Remove barriers that rob people of pride of workmanship, and eliminate the annual rating or merit system.
13. Institute a vigorous program of education and self-improvement for everyone.
14. Put everybody in the company to work accomplishing the transformation.

ISO 9000 Introduction

The term ISO – International Organization for Standardization - was introduced in the early 1980's as well and has been used so frequently since the early 1990's it created a wave of organizations wanting and needing certification to this quality management system. The use of ISO 9000 as an organizational platform has been tremendous. There are other system platforms that can be used but because of the knowledge and marketing of ISO, many organizations chose this platform without researching others.

The majority of organizations world-wide using ISO 9000 is phenomenal. ISO 9000 is so widely known that many customers require their vendors to be at a minimum compliant with this quality management system or at a maximum certified to this system.

It is becoming harder and harder for organizations to compete without some type of certification to ISO 9000.

While ISO 9000 is a well respected quality management system, it is difficult for some organizations or industries to use. It is important to choose the correct quality management system that will bring about high stakeholder satisfaction and increased improvement for the organizations overall system.

The primary focus of the literature review is to discuss the history of quality and provide some limited benefit and cost analysis of ISO 9000 and TQM quality management systems. There are choices for any organization to determine the best for them. For the purposes of this study, we will review ISO and TQM.

ISO 9000

History

In 1906, the International Electrotechnical Commission (IEC) was established. This group was responsible for the standardization of information for the electrotechnical field. This was the beginning of international standardization. In 1926, the International Federation of National Standardizing Associations (ISA) was created to carry out standardizations among other fields, primarily in the mechanical engineering field. The group disbanded in 1942. With delegates from 25 countries, a meeting in London in 1946 created the International Organization of Standardization (ISO). Their sole purpose was "to facilitate the international coordination and unification of industrial standards." The group was formalized in 1947 (ISO, 2005).

ISO has published approximately 13,000 international standards since it's inception in 1947. These standards range from traditional activities, such as agriculture

and construction, to engineering and the newest information technology sectors (ISO, 2005).

ISO 9000 is a group of standards providing a framework for quality requirements in business to business dealings and are one of the most widely known standards in the world. The goal is that these standards can be applied to any organization, large or small, and any product or service. Quality management refers to what an organization does to enhance customer satisfaction by meeting customer requirements and applicable regulatory requirements while continually improving their performance (ISO, 2005). The first group of ISO 9000 standards were issued in 1987.

With 500,000 companies certified to an ISO 9000 standard, it is safe to say that there are benefits and costs to completing an implementation of an ISO 9000 quality standard.

Benefits of ISO 9000

While one set of standards does not ensure quality goods or services, it does ensure the system in place will have the capability to produce those goods and services to meet their expectations (Douglas, Kirk, Brennan, and Ingram, 1999). Douglas et al. also found that 44% of the companies they surveyed felt ISO 9000 was a foundation for TQM. This implementation could have been a part of a TQM initiative or the ISO standard could have been implemented on its own. The ISO 9000 quality based system showed benefits with regard to financial perspectives and employee participation to make this quality system work for their organization.

If senior management want to implement an ISO 9000 based quality system for the right reasons – either to improve the quality of service or product or to gain market share – the standard will provide a set of procedures that should ensure their service is delivered consistently to internal and external customers at a level that will meet the customer expectation. Meeting customer expectations has correlation to satisfied employees (Douglas et al., 1999).

At the Labour Government in the United Kingdom, Douglas et al. (1999) interviewed the internal service department. Their goal was to implement ISO 9002 to improve standards of service and enhance their department reputation with the internal customer. By using the ISO 9000 quality based system, they were able to have a set of documented procedures that would ensure consistent and standardized approaches to customer service. The benefit of these standardized procedures is now the department employees knew what to expect when it came to servicing their customers. The feeling of the employees in the beginning was this set of standards would interfere with their work because servicing customers should have been 'second nature' to them.

Another group to experience the benefits of ISO 9000 implementation was the AIAG. The Automotive Industry Action Group (AIAG) is a non-profit trade organization with approximately 1600 members in the automotive and truck manufacturing industries. Their group chose ISO 9001:2000 as their platform for implementing a quality management system. After looking at QS-9000 (the automotive industry quality standard), it was determined that this would not meet the needs of their business. Their main product or service lines were to provide project management and distribution of

publications and training materials. Twenty-one months ahead of schedule, AIAG gained its ISO 9001:2000 certification. With their certification, AIAG has found their customer complaints decrease and identified areas of improvement. They are using data collected in the past for useful improvement projects. Unlike in the past, their data is being used in charts and graphs for everyone to evaluate and use for constant improvement. There is even a stronger sense of teamwork with everyone working toward their common goals (Miller, 2001).

While there is no correlational result between ISO 9000 certification at large organizations (more than 100 people employed) and their defined business results, having an ISO 9000 quality management system in place did improve their competitive capability (Hongyi and Cheng., 2002). They did show marginal business results at small organizations in their study.

