QUALITY MANAGEMENT IN HIGHER EDUCATION: ABANDONED OR EMBEDDED?

by

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(Under the Direction of James C. Hearn)

ABSTRACT

Financial, legislative, and competitive pressures in the 1980s caused many higher education institutions to pursue quality management, and the late-1980s and 1990s saw the adoption of quality management principles by a variety of public and private universities, community and technical colleges, and professional schools. Quality management tools and methodologies were applied to a variety of administrative and academic processes, and customers, e.g., students, alumni, employers. This research aims to determine the extent to which the quality management movement during the late-1980s and 1990s continued at three four-year public higher education institutions, and the factors that led to quality management being embedded or abandonment at these institutions. The three case study institutions are the Georgia Institute of Technology, University of Maryland College Park, and Pennsylvania State University - University Park.

Leadership theory and organizational theory conceptual frameworks were used to inform my research. The research results indicated that individuals with certain engaging trait, participative, and transformational leadership styles may be more successful in implementing and sustaining change initiatives such as quality management. In addition, change initiatives may experience greater success and sustainability in collegial organizations than bureaucratic and

political organizations. The research results also identified five additional factors contributing to quality management being embedded in the three institutions. The research suggests that external influence (business, industry, governing entities, legislative, public, etc.) may have a positive and/or negative effect on a quality management initiative, and care should be taken to consider but not primarily let external influences drive the strategy of the quality management initiative. Adapting the language and methodologies of quality management to various campus constituents may reduce apprehension and enhance acceptance of quality management. In addition, the research results suggest that creating an internal department that supports the organization's quality management activities facilitates the implementation and continuation of quality management. The inclusion of quality management principles in the strategic planning process and as a strategic initiative communicates organizational commitment, and emphasizes its strategic importance. Finally, the research results suggest that developing and assigning responsibility of key performance measures and an organizational culture of assessment to drive accountability and measure progress may help quality management endure.

INDEX WORDS: Total Quality Management, Continuous Quality Improvement, Quality Management, Georgia Institute of Technology, University of Maryland College Park, Pennsylvania State University – University Park

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A Dissertation Submitted to the Graduate Faculty of The University of Georgia in Partial Fulfillment of the Requirements for the Degree

DOCTOR

OF EDUCATION

ATHENS, GEORGIA

2015

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December 2015

DEDICATION

My parents taught me much about hard work, ethics, and commitment, and made so many sacrifices to provide my siblings and me with a strong educational foundation and appreciation for learning. This is for you, Mom and Dad!

ACKNOWLEDGEMENTS

From the day she was born, my daughter has been my greatest inspiration and my proudest accomplishment. She has been an immense source of personal encouragement and practical support during my doctoral studies and dissertation writing. Thank you for doing so many of my errands, the endless meals and snacks, and sending the boys my way when I needed a break!

My major professor, Jim Hearn, has provided infinite patience with my endless questions and invaluable advice during my dissertation proposal, research, analysis, and writing. My dissertation committee members – Erik Ness and Karen Webber – offered many insightful comments and helpful feedback on my dissertation proposal and the final product.

My classmates helped increase my knowledge of higher education, provided invaluable support and encouragement, and became my lifelong friends.

Elisabeth Hughes has the patience of a saint. I want to personally thank her for all of her tireless efforts to answer my endless questions, fixing all manner of my mistakes, ensuring we were properly fed at all times during and after class, coordinating numerous residencies and international trips, and most important for the gift of her friendship.

My Emory Law School colleagues – especially Andrea Schmoyer and Jessica Dworkin - covered for me many times during the past two years, and I thank them for their support.

Brooks Seay offered such an outstanding example of and inspiration for my doctorate. Her invaluable editing skills, and enduring professional support and personal friendship have been irreplaceable.

Rob provided the competitive motivation to achieve my doctorate. Anything you can do, I can do better!

Thank you all from the bottom of my heart!

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CHAPTER 1

STATEMENT OF PROBLEM

During the 1980s, public higher education institutions in the United States saw a reduction in federal funding, ambiguity around the value of a degree, increased competition, high degrees of change, resource scarcity, rising dropout rates, and shifting student demographics. Economic and legislative forces were pushing higher education into a new environment. Federal and state policies improved postsecondary education access and ushered in the age of massification, placing pressure on institutional leaders who were not given corresponding levels of public financial resources. Officials at public colleges and universities were expected to improve performance in terms of teaching and producing competent college graduates (Hogg & Hogg, 1995). At the same time, tuition continued to increase along with public demand for more accountability and improved institutional efficiency and effectiveness. Leveille (2006) stated that

> The term *accountability* . . . refers to the responsibility (if not legal obligation) of campus and system administrators, as well as governmental officials, to provide their supervisors (ultimately, the public) reports of their stewardship of public funds. Such officials have always had a professional responsibility to account for their use of public dollars, but since the 1970s, deteriorating state and national economic conditions have led to demands for greater accountability (p. 31, 34).

Higher education faced a new era. Students, parents, legislators, businesses, and the public were becoming increasingly dissatisfied with the quality of higher education being provided, e.g., large class sizes, lack of access to faculty, and haphazard instruction (Hogg & Hogg, 1995). Government authorities and society were no longer receptive to the traditional self-regulatory processes that dominated universities for centuries. Barnett (1992) stated that

> Our higher education systems have entered 'the age of disenchantment' and society is not prepared to accept that higher education is self-justifying, and wishes to expose the activities of the secret garden. With greater expectations being placed on it, higher education is being obliged to examine itself or be examined by others (p. 16).

The accountability movement in higher education gave rise to new systems such as performance-based budgeting, and increased attention on the efficiency and effectiveness of state colleges and universities. Many state higher education institutions were under pressure to implement performance-based funding which linked a portion of government funds to goals such as access, completion rates, and educational efficiency. To cope with these pressures, some higher education institution leaders looked to management systems - usually introduced first in the business and government sectors and subsequently adopted and adapted by the higher education sector - such as total quality management and continuous quality improvement to address some of these challenges. Total quality management and continuous quality improvement encompassed various quality management tools and methodologies.

In the aftermath of the 2008 Great Recession, academic and administrative leaders in higher education are still faced with many of these same challenges and the ever-shifting financial and regulatory landscape of higher education that were experienced over two decades ago. Decreasing state appropriations have led to undependable funding levels and tenuous budget planning. Adding to this tension is President Obama's recent focus on improving achievement and completion rates in order to meet changing workforce demands and remain internationally competitive (Lebioda, 2014). In addition, the evolution of performance-based funding to outcomes-oriented assessment aim to link the allocation of a substantial part of state funding on federal- and state-desired student success outcomes such as academic progress, learning, graduation, and job placement (J. C. Hearn, personal communication, December 18, 2014).

Higher education institutional leaders feel the pressure to innovate and improve learning outcomes while simultaneously maintaining or even improving institutional efficiency and effectiveness. As in the late 1980s and early 1990s, the use of quality management tools and methodologies may aid higher education leaders in these efforts. It is important to note that the organizational culture of an institution and the leadership style(s) of key individuals are important aspects that should be considered when pursuing change initiatives such as quality management. As such, leadership theory and organizational theory were the primary lenses used to guide and inform the research.

There is scarce published literature that follows up with higher education institutions that successfully implemented quality management in the early 1990s to determine if the quality management movement in their organization was a management fad (Birnbaum, 2000) or evolved to a strategically-embedded management system. The research attempts to determine the extent to which the quality management movement during the late-1980s and 1990s continued at three four-year public higher education institutions, and the factors which led to the continuation or abandonment of quality management at these institutions. As higher education leaders consider the use of quality management tools and methodologies to address current challenges, the research is designed to analyze the factors that contributed to quality management being embedded or abandoned in higher education colleges and universities. As such, two research questions guided and informed my research:

1. What factors are associated with the continuation or abandonment of quality management initiatives in higher education?
2. In what ways have quality management efforts evolved on campuses since the early 1990s?

CHAPTER 2

LITERATURE REVIEW

There is no one definitive piece of literature chronicling the history of quality management in higher education, only brief excerpts included in the introduction of various books, articles, and case studies. The post mid-1980s literature on quality management in higher education focused primarily on planning and implementation tactics and recounting successful case studies, although there is some literature describing the barriers to implementation and a few case studies that examined unsuccessful quality management projects. The literature addressed the various definitions of quality, implementation frameworks, and tools and methodology used in quality management. In addition, the writings explained institutions' impetus for pursuing quality management; information, characteristics and benefits of successful quality management implementations; and barriers to quality management planning and implementation. There are several areas where additional research could be conducted, and scholarship produced. Following is a review of the literature of quality management in higher education from the mid-1980s through the early 2010s.

The Evolution of Quality Management

While there is extensive literature on the history of the quality movement in the United States, I will only briefly touch on this topic as a foundation for the history of quality management in higher education. It is possible to trace the origins of continuous improvement back to the standardized measurements employed by the Egyptians in building the pyramids. Awareness and a systemized body of knowledge began to take shape, though, with Fred Taylor's

introduction of scientific management in the late 1890s (Mouradian, 2002), ushering in the first of the four major modern eras that contributed to the quality movement and its body of knowledge (Dew & Nearing, 2004).

The pre-1930s Inspection (‘inspects in’ quality) era emphasized product uniformity using gauging and measurement methods (Mouradian, 2002). Walter Shewhart’s published work on statistical charts in 1931 in *Economic Control of Quality in Manufactured Product* (Dew & Nearing, 2004) launched the Statistical Quality Control era (‘controls in’ quality) that occurred during the 1930s–1950s and focused on product uniformity with reduced inspection using statistical tools and techniques (Seymour, 1992). The continuous improvement body of knowledge incorporated other statistical concepts such as sampling, and integrated practical tools and concepts developed within the engineering community (Dew & Nearing, 2004). Deming and Juran’s formative research, writings, and teaching on quality management also made notable contributions to Japanese engineers, management executives, and the quality management literature in the 1950s (Coate, 1993). The Japanese embraced these quality principles during this era, but the United States did not.

The 1950s–1980s was the Quality Assurance era (‘builds in’ quality) that encompassed the entire production chain, and the contribution of all functional groups to prevent quality failures by using programs and systems (Mouradian, 2002). In the 1950s and 1960s, continuous improvement expanded to include concepts and tools from the social sciences and organizational development (Dew & Nearing, 2004). By the 1980s, Japan was a dominant industrial powerhouse, and led by major businesses such as Ford, Xerox, and Motorola, quality management finally took hold in the United States in the early 1980s. It took another 5-10 years for United States colleges and universities to discover quality management and test its

adaptability to higher education (Coate, 1993). Dew & Nearing (2004) claimed that "the body of knowledge for continuous improvement evolved over many decades through the collaboration of academics and students who sought to apply these concepts in business and industry" (p. 3).