Service organizations can also benefit from ISO 9000 implementations (Casadesus and Karapetrovic, 1999). Their research shows ISO 9000 helps build morale in an organization because it forces each person in the organization to communicate in order to complete tasks and serve their customers. They further states people feel more satisfied with their contribution to the organization and furthermore their careers.

Negatives of ISO 9000

ISO 9000 has many positives in its implementation process and completion but can also show a negative side. The frontline council service at the Labour Government in the United Kingdom chose the ISO 9000 quality based system as an improvement tool

(Douglas et al., 1999). The cost of achieving certification was unknown but was not a factor in deciding this system. The staff working there believe this system would guarantee quality by reducing wait times for their customers. There was also an impression that ISO 9000 quality based system would ensure new customers just by having the certification hanging on the wall and used for advertising. The result of the implementation and certification of this ISO 9000 system was seen by the employees as one of being out of control. If procedures or policies were not in the quality manual, then it needed to be updated – even if the procedure or policy was not deemed necessary to serve the customer or employee. The system was perceived as getting larger with no benefit as to what it was supposed to achieve. The quality system meant a lot more paperwork. The increased documentation had one benefit in that each employee knew what to do and when to do and who did it when it came to daily tasks. Overall, the employees at the frontline council service have seen no advantage and no disadvantage to the ISO 9000 quality based implementation.

There are those that find there are larger costs and fewer benefits with ISO 9000 implementation and/or certification. Seddon (1998) has researched the negative aspect of ISO 9000 implementation in a number of industries and different sized companies. He has found that ISO 9000 has ten reasons implementation is not beneficial to organizations. Some of these include encouragement of organizations to act in a way that will make products and services worse for their customer, the standard relies too much on people's interpretation of quality (particularly auditors), and as an intervention, ISO 9000 has not encouraged managers to think differently.

LAN Company's ISO 9000 certification process (Seddon 1998) was described as a negative process. Instead of using a quality standard to better their business, they found themselves working harder to appease the auditors. One example is contract review. As part of their contract review process, all changes by the customer from the original order placed would need fully documented approval from their customer. This process was not pleasing because the focus was on the contract, not servicing the customer. In turn, LAN Co. began "hiding" documents when the auditors arrived.

Total Quality Management

History

According to reference.com (2006):

> In 1984, the United States Department of the Navy Personnel Research and Development Center began researching the use of Statistical process control (SPC) and quality management methods for potential benefit in making performance improvements. This work included a detailed examination of the quality management approaches advocated by Philip B. Crosby, W. Edwards Deming, and Joseph Juran.

The Navy in 1985 first used the phrase Total Quality Management (TQM) when they were starting to introduce the methods that had been successful in the North Island test to other Naval installations (Total, 2006).

Total quality management (TQM) is also called continuous quality improvement (Bell & French, 1999). TQM is a combination of statistical quality control, statistical process control, self-managed teams, and extensive use of employee involvement. TQM

in the United States has become a process used by many companies and organizations because of the growing amount of competition globally. To compete globally, it is necessary to ensure a company or organization has the ability to manage their quality. Features that characterize a total quality management system are primary emphasis on customers, daily operational use of the internal customer, an emphasis on measurement, competitive benchmarking, eliminating defects continually, participative management, emphasis on continuous training and development, emphasis on teamwork, and top management support for a long-term perspective.

TQM is considered a management strategy to create awareness of quality in all organizational processes and personnel (Total, 2006). The TQM application has been widely used in manufacturing, education, government, service industries, as well as NASA space and science programs.

The focus of TQM is not just statistical gathering, but understanding what caused any failures found in the statistical gathering (Total, 2006). After TQM has been in use, it is very common for parts or processes to be redesigned or reviewed so critical measurements either are reviewed regularly or changed to meet the needs of the organization.

Benefits of TQM

TQM ideologies are gaining ground in many sectors and areas of the world (Agus, 2004). There are many studies showing a positive financial impact on performance in service organizations. It is clear that in order to maintain competitiveness in any organization, the managers need to make quality an organizational goal. Organizations

that fail to implement TQM and implement it properly run the risk of being less competitive. The less competitive the organization, the gradually they disappear.

As study on a public service sector in Malaysia (Agus, 2004) showed that through the use of TQM, their organization found themselves encouraging their employees to actively participate in improvement processes. They continued to find that encouragement of teamwork to achieve organization goals emphasized continued quality. Freedom to actively participate in solutions provides an organizational transformation in the culture and creates a commitment to the success of the organization (Agus, 2004). Through TQM, Agus found the organizations employees put their support greatest to those objectives they help set.

TQM is also considered a culture-based approach to quality (Jabnoun and Sedrani, 2005). There is a two way direction of the effect of TQM on an organizations culture. While most would believe a quality culture needs to be in place for TQM to succeed, there are also many other TQM implementations that effectively modify the culture of an organization. Examples would be training, employee involvement, and empowerment (Jabnoun and Sedrani, 2005). Jab further finds combined effects of a TQM implementation showed to reduce customer complaints, increased product reliability, and profitability. This encouraged management to use their TQM processes and encourage involvement by their team members.

Negatives of TQM

TQM will bring many positives to an organization. It can also bring with it negative situations that can cause great harm to any organization.

A study done by Michael Beer (2003) from Harvard Business School shows that failure to properly implement TQM can be attributed to a gap between top management and the organization as a whole. Without honest organization-wide conversations about quality and excellence with valid data, a TQM program will not persist in an organization and can cause harm to the culture of the organization (Beer, 2003).

Beer's (2003) study points out that the negative of TQM is not in the theory and methods but mainly with the implementation process. This negative or failure of TQM to work is mainly due to top-down management implementation and therefore it is not organization wide as stated in our definition on page 5. Beer further suggests that top-down implementation of TQM will ensure gaps in communication between organizational leaders or top management and front line or reporting employees thereby creating an impossible situation for talking to top management about the problems with the policies and procedures being put into place.

When TQM first surfaced in the US in the mid-1980's, it was promoted on the basis of a very small number of organizations such as Motorola, Xerox, and Hewlett Packard (Van Der Wiele, Williams, and Dale, 2000). He explains that TQM is the center of management thinking and has spawned other success stories such as the Japanese experience, which is over 50 years old. It also spawned national quality awards such as the Malcolm Baldrige National Quality Award in the United States and the European Quality Award. Van Der Weile et al. (2000) continues to discuss that because TQM is at the center of management thinking, it is more of a fit for many organizations. The other tools or awards or systems that have been spawned from TQM take on a view as being a fad. ISO 9000, Baldrige, and other forms of quality management systems can be thought

of as fads. Fads are a new popular finding or the latest 'buzzword' in industry and organizations (Van Der Wiele et al., 2000). Various fads have a lot in common in their concepts, approaches, views, and tools and techniques according to Sorensson. Van Der Wiele et al. continues to explain that in order for TQM to not be a fad in an organization, we must ensure after awards and certifications that the employees in that organization are continued in support, empowerment, and involvement to ensure continued success.

Chapter III

Methodology

Introduction

The value of ISO 9000 as a whole is evident. It is also evident that other choices in quality management platforms should be reviewed and taken into account based on the organizations needs, culture, customer expectation, and employee satisfaction. Quality management systems that are implemented and not utilized to their potential create costs and decreased customer service as well as create lower morale and enthusiasm by the employees for the implemented system.

Case Study Approach

The researcher has chosen to use a case study approach for this particular research. "Every discipline depends on research activity to expand its knowledge base" (Merriam, 1998). Research is a systematic inquiry of events, problems, programs, social groups, etc. Therefore, research design is the architectural blueprint or plan for assembling, organizing, and joining together the data that provides an end result in the form of research findings. Case studies are a form of research design to study a particular event, occurrence, or observable facts. The best way to determine the type of approach to be used is through consideration of the nature of the research questions, the amount of control the researcher will have, and the desired end product. A case study in this research will provide an examination of a specific program at the University Centers. The examination is of the ISO 9000 systems and the implementation of a TQM system and result in recommendations and further research by University Centers.

Case studies include an in-depth, longitudinal view of one instance or one event or one organization. There is a systematic view of events, collection of data, analyzing of data, and reporting the results. The researcher can gain a heightened view of why an event happened as it did and what might be important to view in the future. Case studies tend to generate rather than test hypotheses (Case, 2006).

Research Design and Analysis

The researcher developed a case study about the University Centers quality system implementation and participation. There are many tools that can be used when collecting qualitative data. These tools include surveys, focus groups, observation, questionnaires, and interviews. The tool used for this case study includes an interview and observation of the data from the University Centers Non-Conforming Database. The non-conforming database houses all corrective actions, customer complaints, and some preventive action items such as continuous improvement suggestions. The data from the non-conforming database should give the University Centers a good review of the handling of customer issues and ensuring customer satisfaction. It should also show improvements in the system because of the documentation of such items.

An interview is a major source of data when conducting a case study (Merriam, 1988). They range in structured interviews which rely on questions and the order they are asked in are predetermined. A semi-structured interview is guided by a set of questions. However, other issues can be explored based on the answers provided by the subject being interviewed. Interviews allow probing for clarification and allow for questions to be asked about the subjects' knowledge and involvement when it comes to the phenomenon being discussed during the interview. For the purposes of this case study, a

semi-structured interview will be completed. "For the interview is the best way – and perhaps the only way – to find out 'what is in and on someone else's mind" (Patton, 1980 as cited in Merriam, 1988).

The interview questions (Appendix A) used for each participant from the organization were developed by the researcher. The interview consists of six questions asked of each person who participated in this study. The researcher completed a qualitative analysis of the information received in the interview sessions. It was possible to complete a write-up of an indication of the perceptions the participants had of the quality management system. Their participation levels create a perception of enthusiasm about the system as a whole.