The Strategic Quality Management era ('manages in' quality) of the 1980s and 1990s emphasized market and consumer needs using strategic planning, goal setting, and mobilizing the organization (Mouradian, 2002; Seymour, 1992). It was in this era that the national focus on continuous improvement was at its highest peak. Many companies were achieving success by focusing on continuous improvement, and the Malcolm Baldridge National Quality Award - a new national award for excellence in management - had been created. It was also in this era when support for continuous improvement in higher education had grown (Dew & Nearing, 2004).

Assuring Quality in Higher Education: A Brief History

The origin of accreditation systems as a form of quality assurance in American higher education date back to the late nineteenth and early twentieth centuries (Woodhouse, 2004). Higher education in the 1940s experienced a trend of responding to challenges in demographics, economics, and social values. Enrollments increased after World War II, new programs were created, and competition was limited. Quality was often based on institutional reputation as reflected in admissions test scores, size of endowment, and number of faculty with PhDs. The 1970s and 1980s saw a reduction in federal funding, ambiguity around the value of a degree, corporations offering courses and degrees, and shifting demographics (Freed et al., 1997). At the same time, tuition was increasing along with the public demand for more accountability and increased productivity (Fincher, 1991). Competition increased, students were shopping around, and higher education - used to thinking of value in terms of low cost or exclusivity - needed to

(re)consider the existing external environment (Dehne, 1995). With the public's concern about educational value and outcomes, the definition of quality was changing from the traditional internal focus on product and service to an external focus on various stakeholders'- defined as faculty, students, administration, parents, employers, research community, alumni, local community and society - expectations (Mizikaci, 2009; Ruben, 1995), and a focus from quality teaching to quality learning (Bok, 2013). Others agreed with this view.

> The public has the right to know what it is getting for its expenditure of tax resources; the public has a right to know and understand the quality of undergraduate education that young people receive from publicly funded colleges and universities. They have a right to know that their resources are being wisely invested and committed . . . public policy makers, taxpayers, students and parents should expect colleges and universities to fulfill their promises. To assume accountability, postsecondary institutions must assess [students'] learning and ability, [programs'] effectiveness, and [institutions'] accomplishment of their mission (Mayhew et al., 1990, p.11).

Assessment rose in part as a response to the increased demands for accountability (Gaston, 2014). The beginning of the assessment movement in higher education is often associated with two national reports: The National Institute of Education's 1984 report, *Involvement in Learning*, and the Association of American Colleges 1985 report *Integrity in the College Curriculum.* Similar to long-range planning in the late 1970s and strategic planning in the mid-1980s, higher education was influenced by the management experiences of government, business, and industry. A handful of colleges joined the quality movement in the mid- to late-1980s (Hubbard, 1993). The early followers were a mixture of community colleges, private and public schools, and university systems (Dew & Nearing, 2004). In the late 1980s quality management existed only on the fringes of campuses with approximately 40 higher education institutions (Freed, et al., 1997) beginning to adopt quality principles, and defining quality according to stakeholder expectations and educational outcomes (Miller, 1991; Seymour, 1992;

Spanbauer, 1992). Higher education leaders' interest in the quality movement exploded in 1991 and 1992 as evidenced by a national survey on total quality management identifying over 400 higher education institutions as having shown interest in the quality movement (Freed et al., 1994). During the late-1980s, academic leaders questioned the value and appropriateness of quality for higher education. Just a few years later, administrators no longer asked whether the quality movement was appropriate, they asked how to make quality management relevant and worthwhile on their campuses (American Association for Higher Education, 1994).

Simultaneously, there was growing state interest in assessment, as many states had adopted assessment mandates for public colleges and universities. Linking Total Quality Management (TQM) with the assessment movement was attractive as both management systems shared several qualities. Both incorporated a systematic approach to change, emphasized the need to listen to customers - although the notion of students as customers was at times contentious - and, stressed performance information as a critical part of continuous planning and improvement (Ewell, 2002).

Academe's interest in implementing quality principles continued to evolve as indicated in the 1995 Quality in Education Survey by *Quality Progress.* Eighty-eight percent of four-year colleges and universities and 91% of community colleges that responded to the survey reported using quality principles to manage their administrations (Calek, 1995). Because quality techniques were often viewed as management tools, quality principles were generally first applied in administration and only later in academic areas (Seymour, 1991). In response to this interest, the Continuous Quality Improvement Network of Community and Technical Colleges formed in 1990. The Academic Quality Consortium was created in January, 1993 and was chartered with providing campuses the opportunity to exchange information, build on each

other's experiences, expand on assessment practices, and share the results of their work with the broader higher education community. In addition, the focus of the 1996 National Association of College and University Business Officers' annual meeting was on process improvement and innovative ideas to assist colleges and universities in offering new or improved services to their students (Freed et al., 1997).

Early iterations of accountability focused on governance structures that simultaneously provided institutional autonomy with effective and efficient state oversight of campus decision-making. The focus on accountability expressed itself in three distinct forms of accountability: performance funding, performance budgeting, and performance reporting. Performance funding linked the allocation of state funds to public higher education institutions' achievement of pre-defined performance indicators, while performance budgeting permitted state governing bodies to consider the allocation of funds to the achievement of various performance indicators. Performance reporting only required higher education administrators to provide performance information (McLendon et al., 2006).

Tennessee initiated the first formal performance-based funding model in 1979-1980, followed by Connecticut in 1985, Missouri in 1991, and Kentucky in 1992. Performance-based funding offered higher education leaders a 'particularly nutritious carrot rather than an accountability stick' (Banta, et al, 1996). By 2001, twenty-one states had adopted performance funding systems. There has recently been a resurgence in state performance-based funding. 'Performance Funding 2.0' incorporates features such as degree production; workforce development; efficient alignment of mission, measures and incentives; persistence; and financial and political stakes (J. C. Hearn, personal communication, December 18, 2014). Quality management had gained wide acceptance in the business and manufacturing sectors as an

institutional transformation philosophy, and one which higher education leaders chose to address the shifting higher education landscape and declining resources without compromising the quality of education.

Birnbaum (2000) described the history of several management systems over the past 40 years, and argued that management systems - or management fads - are usually introduced first into the business and government sectors, and subsequently adapted by higher education. Birnbaum explained the life cycle of where fads come from, why they frequently fail, and how they occur; and stated that even management approaches such as fads can make a difference. He provided examples including the planning programming budgeting system, business process reengineering, benchmarking and total quality management (TQM), and continuous quality improvement (CQI). He did temper his argument, though, by acknowledging that very little empirical research has been conducted on management fads. G. Williams (1993) posed the question, then, of whether quality management in higher education was a panacea or placebo - an actual versus perceived solution to the issues facing higher education leaders - and suggested that the main themes of continuous quality improvement had a significant contribution to make to the development of efficient and effective higher education systems and institutions.

The Impetus for Quality Management

There were many motivations for higher education institutions to pursue quality management. “Quality is not a new concept in higher education. Institutions have always striven for academic excellence and high quality. What is new is the rapidly changing environment in which institutions operate and the changing public and professional perception of what defines a quality institution” (Freed, et al., 1997, p. 1). Higher education leaders have claimed to hold academic excellence and high quality as goals. As college and university leaders faced the

financial realities of decreasing enrollments and revenues coupled with increasing costs and competition, many looked to increase their institution's competitiveness and productivity by improving academic and administrative quality (Freed et al., 1997; Mergen et al., 2000). A 1992 Oregon State University Image Survey of 23 United States higher education institutions that had committed to implementing total quality management within the past three years indicated that more than half cited improving quality and becoming customer-oriented as the primary benefits expected (Coate, 1993).

A wide variety of external stimuli led higher education institutions to embrace the quality movement (Hoffman & Julius, 1995). Freed et al. (1997) commented that

> Criticism, encouragement, and pressure from businesses were often cited as reasons in institutions located in metropolitan areas. Public institutions cited legislative and public demands for accountability because of the significant amount of funds being allocated to public institutions. These same institutions cited reduced support from state governments as an additional impetus to implement the quality principles. Along the same lines, some schools faced declining enrollments because of increased competition and a declining population base. And other schools cited reaccreditation and advice from college advisory boards (p. 28).

The emergence of performance-based funding in the late 1970s was another key impetus prompting higher education institutions to pursue quality management. McLendon et al. (2006), indicated that the demand for accountability was a result of several factors including the pressure to maximize productivity and efficiency with the arrival of globalization; shift of public-sector governance focused on decentralization, entrepreneurship, markets, competitiveness and performance measurement; extreme financial pressures in the 1990s; trickle up effect of the K-12 reform movement; new state leadership's focus on increased accountability; and failure of previous voluntary institutional assessment efforts.

In addition to external influences, many internal influences also led higher education institutions to pursue quality management.

> Several institutions recognized the irony that they taught quality improvement but did not practice what they taught. Many realized that they needed to improve processes within their institutions, others sought to improve services for stakeholders, and still others sought to achieve the vision and mission. Many institutions wanted to eliminate the duplication of effort in academic and administrative areas and thereby increase the organization's efficiency (Freed et al., 1997, p. 29).

Dew & Nearing (2004) cited David Ward's quote summarizing the feeling of many academic and administrative leaders in higher education at that time, "It was time for the university to start doing some things differently, not just the same things better'' (p. 77).

Quality and Quality Management Methodologies

Seymour (1993a) posed the question, "What is quality? People are willing to pay for it, organizations are driven to invest in it, workers are exhorted to produce it, and advertisers feel compelled to communicate it. Everyone wants it, but what is it?" (p. 6). Henry Ford offered his view that 'quality means doing it right when no one is looking'.

Definitions of quality vary and examples included a predictable degree of uniformity and dependability at a low cost, suited to the market (Deming, 1986); fitness for use as judged by the user (Harvey & Green, 1993; Juran, 1989); conformance to requirements (Crosby, 1979); full customer satisfaction (Feigenbaum, 1956); continuous improvement involving everyone (Imai, 1986); and a thought revolution in management (Ishikawa, 1985). Scott (1994) outlined five quality concepts: quality as excellence, quality as audit, quality as outcomes, quality as mission, and quality as culture (p. 65-66).

Deming (1986) stated that quality is defined by stakeholders, and therefore, quality is a moving target because customers' perceptions change and evolve. Chaffee & Sherr (1992) stated

that quality is something people do (a verb) rather than a state of being (a noun). Quality is indeed nebulous, yet important to define. Newton (2002) declared quality as a contested issue, and Jones (2003) outlined several dichotomies when approaching quality in higher education.