A five question interview instrument used during the interview process was created for this study. Refer to appendix one for a copy of this instrument. Twenty-two interviews were completed with permanent and student staff. The results were recorded on tape and transcribed to provide the data needed to create themes to focus on.

Population and Sample

The University Centers includes approximately 20 employees, part-time and full-time. All full-time and part-time employees are invited to participate in this study. The University Centers also employs approximately 150 students. Ten percent of the population will be sampled using a proportional stratified sampling technique.

Chapter IV

Results and Findings

The Total Quality Management (TQM) based quality system is the program that best applies to this organization because it will allow freedom of expression in improvement processes. The TQM quality system will replace the current ISO 9001:2000 quality system. The TQM process has a human element to it that other quality systems do not have. TQM will ensure a larger participation level from this organization and help increase morale of the employees working with this particular system.

The results of the interview process for this study are being categorized based on themes that showed recurring regularities through out the process. Developing themes involves looking for these recurring ideas or thoughts in the data provided from the interviews (Merriam, 1988). Devising these categories is a mostly an intuitive process. However, it is systematic and informed based on the purpose of the study. For the purposes of this study, the researcher found the three themes that were discussed by the interviewees for each question asked.

Past Practices – Question One

Question one was based on what subjects liked about past practices based on the ISO 9000 system in place. There were three emerging themes among the participants. The first theme was having the documentation of policies and procedures completed. Before the ISO implementation, most of the departments did not have documented work instructions to explain what, how, and why a task was performed. The ISO implementation allowed them to ensure consistency in completing the tasks they needed to complete as well as have the knowledge of what tasks other departments required.

The second emerging theme among the participants was online webpage hosting the documents and checklists, and employee training checklists. This served as a communication tool among the departments in the sharing of knowledge and best practices. It also served as a much easier process for finding specific policies and procedures as needed.

The third emerging theme was having the employee training and training checklists documented. The participants felt this helped in the training of new employees and ensured each new employee was trained in the same fashion. Table one on the next page shows the break down of data. The participant response section other includes single responses from the participants.

Table 1

In the past, what are some practices, policies, or procedures through the ISO 9001:2000 system that you found desirable? Those that have helped the improvement and success of the University Centers?

Participant Responses	Number and Percentage of Reponses
Polices/Procedures/Documentation	10 (29%)
Documents available online	6 (17%)
Employee training and training checklists	5 (14%)
Was not here for ISO implementation	3 (9%)
Non-conforming report process	2 (6%)
Only used during training	2 (6%)
Not much was positive about this process	2 (6%)
Other (one or less responses)	5 (13%)

Recurring past themes show the participants enjoying the process of having to go through and document all of their processes. Most respondents felt this process was painful but provided the necessary means of ensuring all staff members, student or permanent, were aware of the duties and tasks needed to be performed. Participant 012 (personal communication, March 31, 2006) stated "document control provided current processes and a foundation for documenting our tasks. This was very important to us." Having the documentation in an online webpage was also felt to be beneficial because of

ease of access to the information. Training checklists were also appreciated by the participants as a way to ensure proper training for all staff members.

Current Practices – Question Two

Question two was based on what current practices the subjects like based on the TQM system that was put into place. The first theme to emerge from this question was the forms, work instructions, and checklists were much easier to use and work with. During the TQM implementation, the entire system was reviewed and all documentation was updated. The updates included a new layout, elimination of unnecessary steps, and the movement of documented tasks to the front of the document. The participants felt this made them want to use the work instructions more.

The second emerging theme involved the document change process. With the TQM implementation, the staff changed the process of document changes to require fewer signatures. This change helped create a faster turn around of needed changes to the process.

The third emerging theme showed that the new system is not used as much. Based on the participant information, the reason the system was not used as much is that the documentation was used mainly during training and then not needed during the year. This was found to be positive. Table two shows the break down of data. The participant response section other includes single responses from the participants.

Table 2

Identify current practices you find desirable and that you feel are contributing to the improvement and success of the University Centers.

Participant Responses	Number and Percentage of Reponses
Forms and Work Instructions were better and easier to use	6 (19%)
Easier document change process and easier process changes	5 (17%)
Does not get used as much	5 (17%)
Easier to work with new ideas	2 (6%)
Checklists are much easier to use than documents	2 (6%)
Website is cleaner and easier to use	2 (6%)
Other (one or less responses)	10 (29%)

Current themes from the TQM implementation process show the highest number of participants enjoying ease of being able to make changes, whether documentation or change in the process in general. Comments of how hard it was to make changes seem to be a part of this theme. With the TQM implementation, an update to the format, layout, and content of the documentation was established. The participants consistently stated the current forms, work instructions, and checklists are much easier to work with and look at.

A final current theme shows the subjects not using the system as a whole on a regular basis. The system not being used, based on the subjects responses, meant that the

online system or look up of documents was not needed as regularly and the subjects only used the documents during initial training and did not need to review those documents through out the year as employed. Participant 003 (personal communication, March 31, 2006) stated "the new work instructions are great but we only use them during initial training. It was required to use them much after that."

Future Practices – Question Three

Question three was based on what subjects would like to see in the future with regard to their practices. The first emerging theme was the focus on professional training and development. The participants felt that there is a need to ensure the staff is consistently updated in their field of expertise. This could involve conferences, the joining of professional organizations, and staff development days to complete this task.

The second emerging theme involved consistent evaluation of processes that are put into place. The participants stated it was important to review all the work instructions and documents issued and used to complete tasks. This could involve yearly reviews, internal audits, or management review based on the participant feedback.

The third emerging theme involves the utilization of a continuous improvement or preventive action tool. The participants felt many good ideas were coming out in meetings but not being followed through. The losing of this continuous improvement information was a concern for the participants because there is no solid tool to work with at this time. Table three shows the break down of data. The participant response section other includes single responses from the participants.

Table 3

What would you like the practices to be in the future that will contribute the improvement and success of the University Centers? Think in terms of employee development, expectations, processes, measurements, and continuous improvement.

Participant Responses	Number and Percentage of Reponses
Test, re-evaluate, and audit processes regularly	6 (18%)
Professional training and development	5 (15%)
Utilize a continuous improvement tool	4 (12%)
Reduce duplication of efforts	3 (9%)
Things are fine the way they are	3 (9%)
Measures, goals, and objectives need to be established and reviewed	2 (6%)
Other (one or less responses)	10 (31%)

Future themes discussed by the participants show continued emphasis on professional training and development of all permanent and student staff. Training and development is a consistent theme past, present, and future but the subjects want to continue to see emphasis placed on this topic. Evaluating and testing of the practices and processes we put in place is also an emerging theme among the subjects. It was not enough to have processes written down but those documented processes need to be evaluated on a regular basis to ensure current and updated information. Participant 003

(personal communication, March 31, 2006) stated "it would be nice for us to do yearly reviews of all the work instructions, job descriptions, and checklists with the new student leads. This was beneficial for me because we found that many of the instructions were incorrect and we were able to fix them." The other key theme the subjects would like to focus on in the future is the utilization of a continuous improvement tool and/or process. The participants want to ensure change can still be easily made but in the context of continuous improvement.

Trends – Question Four

Question four was based on trends the University Centers should focus on in the future. Trends are what set the level of expectation to ensure processes are in place to meet the needs of those expectations. The first emerging theme discussed with regard to trends was the monitoring of goals, objectives, and measurements. The participants felt that it is very important to set realistic and important goals and objectives and ensure they are measured on a regular basis. Many good goals had been set in the past but were not reviewed regularly. This made the participants feel as though they were not meeting expectations of themselves or their customers.

The second emerging theme discussed was that change is happening at University Centers. In the fall of 2006, the current director will be retiring. At that time an organizational review will be completed and the participants feel the process will be positive but will result in change.

The third emerging theme was customer satisfaction. The participants discussed how important it is to consistently monitor and maintain high levels of customer satisfaction. The participants felt this was a trend that needs to be discussed in further

detail so that with the changes arriving in the fall of 2006, customer satisfaction will remain a priority. Table four shows the break down of data. The participant response section other includes single responses from the participants.

Table 4

Are there trends you see within the processes at University Centers that we should be responding to ensure continued success? What are those trends?

Participant Responses	Number and Percentage of Reponses
Change is happening here at University Centers	9 (33%)
Measures, goals, and objectives – keep working on them	5 (19%)
Customer satisfaction has to be a priority	4 (15%)
Accountability for cash and cash management processes	3 (11%)
Better communication and understanding between departments	2 (7%)
Other (one or less responses)	3 (15%)

Trends the participants see show that measures, goals, and objectives are extremely important for University Centers to focus on. Past results of other assessments and inquiries have found the subjects trying to work on too many measures and goals and not able to see results in any area. The feeling is if one or two solid or good measures are focused on by University Centers, more will get accomplished.

Change is happening at the University Centers was discussed by many participants interviewed. There was much excitement about this trend, and the participants see it as positive process. Participant 005 (personal communication, March 31, 2006) stated, "changes are happening faster than we can keep up but we are getting better at keeping up. We are working to be proactive and to continue to be quick and nimble on our feet with the day to day stuff." The key, according to the participants, will be to keep up with the change in a positive and controlled process.

Customer satisfaction also remains a key trend for the University Centers to consistently monitor. Participant 008 (personal communication, March 31, 2006) states very well the need for customer satisfaction because we need to "add new things, new events, the interests of the students are always changing." With these changes and new events and services, customer satisfaction is important because the students are the customers of University Centers.