> One views quality improvement at the macro or university level, another focuses at the micro or education-delivery level. One sees quality assessment as an administrative 'check-off', the other sees quality as a continuous improvement in educational delivery. One values quantitative measures to demonstrate quality, the other values qualitative measures (p. 223).

Seymour (1992) offered another definition of quality in higher education during the current Strategic Quality Management era. "Quality extends beyond the interaction between the professor and the student in the classroom or the meeting of accreditation standards; strategic quality management is a set of multi-dimensional principles that embrace this broadened definition" (p. 25).

Quality leaders in higher education often used four criteria to define quality: input of resources (e.g., grade point averages and standardized test scores of incoming students, faculty terminal degrees, size of endowment); outputs (e.g., graduate rate, faculty publications and research grants, scholarly awards); value-added criteria (e.g., intellectual development of a student); and academic and non-academic processes (e.g., student evaluations, payroll processing). Bergquist's (1995) definition of quality aligned with these criterion.

> Quality exists in a college or university to the extent that adequate and appropriate resources are being directed successfully towards the accomplishment of mission-related institutional outcomes and that programs in the college or university make a significant and positive mission-related difference in the lives of people affiliated with the college or university and are created, conducted, and modified in a manner that is consistent with the missions (and values) of the institution (p. 44).

This definition of quality was valid in that it included the four criterion used to measure quality, and positions quality as an ongoing process. Its weakness, though, was that it did not define quality as a fundamental part of the culture of an organization (Bergquist, 1995).

There are numerous quality management methodologies including business process reengineering (Birnbaum, 2000), continuous quality improvement (Birnbaum, 2000; Dew & Nearing, 2004; Roberts, 1995), Lean (Balzer, 2010), process improvement (Seymour, 1992), quality assurance (Mouradian, 2002), Six Sigma (Mouradian, 2002), and total quality management or TQM (Birnbaum, 2000). In addition, tools such as Plan-Do-Check-Act (Sokol, 1993), flow charts (J. Williams, 1993), affinity and cause and effect diagrams, Pareto charts, histograms, run charts, scatter diagrams, force field analysis, relations diagrams, and control charts (Cornesky & McCool, 1992; Seymour, 1992) were often used. Dew & Nearing (2004) included other tools such as self-assessments, benchmarking, measurement, and feedback, and Heverly and Parker (1993) added Hoshin planning.

There were several studies that discussed the application of quality management methodologies and tools in higher education (Mergen et al., 2000), but few examples of comprehensive quality frameworks applied to higher education (Natarajan et al., 1999; Wallace, 1999). One such framework was developed by Mergen et al. (2000), professors at the Rochester Institute of Technology's College of Business. Prompted by several institutional problems and the lack of comprehensive and well-structured quality management frameworks for higher education at the time, Mergen at al. (2000) developed a model to identify improvement opportunities, operationalize quality management concepts, and structure internal discussions to increase quality-related research. Using Juran's Trilogy model - widely utilized for new product development - as the foundation, Mergen et al. (2000) developed a quality management

framework built around three basic quality parameters: design, conformance, and performance. A two-dimensional matrix mapped the relationship of the three quality parameters to functional areas depicting how each functional area contributed to quality, and how quality principles and tools could be used to improve processes.

Seymour (1993a) cautioned that strategic quality management in higher education has a great deal in common with a "red queen of spades" (p. 23), referencing Kuhn's premise that information that agrees with expectations created by a paradigm has an easier path to recognition as compared to information that does not match the expectations created by a paradigm which is usually ignored. Quality management was indeed very nebulous, but it was necessary for organizational leaders to determine the most appropriate definition, as well as the most effective framework, methodology and tools to utilize in order to successfully accomplish their goals and objectives.

Successful Quality Management Initiatives

The literature provided details of many successful quality management initiatives and case studies as well as several key characteristics contributing to their success. As reported in the October, 1992 issue of *Quality Progress*, over 200 institutions of higher learning reported to be involved in quality management. From 1991 to 1992, the number had grown from 92 to 220 (Lewis & Smith, 1994). As early as 1991, quality management success stories at a handful of institutions were being published (Bemowski, 1991), detailing accounts of its adoption, early successes, and how-to stories (Entin, 1993).

Many schools focused their quality management efforts solely on administrative processes. Fox Valley Technical College realized measurable improvements in reducing the cycle time for student application processing, decreasing accidents and workers compensation

claims, and revising management performance appraisal criteria (Tyler, 1993). Rio Salado Community College successfully utilized total quality management tools to promote understanding of the way things happen, concentrating in the areas of meeting facilitation, process definition, project selection, and data gathering and analysis (Koberna & Walter, 1993).

Having realized success with their initial quality management efforts with administrative processes, many schools extended their focus to include academic and research processes. Pennsylvania State University (Penn State) initially pursued quality management to become more effective and efficient in processes such as chemical management, procurement of scientific equipment, research proposal preparation, and academic transcripts process, and subsequently expanded their efforts to improving student readiness and the learning experience (Seymour, 1993b). Similarly, Oregon State University (OSU), faced with downsizing while at the same time trying to improve operational and service quality in 1990, decided to pursue TQM to help improve the quality and productivity of their operations and services. By 1993, over 85 OSU process quality improvement teams working in administrative and academic areas had received numerous rewards for their work in TQM (Coate, 1993). Georgia Institute of Technology (Georgia Tech) began their continuous quality improvement (CQI) journey in the early 1990s and focused their initial efforts on implementing CQI within university operations and research, reporting successful CQI results in both areas (Roberts, 1995; Seymour, 1993a; Seymour, 1993b).

While generally not the norm, some universities initially pursued quality management to improve academic processes. Maryam Alavi, professor at the University of Maryland, created a technology infrastructure built upon the total quality principles of customer satisfaction (creating an environment of user-seduction), measurement and feedback (anonymous and real-time

classroom feedback meters), and teamwork (level of engagement) to enhance the teaching and learning process (Seymour, 1993b). In response to criticism from the business community that MBA graduates were not prepared to contribute value to organizations, academic leaders at the University of Tennessee's MBA program initiated a total quality project focused on changes to the MBA curriculum. The new curriculum was put into place in 1991, and three groups of students from the new program worked in summer internships, and two groups received job offers upon graduation (Roberts, 1995). Using the Plan-Do-Check-Act quality management cycle, Sokol (1993), associate professor of physics at Penn State, emphasized homework rather than exams, and as a result improved learning outcomes in his Introductory Physics course. Penn State's decision to also focus on understanding the requirements of their customers - defined as students and employers - was a turning point in their TQM initiative. With senior leadership's commitment to 'walk the talk', customer-focused continuous quality improvement permeated all Penn State's endeavors with quality teams working with and learning from each other (Seymour, 1993b). As evidenced by these examples, quality management had been successfully applied to a wide variety of colleges, universities, processes, programs, and courses.

Building on these examples, Seymour (1992) offered several characteristics of successful quality initiatives including building a supportive culture, willingness to share information, creating an effective communications delivery system, involving everyone in the quality journey, breaking down organizational barriers, and recognizing and rewarding successes. Dew & Nearing (2004) added educating and engaging faculty and staff, insuring committed leadership, and using cross-functional teams. Based on their experiences at the University of Pennsylvania, Miselis (1993), the executive vice president for finance and administration at Franklin Institute, promoted using pilot teams and projects; and Winch (1993), administrative director of

undergraduate programs at Penn State, emphasized the importance of the building the right culture. Coate (1993) promoted the use of frequent team status and summary reports, and proposed six key factors to successful implementation of TQM in higher education: commitment from senior leadership; just do it – don't study it to death; teams are everything; identify a senior-level champion; breakthrough planning (activities that will generate quality improvements in basic systems and processes); and try the service side first.

Testimonials of successful applications of quality management in higher education during the late 1980s and 1990s were abundant, but empirical evidence and data was scarce. In some organizations, it had transformed the culture and had a dramatic impact on efficiency and effectiveness, and in others it had been an outright failure (Seymour, 1993a).

Unsuccessful Quality Management Initiatives and Implementation Barriers

Koch (2003) argued that TQM's time had come and gone in higher education, and claimed that two-thirds of higher education institutions that began TQM projects in the 1990s had abandoned them because the vast majority have been failures. This was due, he claimed, primarily to the difficulty of defining the precise nature of higher education and because higher education has failed to address the most important issues such as faculty tenure, curriculum, and tuition and fee levels vis-à-vis scholarship assistance. Few case studies included aspects of why quality management initiatives in higher education were not successful, although there was some literature available on barriers to implementation of quality management in higher education.

Coate (1993) cited common barriers to implementation that Oregon State University encountered including skepticism (it's only a fad mentality); time and workload balance (another thing to be laid on them); quality language (suspicious of jargon-laden language); middle management resistance (empowering employees is incompatible to a command-and-control

management style); university governance (politically-driven committees and task forces); dysfunctional units (unhealthy interpersonal dynamics and use of TQM for personal agendas); and attitude (looking for the big fix, institutional arrogance, and suspicion). In addition, senior leadership turnover (Roberts, 1995), organizational inertia, and resistance to change (Koch, 2003) were also cited as implementation barriers.

Lewis & Smith (1994) offered three caveats to implementing quality management in higher education. The first caveat surrounded organizational structure (e.g., dual organizational and governance structure, intensive divisionalization, and fragmented leadership). The second caveat pertained to the culture of higher education institutions. Lewis & Smith (1994) claimed that higher education is different than other social institutions, and therefore should be exempt from assessment as continuous improvement and participation already exist in higher education organizations. The final caveat concerned the linguistic factor in that certain terms do not resonate well with the higher education community, e.g., customer and customer satisfaction, control and management, variation minimization, and standardization.

While Georgia Tech realized benefits from their continuous quality improvement efforts with their administrative and research processes, they had some difficulties improving their academic processes. Georgia Tech's Quality Council struggled with their effectiveness as a result of a transition in leadership, spotty understanding of the Council's role, not effectively touching many of the campus academic processes, and focusing their efforts solely on administrative and operational processes, assessment, and accreditation rather than incorporating academic processes (Roberts, 1995).

Conceptual Frameworks

Now, more than ever, higher education leaders are implementing changes in how they operate in order to cope with a new, more challenging competitive landscape and market forces. The combination of the leadership style(s) of higher education institution leader(s), and the organization's governance and decision-making structures may have a significant impact on the success or failure of its change initiatives. When leadership styles and governance models operate in harmony, transformational change may successfully occur. Conversely, if one or more of these elements are missing, success may be jeopardized, e.g., a decision is made to pursue a quality management initiative, but institutional leaders may not have the appropriate leadership style to champion and implement the initiative. Equally, an institution may be led by a transformational leader, but the leader may not have the necessary decision-making authority to pursue a quality management initiative. As such, aspects of leadership theory and organizational theory informed my research.

Leadership Theory: Chester Barnard (1938) defined leadership as the ability of a superior to influence the behavior of subordinates and persuade them to follow a particular course of action. Leadership styles are important methods by which leaders inspire and motivate others to accomplish goals and objectives. Effective leadership is a critical factor in the life and success of an organization. Leadership theory provides a valuable framework with which to define and organize the leadership factors associated with the continuation or abandonment of quality management initiatives in the three case study institutions. Specifically, trait, participative, transformational, and situational facets of leadership theory inform my research.

Successful leaders are often referred to in terms of traits such as personal attributes (humor, courage, judgment, integrity, persistence, vision, hard work and being opportunity

conscious), interpersonal abilities (being open and building teams), and technical management skills (producing results, resolving conflicts, and shaping the work environment) (Masland, 1985). Leaders with these types of traits may be more successful in effecting change initiatives in complex organizations with shared governance structures such as higher education institutions.

Participative leaders believe that involving other people - subordinates, peers, superiors, and other stakeholders - in the decision-making process may result in better decisions. In addition, when people make decisions together, the social commitment to one another is greater and increases their commitment to the goal (Kouzes & Posner, 2006). The continuum of participatory leadership styles range from autocratic decisions by the leader to full delegation of decisions to the team, and proposes that involvement in decision-making enhances the understanding of the activities by those who must execute the decisions. In addition, people who are involved in decision-making tend to be more committed, less competitive, and more collaborative. A participative leadership style can be damaging, though, when leaders ask for opinions and then ignore them, leaving people feeling cynical and betrayed (Kouzes & Posner, 2006). Participative leaders may be more successful in leading change initiatives when there are various internal and external, and at times competing, stakeholders involved.

Transformational leadership theory suggests that people will follow a person who is passionate, able to articulate a clear vision, and inspires them by their enthusiasm and energy. Transformational leaders develop and sell the vision of the future organization, building trust and often relying on personal integrity to do so. These leaders are visible; model desired attitudes and actions; continually communicate, listen, and motivate individuals and teams; and demonstrate unwavering commitment through the good and bad times (Kouzes & Posner, 2006). Birnbaum & Edelson (1989) state that in higher education, transformational leadership appropriately refers to

the inspirational role of the leader, but change can be very difficult to effect except in certain conditions such as institutional crisis where leaders are expected to take strong action.

Situational leadership emphasizes the behaviors leaders should adopt, given situational factors which generally focus on follower behavior. A situational leader's style is highly variable depending upon a range of situational factors, including forces in the particular situation, the followers, and/or the leader (Kouzes & Posner, 2006). Situational leaders may have to adjust their leadership style based upon the internal and external influences driving the pursuit of quality management, and the stakeholder(s) involved in implementation, e.g. faculty, administration, alumni, students, trustees, etc.

The various leadership styles of an institution's academic and administrative management may have a positive or negative effect on the adoption and implementation of change initiatives such as quality management. In the same way, the organization and its decision-making structures may also have an impact on the success or failure of a quality management initiative.

Organizational Theory. The strength and coherence of an organization's culture can support or detract from the adoption of initiatives (Masland, 1985). Organizational theory provided an understanding of how organizations make decisions, solve problems, maximize efficiency and productivity, and meet stakeholders' expectations. Organizational structure and governance are significant aspects of organizational theory, and have an essential influence in the culture of an organization and its decision-making processes (Birnbaum & Edelson, 1989). Organizational theory provided a valuable framework with which to define and organize the organizational system factors associated with the continuation or abandonment of quality management initiatives in the case study institutions. In particular, collegial, bureaucratic, and political organizational systems informed my research.

Collegial systems stress consensus, shared power, common commitments and aspirations, and leadership that emphasizes consultation and collective responsibility (Birnbaum & Edelson, 1989). Individual status is deemphasized and people interact as equals - a community of colleagues. Decisions are made by consensus, but consensus does not require unanimity. If participants feel they have had a chance to present their positon and influence the outcome, they are comfortable with supporting the chosen outcome (Birnbaum & Edelson, 1989). Collegial organization structures may foster buy-in and support for institutional initiatives such as quality management.

Bureaucratic systems are rational organizations that are commonly described via an organizational chart depicting lines of authority that flow downward. These systems have orderly processes guided by rules and regulations through which reports are prepared, forms processed, and work gets done. Pettigrew (1979) comments that bureaucracies "protect as well as restrict; coordinate as well as block; channel effort as well as limit it; permit universalism as well as provide sanctuary for the inept; maintain stability as well as retard change; and permit diversity as well as restrict it. They constitute the organizational memory and the means for change." (p. 30).

The core of bureaucratic management is decision-making, whereby leaders are expected to rationally analyze the most efficient means by which goals can be achieved. The main source of power is legitimization, with little referent power. Leaders in bureaucratic organizations are concerned with planning, directing, organizing, staffing, controlling, and evaluating (Birnbaum & Edelson, 1989). As these activities mirror the major tenets of any quality management system, leaders in bureaucratic organizations may be supporters of such a structured management system.

In political systems, the power to get one's way is through negotiation reliant upon social exchange and mutual dependence. Individuals acquire, develop, and use personal power to obtain preferred outcomes in situations where the group disagrees. Coalitions are formed with others in order to achieve a level of power and influence that cannot be achieved alone. Negotiation occurs with members of their own coalition as well as with the other groups or coalitions. Leaders understand that influence is exerted by people who are present when compromises are being negotiated (Birnbaum & Edelson, 1989). Effective political leaders seek agreement on values, and facilitate involvement in governance by reducing the cost of participation. Leaders in political systems may or may not have the power and coalition support to champion an initiative through the organization.

The organizational culture of an institution and the leadership style(s) of its officials have an impact on the success of change initiatives. As higher education leaders guide their organizations through change and change initiatives, an understanding of the leadership style and organizational factors that impact the success or failure of change initiatives may be beneficial.

Summary and Conclusion

While there is extensive literature on quality management in business and industry, the literature on quality management in higher education pales in comparison. Financial and competitive pressures in the 1980s caused many higher education institutions to pursue quality management, and the mid-1980s and 1990s saw the adoption of quality management principles by a variety of public and private academic institutions, e.g., universities, community and technical colleges, and professional schools. In addition, quality management principles were applied to a variety of administrative, research, and academic processes, and customers, e.g., students and employers.

Quality management in higher education is nebulous in that there are many definitions of quality and quality management, as well as a variety of quality management frameworks, methodologies, and tools. Each organization must determine the appropriate definition of quality and scope of processes on which to focus, as well as the most effective framework, methodologies, and tools utilized to accomplish their quality management goals. The most common reasons cited by higher education leadership for pursuing quality management were managing financial and competitive pressures, legislative and public demand for accountability, accreditation advisements, improving programs and services, and increasing organizational effectiveness and efficiency.

The review of quality management literature in higher education illustrated that numerous colleges and universities pursued quality management during the late 1980s and 1990s. Many were successful, although the definition of success was often vague and unquantifiable. Comparatively, there were few case studies of unsuccessful quality management initiatives, but some literature on barriers to implementation included skepticism, resistance to change, university and shared governance, and lack of leadership commitment. It should be noted that there may be bias towards publishing positive results, and the literature may not reflect an accurate depiction of the success or failure of quality management initiatives. As many of the same financial and competitive pressures that instigated quality management in higher education in the late 1980s still exist and new pressures are being encountered, there may be a resurgence of quality management systems and principles in academe.

CHAPTER 3

RESEARCH DESIGN

The research aimed to add to the literature and enhance the knowledge of why quality management programs were embedded or abandoned in three four-year public higher education institutions over the past two decades. For purposes of this research, quality management was defined as the utilization of quality management tools and methodologies to improve processes or services. The terms total quality management (TQM) and continuous quality improvement (CQI) are used interchangeably throughout the research report.

Research Method

I employed a multi-case study research design in this study, with each case study institution its own single, bounded system. Aspects of leadership theory and organizational theory were the lenses used with which to guide and inform my research.

As the study is historical in nature, I was the primary instrument of data collection and analysis. The findings are presented in two stages beginning with a within-case analysis, whereby each case was treated as a comprehensive case in and of itself. A cross-case analysis then built themes and patterns across the three cases in an effort to shape general assertions and interpretations. The format for each case consisted of a brief institutional overview, extensive description of the chronological evolution of quality management, and my observations of the factors which caused quality management to endure.

To identify the factors that led to the continuation or abandonment of quality management and ascertain the extent to which the quality management movement during the

late-1980s and 1990s continued at the three case study institutions, two research questions informed my research.

- What factors are associated with the continuation or abandonment of quality management initiatives in higher education?
- In what ways have quality management efforts evolved on campuses since the early 1990s?

To determine the evolution of a case study institution's quality management efforts since the early 1990s, five open-ended interview questions guided the gathering and organization of my research data.

- Why did the officials at < > choose to pursue quality management?
- In what ways have quality management efforts evolved on your campus since their earliest years?
- How has your institution defined and measured the success and cost-effectiveness of quality management efforts over the years?
- What were some of the challenges encountered?
- What lessons have been learned?

To discover the factors associated with the continuation or abandonment of a case study institution's quality management initiative(s), three open-ended interview questions were used.

- How have < > organizational and governance structures impacted the evolution of quality management over the years?
- How have the leadership styles of < > academic and administration leaders impacted the evolution of quality management over the years?

- What factors are associated with the continuation or abandonment of quality management initiatives since its inception at < >?

In an effort to determine the future of quality management at each case study institution, one final open-ended question was asked.

- How will quality management be utilized at < > in the coming years?

The remainder of the research design section will cover case study selection criteria, data sources and collection, coding techniques, limitations, and trustworthiness.

Case Study Selection

The data utilized to select the case study institutions was comprised of 201 United States universities and colleges, identified via a 1992 survey conducted by *Quality Progress*, which were self-reported as involved in quality management in the early 1990s (Lewis & Smith, 1994). The institutional data are categorized below.