Quality Management Systems – Question Five

Question five was asked mainly to discern by the researcher if the participants were aware of other quality management systems and determine if there are other systems the participants would like to use or learn about. The first emerging theme among the participants was the knowledge of TQM. The majority of participants liked the TQM system and felt the organization should continue with the TQM methodologies.

The second emerging theme was to use no system at all. Participant 005 (personal communication, March 31, 2006) stated, "no system should be used. I have yet to see one that works well in this environment and brings longevity. It's hardworking people that bring about quality."

The third emerging theme was to use a combination of other systems. Participants felt that using one system is not a good fit for University Centers. Using the best practices from multiple quality systems would be beneficial in that the participants can use what works best for them. By having the ability to be flexible in quality management systems, the staff can be flexible with the needs of their customers.

Knowledge of quality management systems was also important. While this knowledge does not directly affect participation in a TQM system, it does provide some information into how knowledgeable the staff members at the University Centers were in choosing an ISO 9000 or TQM system for implementation. Figure one shows the break down of data. The participant response section other includes single responses from the participants.

Table 5

Are there other quality management systems or combination of systems you would like to see University Centers use? Reasons why?

Participant Responses	Number and Percentage of Reponses
TQM	8 (31%)
Other combinations	5 (19%)
Don't know about quality systems	5 (19%)
None at all	3 (12%)
Lean	2 (8%)
Other (one or less responses)	3 (11%)

The participants show a knowledge and liking of TQM systems based on current use or past use in other environments. There is also a recurring request of not using a quality management system anywhere at University Centers. Other participants would like to see a combination of quality management systems and other process platforms implemented at the University Centers.

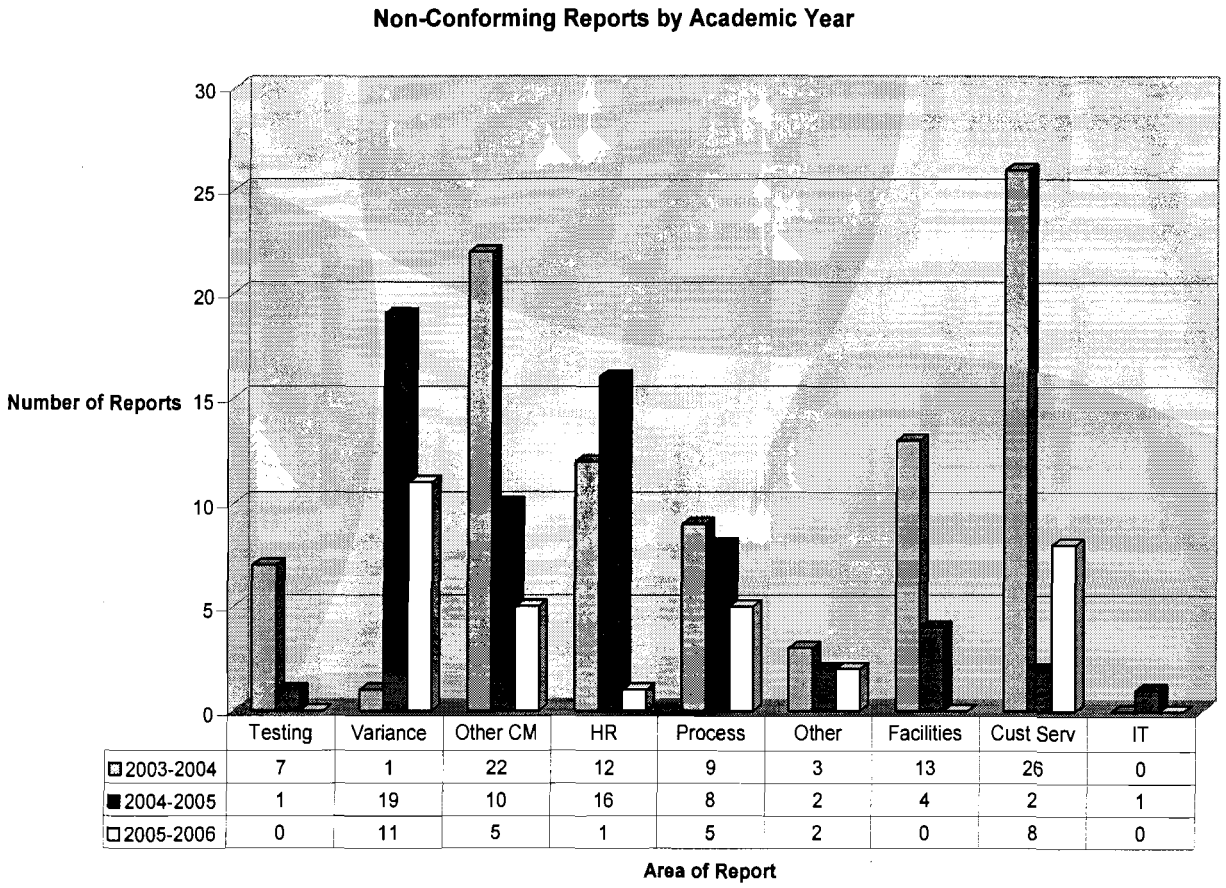
Non-Conforming Database – Customer Satisfaction and Employee Participation

The non-conforming database began in June 2003 with the ISO 9000 implementation. Its purpose was to document all non-conforming processes and product, customer complaints, and errors anywhere within the quality system at the University Centers. Its goal was also to give the employees at University Centers a way to

participate in the quality management system and ensure non-conforming processes were fixed to provide high customer satisfaction. During the TQM implementation, the database was expanded to include such preventive items like process changes and continuous improvement suggestions. Below are the results from the data taken from the database from June 2003-April 2006.

Figure One

Non-Conforming Reports Data by Academic Year and Area



	Testing	Variance	Other CM	HR	Process	Other	Facilities	Cust Serv	IT
2003-2004	7	1	22	12	9	3	13	26	0
2004-2005	1	19	10	16	8	2	4	2	1
2005-2006	0	11	5	1	5	2	0	8	0

Note: test = testing the database, variance = cash drawer errors, cm = cash management, HR = human resources, IT = information technology

From the data above, a strong participation level can be seen by the number of reports for the academic year 2003-2004 (starts in June). The next year shows a slight decline with an even larger percentage decrease in 2005-2006 of reports entered into the database.

Customer satisfaction levels based on the customer service entries show a major decrease in the 2004-2005 year but show higher levels in the 2005-2006 year.

Chapter V

Conclusion

The University Centers is looking for a quality management system that will ensure the highest level of customer service while providing a process that allows for employee participation with high levels of enthusiasm by the staff. Through TQM, the University Centers will show an increase of participation in their quality management system while improving morale for quality systems and improvement through training of basic quality management systems.

Limitations

This study is a case study involving only one organization. The results can only truly apply to this organization. TQM implementation is still in place with continued training. Based on the results of this study, University Centers may choose to re-evaluate their use of quality management systems in the future.

Summary

The University Centers permanent staff consists of 17 permanent employees, two limited term (part time) employees, and approximately 150 student staff members. The researcher was able to interview 15 of the permanent staff members, one limited term staff member, and eight student staff members for this study. An interview questionnaire consisting of five questions was used for the interview (see appendix one).

Results of the interviews were put into sets of three themes for each question asked. The themes were chosen based on the highest number of responses to a particular theme regularly discussed by all subjects interviewed.

Recommendations

Past experience with the ISO 9000 quality system, while not fully positive, was of some success in that processes and procedures were documented to ensure all employees completed their tasks consistently each time. Participant 12 states (personal communication, March 31, 2006) "the ISO system provided a foundation for document control important to us." Training and training checklists also provided a positive experience with the ISO implementation. Participant 022 (personal communication, March 31, 2006) stated "the training checklists put consistency in back into our training and was the most valuable piece of the implementation."

Current experiences with the TQM quality system continue with documentation themes. The process of changing the layout and format of the work instructions and procedures at University Centers made the documents easier to use and easier to work with. Participant 004 (personal communication, March 31, 2006) stated "the processes are much easier to understand now that they are in this new format."

Future themes and trends move into more focus on training and development, continuous improvement tools, and measurements, goals, and objectives. Participant 005 (personal communication, March 31, 2006) would like to "continue employee development by focusing on our professional fields. Become members in a professional organization and go to more conferences and training." Participant 020 (personal communication, March 31, 2006) discusses how the mission is solid but "goals need to be more fluid and usable for our organization." Continued discussion around solidifying measures to work with and build on to ensure improvement within the University Centers was also widely discussed.

Based on the information received from the interviews, it is not clear that an increased level of participation or employee involvement was found with the implementation of a TQM system. However, all subjects stated that future improvements in professional training and development, a need to review measurements, goals, and objectives, and utilizing continuous improvement methods were welcome and needed. All of these themes fall within the boundaries of a TQM system. The research also shows that knowledge of quality management systems in general is limited. The subjects did arrive at the conclusion that a TQM based quality management system is well liked. The comments from the subjects also show that a combination of quality systems or none at all would also be beneficial to the continuous improvement of the University Centers.

Three overlying themes across all questions show that priority should be set on training and development, establishing measures, goals, and objectives, and installing or using a continuous improvement tool. Training and development will be the focus for the Competence, Awareness, and Training Team at University Centers. The goal for the academic year 2006-2007 is to provide more professional training and development through conferences, job shadowing, and the development of a knowledge library for the sharing of training information at the university and in the community. The University Centers is in the process of completing a set of goals and objectives to measure for the next academic year 2006-2007. These goals and objectives will be strong but minimal in number to ensure they can be measured effectively. The University Centers will also be implementing an action request database to document all continuous improvement projects. The researcher recommends continuation with these projects to address the concerns of the participants.