Table 1

Higher Education Institutions by Type Involved in Quality Management in the Early 1990s

Institution Type	Number
Public (4-year) Institutions	104
Community Colleges	60
Private Institutions	32
For-profit Institutions	1
Non-United States Institutions	1
Unknown	3
Total	201

Private institutions were excluded as there was minimal information about the extent, scope, and activities of their quality management initiative(s) in the late 1980s and 1990s. In addition, private institutions were not subject to the same public and legislative pressures for increased accountability, cost reduction, and/or increased efficiency and effectiveness to the

same extent as public institutions. While the external pressures for increased accountability was similar to that of public institutions, community colleges were also eliminated as there was minimal information about the extent, scope, and activities of their quality management initiative(s) in the late 1980s and 1990s. The for-profit and non-United States institutions were eliminated as out-of-scope and having an insufficient sample size. The three unknown institutions (no current institution under the same name) were eliminated for the obvious reason.

I narrowed the remaining 104 public institutions to the nine institutions that were awarded the IBM TQM grant[1] in 1992 to help integrate TQM in their courses, research, and operations (Main, 1994). These nine institutions received the same level of initial financial stimulus, via the IBM TQM grant, to launch and/or continue their quality management initiatives, thus eliminating those institutions which may have wanted to launch or continue quality management efforts but did not have the necessary funding to do so. The recipients of the IBM TQM grant were the Georgia Institute of Technology, the University of Houston-Clear Lake, the University of Maryland College Park, Oregon State University, Pennsylvania State University - University Park, Rochester Institution of Technology, the University of Wisconsin, and jointly Clark-Atlanta University and the Southern Institution of Technology.

Clark-Atlanta University and the Southern Institute of Technology were eliminated as each institution received half of the award as compared to the other 7 institutions, and the joint nature of one award given to two institutions would make it difficult to compare as individual case study institutions. The University of Houston-Clear Lake was eliminated as there was

[1] "In October 1991, IBM announced that it would make a significant commitment to work with higher education to accelerate the teaching, research, and use of quality management practices in college and university operations. Its commitment? Eight cash and equipment awards - $1 million in cash or $3 million in IBM equipment, or a combination thereof, to each institution over five years." (Seymour, 1993). In addition to cash and equipment awards, IBM offered partnerships with IBM facilities to include loaned executives, IBM speakers, and faculty and student internships with IBM.

minimal literature regarding their quality management initiatives from 1990 to current. An October, 2014 review of the remaining institutions' latest strategic plan indicated the varying degrees with which they currently indicated a focus on quality management within their organization.

- Georgia Institute of Technology's 2010 strategic plan - *Designing the Future: A Strategic Vision and Plan* - detailed leadership's continued commitment to quality management and relentlessly pursue institutional effectiveness.[2]
- The University of Maryland's 2007-2008 strategic plan - *Transforming Maryland: Higher Expectations*[3]- referenced a focus on increasing efficiency.
- Pennsylvania State University's 2009-2014 strategic plan - *Priorities for Excellence* - emphasized controlling costs and generating additional efficiencies.[4]
- Oregon State University's 2004 strategic plan - *A Strategic Plan for the 21st Century*[5]- did not include any goals or aspirations related to cost reduction, or increased effectiveness and/or efficiency.
- The University of Wisconsin-Madison's *2009-2014 Strategic Framework*[6] referenced being responsible stewards of our resources, with one activity focused on making administration and governance more effective, efficient,

[2] The institutional objectives of this goal include continuously improving all support functions and processes, implementing a performance-based management system, and developing an entrepreneurial financial model reflecting the best practices of both private and public institutions. http://www.strategicvision.gatech.edu/sites/strategicvision.gatech.edu/files/Georgia_Tech_Strategic_Plan.pdf
[3] http://www.umd.edu/strat_plan/stratplan.cfm
[4] The components of this goal include improving instructional productivity, making better use of facilities, promoting CQI and rewarding innovation, and submitting ideas for effectiveness and efficiencies. http://strategicplan.psu.edu/
[5] http://oregonstate.edu/leadership/sites/default/files/strategic-plan/strategic-plan.pdf
[6] http://chancellor.wisc.edu/strateg, icplan/docs/strategicplan.pdf

and flexible. As a note, the University of Wisconsin's *2015-2019 Strategic Framework*[7] retained the priority to be responsible stewards of our resources, and included a focus on promoting resource stewardship, improving service delivery and efficiency, and ensuring administrative capacity.

- Rochester Institute of Technology's 2005-2015 strategic plan - *RIT Strategic Plan 2025*[8] - did not include any goals or aspirations related to cost reduction or increased effectiveness and/or efficiency.

The most recent strategic plans of four of the institutions (Georgia Institute of Technology, University of Maryland, Pennsylvania University, and the University of Wisconsin-Madison) referenced efforts to increase the effectiveness and/or efficiency, while two institutions (Oregon State University and Rochester Institute of Technology) did not. Leveraging the my professional contacts and those of my colleagues, initial requests for participation in the research project were sent to the provosts of Georgia Institute of Technology, University of Maryland, Pennsylvania State University, and Oregon State University. Georgia Institute of Technology, University of Maryland, and Pennsylvania State University agreed to participate in the research study. Ideally, it would have been optimal to have at least one case study institution whose current strategic plan did not reference efforts to increase effectiveness and/or efficiency. Oregon State University's current strategic plan did not indicate such a reference possibly suggesting that they may have abandoned quality management, but the provost declined to have Oregon State University participate in the research study.

[7] https://chancellor.wisc.edu/strategicplan2/
[8] https://www.rit.edu/president/plan2025/2005-2015-plan

Data Sources and Collection

I used multiple sources and methods of data collection to inform my research, establish a chronological sequence of events, and develop case study narratives for each institution's quality management journey over the past two decades. Data sources included literature, internal institutional documents, website information, and interviews with various institutional officials employed at each institution over the past 25 years.

Document and online review

The 1992 survey conducted by *Quality Progress* detailed the higher education institutions that were reported to be involved in quality management at that time (Lewis & Smith, 1994) and provided the dataset used as criteria for selecting the case study institutions. A brief literature review of the history of quality management in business, and a more thorough literature review of quality management in higher education over the past three decades was conducted. An in-depth literature review of the quality management journey for the three case study institutions was conducted.

Documents from 1985 through 2014 for each case study institution were collected from institution's online archives and websites, interviewees, and internet queries. The strategic plans and periodic updates to the strategic plans from the past 25 years were reviewed for all institutions. Other documents included annual reports, meeting minutes from executive and board of trustees meetings, presentations made to internal and external stakeholders, and internal newsletters. In addition, institutional overview and strategic planning information was reviewed and collected from each institution's website. All documents were reviewed and sorted in chronological order by institution to provide a linear case study for analysis.

Interviews

My aim was to interview the presidents, provosts, and a representation of faculty and several senior administrators involved in quality management over the past two decades. Semi-structured interviews were used with 11 open-ended questions asked of current administrative and academic leaders that currently are or previously were employed at the three selected case study institutions.

The initial request to participate in my research was sent via email to 20 individuals, with follow-up emails and telephone calls conducted as needed. Fifteen individuals agreed to participate in the study, and five individuals did not respond to the requests. With the exception of one individual from the University of Maryland, all interview participants chose not to remain anonymous. Rather than use a pseudonym, this interview participant was generically referred to as a senior academic administrator with their years of service and tenure not indicated.

Participant interviews were conducted in April of 2015 through August of 2015. The Georgia Tech interviews were conducted in person on the Georgia Tech campus, and the University of Maryland College Park and Pennsylvania State University - University Park interviews were all conducted via telephone. Each interview was recorded with the interviewee's permission. Follow-up calls and emails were utilized during and after the interviews to request clarification and/or additional information. All interviews were transcribed verbatim by an external service, Rev.com.

The following three tables reflect the name, position and tenure at the case study institution where available, and interview status for interview participants who chose not to remain anonymous.

Table 2

Georgia Institute of Technology Targeted Interview Participant Summary

Name	Position	Tenure	Status
Pat Crecine	President	1987-1994	Deceased
Wayne Clough	President	1994-2008	Interviewed
Bud Peterson	President	2009-current	Not interviewed
Steve Swant	EVP, Administration & Finance	1996-current	Interviewed
Hal Irvin	Director, GT Consulting Services	1994–2008	Interviewed
Tim Gilmour	Professor/VP of Strategic Planning	Unknown-1995	No response
Jane Ammons	Professor	Unknown-current	No response
Juana Cunningham	GTSC Consultant	2002-current	Interviewed
Sandy Simpson	Director, Initiative Advancement	2006–current	Interviewed
S. Alvarez-Robinson	GTSC, Executive Director	2014-current	Interviewed

The tenure of participants interviewed spanned the timeframe from 1987-current, and was comprised one president, one senior administrator, and four administrative quality management professionals involved in quality management over the past two decades. I did not interview Bud Peterson due to his recent tenure as president, nor any provosts as their involvement in quality management over the past two decades was minimal.

Leveraging a professional relationship, the initial request for participation in my research project was sent to Rafael Bras, current provost of Georgia Tech. Dr. Bras referred me to Sonia Alvarez-Robinson, Executive Director of Georgia Tech Strategic Consulting. Alvarez-Robinson agreed to participate in my research study, included Juana Cunningham and Sandy Simpson in our interview, and recommended I also interview Steve Swant. My literature review indicated that Hal Irvin, Tim Gilmour, and Jane Ammons were pivotal individuals involved in the initial launch and evolution of Georgia Tech's quality management initiative. Research participation requests were sent to Hal Irvin, who agreed to participate in the research study, and Tim Gilmour and Jane Ammons with no reply. Dr. Chuck Knapp facilitated an introduction to Wayne Clough.

Table 3

University of Maryland College Park Targeted Interview Participant Summary

Name	Position	Tenure	Status
Brit Kirwan	President	1989-1998	Interviewed
C. D. Mote, Jr.	President	1998-2010	No response
Wallace Loh	President	2010-current	Not interviewed
Jay Dorfman	Provost	1989-1992	Interviewed
Anne Wiley	Provost	2011–2012	Interviewed
Mary Ann Rankin	Provost	2012-current	Not interviewed
Maryam Alavi	Department Chair & Professor	1989 – 1999	Interviewed
Anonymous	Senior Academic Administrator		Interviewed
Ann Wiley	Associate Provost	2000–2001	Interviewed
	Assistant President of Chief of Staff	2001-2008	
	VP of Administrative Affairs	2008-2011	

The tenure of participants interviewed spanned the timeframe from 1989-current, and included one president, one provost, one professor, and two senior administrators. I did not interview Wallace Loh nor Mary Ann Rankin due to their recent tenure as president and provost respectively. I was able to connect with only three of the provosts employed over the past two and a half decades.