The non-conforming database shows that is very unclear to know whether or not customer service levels have risen. If the database was used correctly and at all times, the data shows there is an increase in customer satisfaction as shown in the decrease of customer service non-conformities from 26 in 2003 to 8 in 2005. However, according to the researchers informal discussions with the employees at University Centers, the non-conforming reporting process was bypassed on many occasions due to lack of knowledge on how to use the database or simply not wanting to complete the process. Therefore, while there is some usable data from the non-conforming database, it cannot be determined if the current data collection tool is a correct, efficient, or positive collection method of customer information. The implementation of the action request database should provide the needed continuous improvement tool to track and monitor participation levels as well as customer satisfaction levels for University Centers.

During the last two decades one of the most common organizational change initiatives in the US was implementing and utilizing TQM features (Cameron & Quinn, 1999). This initiative, and other quality initiatives, were done to enhance effectiveness of the organization. However, most of these initiatives have fallen short. Rath and Strong (Cameron & Quinn, 1999) surveyed Fortune 500 companies to find that only 20% of those organizations achieved their quality goals. Over 40% of those quality initiatives were considered a flop. Most organizations considered TQM a flop and began cutting back on their quality budgets and programs. The point made by Cameron & Quinn was that without another fundamental type of change, a change in organizational culture, there is little hope of changing or improving organizational performance.

In November 2005, an appreciative inquiry was done at the University Centers to assess the culture within the organization (Ziolkowski, 2006). The results of this appreciative inquiry showed three areas of fundamental change the University Centers needed to address in order to enhance the performance, participation, and employee involvement of this organization. The changes seen as areas of improvement to enhance the culture of this organization were interdepartmental relationships, long term needs of the customers and students, and development of student programming.

It is the recommendation of this researcher that in order to fully embody and use the TQM process, the University Centers needs to continue addressing the results of the appreciative inquiry conducted in November 2005. Addressing those results should also lead to the continued improvement of professional training and development, the increased review and development of goals, objectives, and measures, and the implementation of a documented and used continuous improvement tool and process because a culture change within the organization will take place.

With the results of this study, it is clear that TQM provided a positive experience for the employees at University Centers. Although the results did not show an increase employee participation, TQM has provided a framework for the employees to address their overriding concerns as a result of the interviews completed. The University Centers should also invest the time into the action request database to provide better information on corrective and preventive actions, formerly known as non-conforming reports. Data is critical to making decisions in a TQM or any quality system (Masters, 1996). Lack of a measurement technique, data gathering tool, and unreliable data due to lack of access runs counter to TQM principles making it a barrier to a successful TQM program. With a

proper continuous improvement tool, measures, goals, and objectives can be surely measured properly, timely, efficiently, and provide the needed data to provide the expected customer satisfaction at University Centers. Korfhage (2005) states organizational excellence can only be achieved by aligning the organizations strategic plan with work group performance measures and continuous improvement actions. Aligning these is accomplished through a performance measurement system well-designed for the organization. A well-designed performance measurement system includes the proper instrument for tracking data.

It is also important to note that while TQM was a favorite among the staff, TQM might not be the right choice of a quality management system for University Centers. There are choices among the realm of quality management systems such as lean, Baldrige, kaizen, and six sigma for example. Another favorite mentioned by the staff would be a combination of systems, pulling the best from all areas. Participant 001 (personal communication, March 31, 2006) stated, "get something that works for us, nothing specific, but manageable, and doesn't bog us down."

Recommendations for Future Research

Further research should be continued with the appreciative inquiry process completed in November 2005. Completing or continued work on this process will ensure a culture change that is needed to continue the implementation of a quality management system. As Cameron and Quinn (1999) stated, TQM procedures at organizations get treated as a technique or change in the program, not a shift in the organization's direction, values, or culture. Without this vital culture shift or change derived from the appreciative inquiry will ensure limited success in the TQM program at University Centers.

Further research into the selection of a quality management system whether it is TQM or no quality management system should also be completed. Quality management systems should be chosen based on the needs of the organization. One system is not a perfect fit for any organization. However, pulling the best of each quality management system may be of better benefit to an organization, if the culture of the organization values these tools and understands that when the tools change, it does not mean the culture or values of the organization should change (Cameron & Quinn, 1999).

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Appendix One: Interviewer Questionnaire Form

Total Quality Management
Interviewer Questionnaire Form

Date:_____

Time:_____

Interviewer Name:_____

Interviewee Code Number:_____

1) In the past, what are some practices, policies, or procedures through the ISO 9001:2000 system that you found desirable? Those that have helped the improvement and success of the University Centers?

2) Identify current practices you find desirable and that you feel are contributing to the improvement and success of the University Centers.

3) What would you like the practices to be in the future that will contribute the improvement and success of the University Centers? Think in terms of employee development, expectations, processes, measurements, and continuous improvement.

4) Are there trends you see within the processes at University Centers that we should be responding to ensure continued success? What are those trends?

5) Are there other quality management systems or combination of systems you would like to see University Centers use? Reasons why?