The initial request for participation in my research study was sent to Mary Ann Rankin, University of Maryland senior vice president and provost. Dr. Rankin directed me to Steve Fetter, associate provost for academic affairs, who recommended I interview Ann Wylie and Brit Kirwan. As she was referenced in the early literature on Maryland's quality management initiative, I contacted Maryam Alavi to request her participation in my research. Anne Wiley suggested I interview Jay Dorfman, and a senior administrator who was intimately involved in Maryland's business process re-engineering efforts, and facilitated an introduction for me with that individual.

Table 4

Pennsylvania State University - University Park Targeted Interview Participant Summary

Name	Position	Tenure	Status
Henry Bryce Jordan	President	1983-1990	Unable to locate
Joab Thomas	President	1990-1995	Deceased
Graham Spanier	President	1995-2011	Unable to locate
Rodney Erickson	President	2011-2014	Unable to locate
Eric Barron	President	2014-current	Not interviewed
John Brighton	EVP & Provost	1991-1999	Interviewed
Rodney Erickson	Provost	1999-2011	Unable to locate
Nicholas Jones	Provost	2013-current	Not interviewed
Paul Sokol	Physics Professor	1988-2004	No response
Louise Sandmeyer	Executive Director, Office of Planning & Institutional Assessment	1996-2011	Interviewed
Barbara Sherlock	Senior Planning & Assessment Associate	1995-current	Interviewed

The tenure of participants interviewed spanned the timeframe from 1991-current, and included one provost and two senior administrators in quality management. I was unable to locate and/or obtain contact information for three presidents and one provost, and did not interview Eric Barron nor Nicholas Jones due to their recent tenure as president and provost respectively. I was not able to connect with any faculty members involved in quality management.

The initial request for participation in my research study was sent to Nicholas Jones, EVP and provost of Penn State, with no response. As they were referenced in the literature on Penn State's quality management initiative, I contacted Ann Wiley and Barbara Sherlock to request their participation in my research. Ann Wiley provided contact information for John Brighton.

Data Analysis and Coding Methods

Data analysis was deductive, inductive, and iterative. The data consisted of literature, institutional documents, and transcribed and coded participant interviews. Coding of the interviews was used to detect patterns, categorize, build theories, and analyze the research results. The literature and institutional documents were not coded, but did contribute greatly to the construction of the chronological case study narrative, deductive, and inductive themes.

Participant interviews were transcribed verbatim, and segregated into qualitative datum by individual and interrelated causes or themes. Each qualitative datum was coded in an Excel spreadsheet by case study institution and interview participant, and several were assigned two or more codes. All relevant (passages referencing pleasantries, questions about the research scope, etc. were not coded) interview passages were categorized using deductive and/or inductive groupings, often in an iterative process as new themes emerged. The application of two or more different deductive and/or inductive codes were applied – where appropriate – to a single qualitative datum.

Deductive. An a priori categorization system was used to code the interviews. Four coding categories from leadership theory framework - trait, participative, transformational, and situational leadership styles, and three coding categories from organizational theory framework - collegial, bureaucratic, and political organizational systems were used in the analysis and coding of the participant interviews.

Inductive. Additional categories and themes emerged progressively throughout the data collection and analysis. As interviews were conducted, transcribed, and analyzed, codes were created to capture relevant and reoccurring themes. Once all participant interviews were coded, some similar categories were combined to overarching themes, e.g., adapting the language to

total quality management and allowing teams to select their quality management methodology. While several themes emerged, five – external influence, adapting quality management language and methodology, centralized support organization, integration in strategic plan and process, and organizational performance and assessment - were chosen based upon relevance to the research questions and the frequency with which they appeared across all institutions. Other categories such as 'initial focus on projects that had a high probability of success were strategically selected' and 'celebrate and reward successes' were not included as these factors were covered as characteristics of transformational leaders.

Iterative. The literature, institutional documents, and coded interviews for each institution were interpreted holistically using an iterative analytical approach, providing a chronological and thematic case study. In addition, overall similarities and differences of the leadership style, organizational culture, and five emerging themes across all case studies were also analyzed using an iterative approach and included in my research results.

Limitations

There were several limitations of my research study. Strong consideration was given to the possibility of recall bias of the interview participants, as well as the fact that several of the individuals interviewed were retired and older, which may have impacted their ability to recall events over the past two decades. The difference in the accuracy or completeness of the recollections by interviewees regarding historical events and/or experiences is a valid limitation. The use of triangulation strategies using information obtained from other interviews, literature, internal documents, and websites to cross-check information and timelines was used to minimize recall bias and/or error.

A second limitation was that the responses of interview participants may have been different during an in-person interview as opposed to a phone interview where facial expressions and body language were not observed. In addition, distractions such as barking dogs, ringing phones, and side conversations with family members were encountered during several phone interviews. Clarifying questions were asked during and after the interviews.

A third limitation was the combination of interview participants for each institution. I attempted to select interview individuals comprised of presidents, provosts, faculty, and administrative leaders involved in the quality management initiative over the past two decades to obtain a comprehensive overview of the evolution of quality management. Several desired interview participants identified could not be located or had passed away, and others did not respond or agree to participate in my study.

A final limitation is the lack of a case study institution that did not reference a strategic goal relating to increasing effectiveness and/or efficiency to provide a contrast to the three case study institutions which did reference a strategic goal related to increasing effectiveness and/or efficiency. While a valid limitation, this is also an opportunity for further research.

Trustworthiness

Several strategies were used in an effort to enhance the reliability and validity of the research. Merriam (2009) points out that while the researcher utilizing a case study method may have preconceived notions, there is no greater bias in the case study method towards confirming preconceived notions as compared to other forms of qualitative research. As my professional background is primarily in quality and operational management in the business sector, I have broad knowledge of and experience with characteristics of and barriers to successful quality initiatives. In an effort to avoid relying on my previous experiences and remain objective during

the research and analysis phases, I conducted critical self-reflections as well as periodic reviews with my major professor.

At times, data obtained via literature reviews, interviews, and archived and current documents for each case study institution presented contrasting, incompatible, and/or contradictory information. As some interview questions required recollection of events from the past two or more decades, the possibility of recall error was a strong consideration. Triangulation strategies using transcribed interviews, institutional documents, literature, and follow-up questions with interview participants were utilized to minimize the impact of recall error.

Finally, while only three higher education institutions were used for the comparative case study analysis, Merriam (2009) stated that the contextual knowledge of these examples is still valuable.

CHAPTER 4

RESEARCH RESULTS

In the late 1980s, higher education leaders experienced increasing financial pressures as a result of declining state appropriations. Students, parents, legislators, businesses and the public were becoming increasingly dissatisfied with the quality of higher education being provided. Businesses, in particular, could not tolerate higher education's high rates of rejected parts (attrition), late deliveries (delayed graduation), price increases (tuition increases), and rework (students having to take courses over again). In addition, employers wanted graduates who had knowledge of - and preferably some experience with - total quality management (Hogg & Hogg, 1995).

In 1991, the CEOs of six major companies (American Express, Ford, IBM, Motorola, Proctor & Gamble, and Xerox) wrote *An Open Letter: TQM on the Campus* in the 1991 issue of the *Harvard Business Review,* offering partnerships between business and academia that would foster a shared responsibility to learn, teach, and practice TQM. In 1992, each of these companies presented week-long sessions to approximately 100 presidents, deans, and faculty leaders to identify the core knowledge of TQM, develop a TQM research agenda, and cultivate faculty understanding of and commitment to TQM (Hogg & Hogg, 1995).

At the same time, IBM launched its TQM competition providing eight awards of any combination of $1 million in cash and/or $3 million in IBM equipment to campuses interested in quality. Two hundred and four universities applied (Dew & Nearing, 2004), and nine (two universities submitted a joint application) universities were awarded the grant (Seymour, 1993c).

The IBM TQM grant provided a common financial foundation and launching point for the three case study institutions to pursue total quality management. This section details the quality management journey over the past two decades for the Georgia Institute of Technology, University of Maryland College Park, and Pennsylvania State University - University Park.

Georgia Institute of Technology

Georgia Institute of Technology (Georgia Tech), founded in 1885, is a public research university and part of the University System of Georgia is located in Atlanta, Georgia. Georgia Tech has colleges of architecture, business, computing, engineering, liberal arts, and science across 400 acres on their main Atlanta campus, and has satellite campuses in Savannah, Georgia; Metz, France; Athlone, Ireland; Shanghai, China; and Singapore. As of fall, 2014, the university enrolled 14,682 undergraduate students and 8,427 graduate students.

Influenced by business and industry, in the 1980s senior-level Georgia Tech administrators attended a one-day quality orientation at Milliken & Company[9] exposing the leaders to the "promise and concepts of quality management and initiating the development of quality awareness in our culture" (Roberts, 1995, p. 57). Seymour (1993b) states that in 1988, Georgia Tech's new president, Pat Crecine, realized that the Institute's priorities had gradually changed over a 20-year period. Crecine acknowledged that Georgia Tech had developed a strong research program and a solid regional reputation, but had neglected their undergraduate student body. Joseph 'Tim' Gilmour, vice president for planning, agreed. "Georgia Tech takes in one of the best student bodies in the country, yet we only graduate 65 percent of students in six years. We think there is something wrong, a systematic problem" (Seymour, 1993c, p. 6). The motivation for a cultural shift emphasizing continuous quality improvement principles began with a single focus according to Gilmour - rather than filter them out, how could Georgia Tech

[9] Milliken & Company won the 1989 Malcolm Baldrige National Quality Award. The Malcom Baldrige National Quality Award recognizes United States organizations in the business, health care, education, and nonprofit sectors for performance excellence.

help these students be successful (Seymour, 1993b)? Implementing continuous quality improvement as an operating philosophy at Georgia Tech would take a broader view.

Roberts (1995) indicated that quality management was very popular in corporate America in the early 1990s, and several leaders at Georgia Tech were on boards of corporations that were implementing total quality management. There was general consensus among business and university leaders regarding the need to increase partnerships between business and education to begin quality management training at schools, rather than businesses, in order to provide employers the type of skilled employees they required. In 1992, one way Georgia Tech developed partnerships with the business community was to participate in the University Challenge[10] with Milliken & Company, who subsequently hosted select Georgia Tech faculty and administrators for a week-long learning and sharing session (Roberts, 1995).

In that same year, Gilmour and Jane Ammons, professor of industrial engineering, authored Georgia Tech's IBM TQM grant proposal. The grant proposal stated that "becoming the premiere technological university implies the development of processes that continually improve its ability to meet customers' needs" (Seymour, 1993c, p.18). The grant proposal also highlighted another motivation for pursuing quality management, namely the call by the Regents of the University System of Georgia and the Southern Association of Colleges and Universities for comprehensive assessment. Georgia Tech had recently begun a comprehensive strategic planning process, and concluded that the Institute must transform its culture - realizing that 'business as usual' was not an option, and a paradigm shift was required. Linking quality management to strategic planning provided an organizational anchor point for Georgia Tech (Seymour, 1993c). During our interview, Hal Irvin, Georgia Tech's TQM coordinator at the

[10] The program paired large U.S. corporations with universities to integrate quality training into business and engineering school curricula http://www.goupstate.com/article/19921117/NEWS/211170317.

time, suggested that the Institute's engineering focus was well aligned with science of quality management. Irvin stated that Gilmour was interested in assessment and ways to improve the quality of services, Ammons was particularly interested in quality management tools and methodologies, and both were the initial champions of total quality management at Georgia Tech.

Georgia Tech was one of nine U.S. universities to be awarded the IBM TQM grant in 1992 to help implement quality management principles in their curricula and operations, and conduct research on quality (Seymour, 1993c). Gilmour was assigned to lead the Institute's quality initiatives funded by the IBM TQM grant, and indicated that the award and grant funding added enormous impetus and focus to all of Georgia Tech's continuous quality improvement efforts - even those not funded by the IBM TQM grant (Roberts, 1995).

Seymour (1993b) indicated that Georgia Tech developed "a strategic plan and organizational framework designed to launch and maintain a commitment to continuous quality improvement and to focus its efforts throughout the institution's units" (p. 18). The *IBM TQM Partnership with Colleges and Universities Report* referenced a specific Georgia Tech strategic objective to "integrate the Institute's TQM effort with the strategic planning process and the institute-wide compensation and classification study" (Seymour, 1993c, p. 41). My efforts to locate the afore-mentioned strategic plan and organizational framework were unsuccessful.

While viewed by some as a visionary, Clough indicated that Crecine's 1990 restructuring of the Institute resulted in conflict with the faculty. Roberts (1995) stated that Georgia Tech's continuous quality improvement journey continued in 1992 with the creation of the Georgia Tech Quality Council, chaired by President Crecine, which included key vice presidents, deans, selected faculty, and leaders of student organizations. The Georgia Tech Quality Council initially

had limited impact on the adoption of continuous quality improvement by the Georgia Tech academic community as a result of a conflicts with and transition in senior leadership, and an inconsistent understanding of goals coupled with a lack of commitment of its members. As a result, Georgia Tech's initial continuous quality improvement efforts were focused on training, improvement in administrative processes, strategic planning, assessment, accreditation, and operational issues. Senior leadership at Georgia Tech periodically received feedback and guidance from visiting committees, which consisted of executive-level businessmen, on their continuous quality improvement strategy and progress (Roberts, 1995).

In 1992, the Office of Continuous Improvement and Assessment was established and led by Hal Irvin to facilitate the Institute's continuous quality improvement efforts. The Office of Continuous Improvement and Assessment provided staff and technical support to Crecine and the Georgia Tech Quality Council, and was also responsible for coordinating the assessment and accreditation reports required by the Board of Regents and Southern Association of Colleges and Universities (Roberts, 1995).

Rather than use a cascade implementation approach throughout the institution, initial continuous quality improvement training was provided to interested and committed leaders from human resources, the college of engineering, the school of management, Georgia Tech Research Institute, and the Office of Minority Educational Development (Roberts, 1995). One of the early successes of continuous quality improvement was the Office of Minority Educational Development project, its team members charged with facilitating the success of minority undergraduate students.[11] Seymour (1993b) indicated that the Office of Minority Educational

[11] Supporting President Crecine's 1987 goal to help undergraduate students be more successful at Georgia Tech. As an added note, during Crecine's tenure at Georgia Tech, African American student enrollment doubled at undergraduate and graduate levels, academic performance at the undergraduate level significantly exceeded majority student performance, with approximately 40% of freshman African American students making the Dean's list, with

Development continuous quality improvement project team decided to forego extensive studies, leaving the debate about continuous quality improvement language and strategy to others. One of the first things the Office of Minority Educational Development team did was re-write its mission, drawing from Deming's notion that organizations function better with unifying goals (Roberts, 1995), and reorganized to meet that mission (Seymour, 1993b). The Office of Minority Educational Development team focused on the needs of its customers (students) and re-engineered the program using quality principles such as management-by-fact, and repeatedly measuring the impact of changes to continually improve processes (Roberts, 1995).

In 1993, the Institute's Continuous Improvement Curriculum Committee was established, co-chaired by the deans of engineering and management. Four teams with faculty representatives from engineering and management were formed to work on academic projects, using the seven Malcolm Baldrige National Quality Award examination categories: strategic quality planning; human resource development and management; leadership; measurement, analysis, and knowledge management; quality assurance system; information and analysis; and customer focus and satisfaction (Seymour, 1993c). Little progress was made as faculty had more pressing commitments, there were minimal reward/recognition systems to encourage their commitment, and hindrances as a result of leadership transition issues. Despite these setbacks, some progress was made in developing a customer-driven process for continuous curriculum development using quality tools such as surveys, and comparative and best-practice benchmarking (Roberts, 1995; Seymour, 1993a).

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most African American students enrolling in demanding engineering programs (https://en.wikipedia.org/wiki/John_Patrick_Crecine).

Crecine resigned in 1994 around the time the university received the IBM TQM grant funds, and Irvin acknowledged that the continuous quality improvement efforts were thrown into confusion. In my interview with Hal Irvin, he stated that . . .

> . . . it was confused from the start. I remember I would carry a big bottle of Tums in my car, I ate through them rapidly. I'd never had an experience like I had in that first nine months at Georgia Tech. It was just terrible. I walked into a complete mess. It was being done essentially because corporate leaders thought it was the thing to do and Georgia Tech was very focused on pleasing corporate leaders, but in terms of it being a priority for the campus, it was not widely valued as a priority.

Upon Gilmour's departure from Georgia Tech in 1995, Irvin assumed responsibility for the Office of Continuous Improvement and Assessment and the university's continuous quality improvement initiatives. Irvin suggested that Georgia Tech's initial quality efforts were the 'cookbook sort of things' from corporate America that were being force fed into the academic arena where it did not fit, and that the Office of Continuous Improvement and Assessment team quickly learned how to adopt and adapt continuous quality improvement to higher education, dropping all the lingo and current buzzwords, and focusing more on improving service. It was this second effort concentrated on administrative processes that really got rolling. Irvin indicated that cost per transaction, cycle time, and customer satisfaction metrics were used to assess project effectiveness.

Irvin's sense at the time was that faculty were pleased with the focus on administrative processes and being engaged in the planning process, but had no interest in implementing quality management principles within their curricula or in the classroom. Irvin suggested one reason for their indifference was that faculty had difficulty viewing the student as the customer. Irvin defined Georgia Tech's efforts as 'partial' quality management as quality management did not

carry over to the academic side of the university. “Partial quality management just alluded to the fact that it was catching on administratively, and then at times just in certain areas,” stated Irvin.

The use of internal quality resource centers, attendance at national meetings and seminars, hosting external speakers, and brown bag lunches helped to develop continuous quality improvement understanding and promote usage with both faculty and administrators (Roberts, 1995; Seymour, 1993b). In keeping with the continuous quality improvement principles, the Office of Continuous Improvement and Assessment used the Plan-Do-Check-Act cycle to identify areas that did not work well and build on successes. Senior leadership at Georgia Tech gained valuable insights as a result, specifically noting that changing culture is not easy, there is tremendous resistance to change, it is difficult to change the academic environment, and faculty rewards and recognition are critical to the change process. Georgia Tech knew they still had a long way to go and much to learn from their initial efforts in order to exploit the power of continuous quality improvement (Roberts, 1995).

As part of a Southern Association of Colleges and Schools accreditation review of Georgia Tech in 1995, two business leaders were asked to be part of the review team. On the second day of the site visit, one businessman declared

> You’ve got a wonderful institution with so much talent. And yet, I’ve heard people on campus talk about one administrative problem after another, and I’ve gotten the impression you’ve had these problems for some time. You’ve got some of the best faculty and students in the country here. We get help from your faculty and hire your students all the time. Why don’t you get off your duff and get them to help you fix your problems (Irvin, 2000, p. 33)?

One goal defined in the executive summary of Georgia Tech’s 1996 strategic plan[12] suggested the Institute’s leaders agreed with that assessment. The strategic plan detailed action

[12] https://smartech.gatech.edu/bitstream/handle/1853/20619/GT_StrategicPlan-robert1.pdf?sequence=1)

items for seven areas to help Georgia Tech achieve their strategic goals by 2010, one of which was 'Improving the Infrastructure', with the following description:

> Georgia Tech's support services must complement its academic quality. To ensure ethical behavior, fiscal integrity, customer service, teamwork, a diverse work force, fair human services, and continuous quality improvement, Georgia Tech will simplify and improve administrative processes; financial and administrative systems; resource equipment and faculty management; and organizational structures.

In 1996, the Administrative Excellence Task Force, a smaller advisory group formed by Georgia Tech's new president, Wayne Clough, and chaired by its new vice president of administration and finance, Bob Thompson, realized the university needed to commit both human and financial resources to support the administrative change process by leveraging internal resources to achieve service excellence (Dew & Nearing, 2004). As indicated in our interview, Steve Swant, brought in by Bob Thompson as the associate vice president, budget and planning in 1996, believed that continuous quality improvement was the theme of the day, the fad of the moment, but that it was a very appropriate fad for the Institute. At the time, Georgia Tech was focused on turning itself from a regional university to a research-focused institution, and needed "help to turn the corner, seriously turn the corner," said Swant during our interview. Swant soon began creating a platform for the institution to be successful, to launch other people's successes, to make improvements, and increase effectiveness from one end of the university to the other.

Initially, an external consulting firm was hired to facilitate process reengineering efforts, and two Georgia Tech employees were given a temporary assignment to support the project and learn the methodology. The project was so successful, the two employees were re-assigned full-time to the newly created Georgia Tech Consulting Services (Irvin, 2000). Georgia Tech Consulting Services, a unit of the Office of Organizational Development, consisted of a director,

two consultants, a project support analyst, and administrative manager charged with assisting senior administration with Institute-wide projects without outside consulting assistance.[13] The Georgia Tech Consulting Services team members continued to use the continuous quality improvement process of assessment, re-design, and implementation, but without the trappings and language of CQI emphasized Irvin.

When building the internal consulting organization, Irvin (2000) advised that ideal candidates should have an educational background in business administration, experience in university administration or with an external consulting firm, and a working knowledge of information technology.

> People skills and professionalism are the most critical attributes required in the office. Nothing kills a business relationship faster than a know-it-all consultant. Since internal consultants are a part of the organization by definition, strong interpersonal skills are essential for the long-term credibility and success of our organization (p. 34).

This belief is further supported by Sandy Simpson, Georgia Tech Strategic Consulting's director of initiative advancement, who indicated that Georgia Tech has a very relationship-oriented environment. "It's all about relationships. It's all about influencing people because you don't have that corporate hammer."

In 1997, Georgia Tech Consulting Services assumed responsibility for staff and development training adding two human resource trainers and two project support analysts to the team. The group worked on several business services and process improvement projects, and performed analytical work to help senior management understand how functions were performing, and what needed to be improved (Irvin, 2000). In addition, stressed Irvin, Georgia Tech Consulting Services intentionally involved organizational units and their customers in the

[13] In the following years, Georgia Tech did continue to hire outside consultants for specialized consulting advice (Irvin, 2000).

change process so they would have first-hand knowledge of the assessment and path to improvement. As Hal Irvin (2000), senior director of organizational development and director of Georgia Tech Consulting Services at the time, stressed, “This participation unquestionably accelerated the pace of implementation and helped us achieve significant results quickly” (p. 33).

Irvin explained that in an effort to embed quality management principles across a broad array of subject areas and in alignment with the objective of the IBM TQM grant, a plan was developed to ensure that all business and engineering undergraduate students graduate with an understanding of continuous quality improvement methodology and skills to enhance productivity. Mirroring the Georgia Tech model of industrial engineering senior design teams, Georgia Tech Consulting Services utilized business and engineering students and senior design teams to work on improving campus operations. Students received course credit and the hands-on experience valued by their future employers. Student consultants were hired for particular projects including the development web-based surveys and websites, review of an accounts payable process, assistance of an online training registration process, and development of a database for the tuition remission program (Irvin, 2000).

Still funded at the Institute-level, Georgia Tech Consulting Services continued to provide consulting services for enterprise-wide projects. In 1999, the group began offering their services to departments on a fee-for-service basis. For each service request received, a proposal outlining the project overview, scope, activities, timeline, deliverables, and estimated project cost with a not-to-exceed limit was prepared. Within eight months, projects were ‘sold’ to the office of the dean of students, athletic association, development office, college of management, and two academic departments. Business was booming. As Georgia Tech Consulting Services’ fee-for-service revenue increased, their Institute-funded budget decreased (Irvin, 2000).

An internal Georgia Tech Consulting Services historic timeline indicated that in 2004, two change management positions were added to the Georgia Tech Consulting Services group, and the charge was no longer just about implementing systems or how to fix a process, but also about how to prepare a project plan, get people on board to do what they do differently, make software changes, and implement and roll out projects and initiatives to the campus. In addition, in 2006 the Office of Information Technology developed a roadmap for continuous improvement, and put discipline and rigor in place in terms of business process improvement and enabling technology. The administrative systems training function of the Office of Information Technology was transferred to Georgia Tech Consulting Services in 2006, and by 2007, Georgia Tech Consulting Services regularly offered consulting services such as process improvement and organizational assessment, focus groups, retreat services, survey design and administration, meeting facilitation, managing strategic change, and benchmarking and best practices identification. Juana Cunningham, a Georgia Tech Consulting Services consultant at that time, indicated that continuous quality improvement at Georgia Tech appeared to be further advanced when Georgia Tech Consulting Services successfully led projects for high level individuals including the dean of engineering, school chairs, and vice presidents, and these leaders told others of their experiences and successes. “Most of the requests came from word of mouth and referral, rather than someone mandating it,” stated Cunningham. When Irvin left Georgia Tech in 2008, Clough and Swant both emphasized that “Georgia Tech lost a champion when Hal departed”.

With the higher education landscape changing, Swant indicated that senior leadership at Georgia Tech realized that fast and meaningful change was needed. The 2008 Great Recession resulted in state funding reductions, and the realization that a larger organization required greater

sophistication in process, tools, people, etc. claimed Swant. Bud Peterson became the 11th president of Georgia Tech in 2009, and soon after developed a new strategic plan - *Designing the Future*[14] - released in 2010, which outlined his vision for where Georgia Tech aspired to be in the year 2035 (the Institute's 150th anniversary). The strategic plan was comprised of five goals, one of which was 'Relentlessly pursue institutional effectiveness', encompassing administrative, academic and research operations. Georgia Tech senior administrators knew that achieving this goal would require a common definition and conversation as well as the right people, tools, and culture (Alvarez-Robinson, 2014). The Institute held internal meetings to launch each goal of the new strategic plan, and "the room that had the most people in it were the people who wanted to talk about institutional effectiveness," declared Swant. "The biggest problem we are going to have is getting everyone to understand what institutional effectiveness means," acknowledged Swant. After providing some guiding principles to the campus community, Swant empowered employees to operationalize institutional effectiveness, and recommended celebrating successes to build momentum. "It's not a rigorously labelled process. It's more of a cultural change process."

During our Swant, now the associate vice president of finance and administration since 2006, indicated that he authored *The Next Chapter* in 2013 which laid out a vision for a newly created group that combined organizational development and enterprise project management, and included change management as a core component. Swant's vision was to see the team function in a consulting capacity and providing the same level of quality, breadth, scope, timeliness, and rigor of a big-four consulting company. Swant recognized the Institute needed a new leader to take the mission of the Georgia Tech Consulting Services to the next level,

[14] http://www.strategicvision.gatech.edu/sites/strategicvision.gatech.edu/files/Georgia_Tech_Strategic_Plan.pdf

someone dynamic who could think differently about organizational development and improvement – not doing the same things, but in a different, more strategic way.

In 2013, the Georgia Tech Strategic Consulting group was created by the merger of Georgia Tech Consulting Services and the Office of Enterprise Project and Portfolio Management to drive and enable organizational improvement across Georgia Tech[15]. According to Alvarez-Robinson (2014), the Georgia Tech Strategic Consulting group used a strategic business and operations framework focused on people, partnership, infrastructure, communication, and accountability to achieve their mission to drive and enable organizational improvement across the Georgia Tech community. Georgia Tech Strategic Consulting's mission is supported by six interrelated goals:

1. Develop the capability and capacity for the Georgia Tech community to identify and lead sustainable organizational improvement
2. Lead, support, and facilitate organizational strategic planning and execution of enterprise projects
3. Develop a deeper understanding of our customers' needs and their organizational goals
4. Strengthen the capacity of Georgia Tech Strategic Consulting to deliver more high-quality organizational improvement services
5. Strengthen our ability to measure and demonstrate our value
6. Standardize the Georgia Tech Strategic Consulting business process around the project life cycle

"I think his perspective on what he expects from us is huge, a huge part of who we are and what we are focusing on. If it weren't for Steve's vision and point of view, we would be very different," claimed Sonia Alvarez-Robinson, executive director of Georgia Tech Strategic Consulting. Swant indicated that part of his mission was to drive the understanding of Georgia Tech's strategic goals and objectives throughout the campus, get people excited, passionate, and engaged, and help other people be successful.

[15] http://consulting.gatech.edu/about-0

By 2014, the campus dialogue appeared to have changed claimed Alvarez-Robinson. There was a new basis for performance management discussions and reviews, increased advisory, consultative and governance communication, and a refined focus on current process improvement initiatives. All major academic, research, and administrative units were actively developing and implementing a strategic plan aligned with the Institute's strategic plan. Enterprise-level dashboards showed progress, and the strategic business and operations framework was used across the Institute, according to Alvarez-Robinson. "It's a continuous improvement. It is a maturation in the whole thought process in thinking about outcomes, not outputs," emphasized Sandy Simpson, Georgia Tech Strategic Consulting's director of initiative advancement.

Alvarez-Robinson stated that one of Georgia Tech Strategic Consulting's current challenges is how to measure the success and effectiveness of improvement projects. Swant admits that "we are appropriately criticized for not going all the way on that. We've fallen down on doing real precise and consistent measurements." Cunningham indicated that another challenge is dealing with the various barriers to change and implementation such as requirements to adhere to Georgia Tech and/or state policy, and lack of departmental funding to implement changes. Sometimes barriers are the people themselves in the process, individuals not wanting to expend the effort to change. "Sometimes you just have to wait them out, and wait for their retirement," said Cunningham.

Currently about half of Georgia Tech Strategic Consulting's projects are administrative-focused, and the group is trying to make inroads with the research side of the Institute stated Cunningham. "While there had always been a group on the academic side of the university that used consulting services, the reason why they now come and who is coming is shifting. The

regular customers appeared to have figured it out themselves, and now only call Georgia Tech Strategic Consulting when they get stuck," explained Cunningham.

In the future, Alvarez-Robinson emphasizes that the Georgia Tech Strategic Consulting group strives to be more predictive, to see what trends are happening at Georgia Tech, in higher education, and economically with the State to get ahead of the trends rather than reacting to them. In addition, they want to develop the ability to monetize the value of Georgia Tech Strategic Consulting's contribution. "We have powerful anecdotes, but have yet to quantify the immediate and long-term effects of the work in which we are engaged," said Alvarez-Robinson. In addition, the Georgia Tech Strategic Consulting group will establish a set of metrics and measures to evaluate over time if they've actually achieved their improvement objectives, not just changing for the sake of changing but actually changing for improvement, and realizing and quantifying those benefits. Alvarez-Robinson now works closely with Georgia Tech's Office of Assessment, whose mission includes providing information and technical assistance in measuring and improving student learning and outcomes, facilitating continuous improvement of academic and support services, and developing and disseminating best practices for enabling continuous organizational learning and development[16].

As I concluded my interview with Swant, he left me with an example of an interdisciplinary culture of collegiality and continuous improvement. The Engineered Bio-systems building was the first interdisciplinary building at Georgia Tech. "When you build a building, you usually build one for the chemistry department and one for the literature school. It's siloed and that is reinforced through the buildings, and reinforced even further through the administrative structures that only work within departments." Swant is trying to change that.

[16] https://www.assessment.gatech.edu/misson-statement/

Swant organized a team, supported by Georgia Tech Strategic Consulting, by interdisciplinary themes and charged them with coming up with an organizational structure for the new Engineered Biosystems department that took the burden off the principal investigator, and efficiently and effectively supported the interdisciplinary - not departmental - activities. “It was hard for them to imagine, but you know what, they developed an organizational structure that they are comfortable with. We’ve got good people who were sensitive to the problem and the challenge, and they wanted to be part of the solution.” Swant appeared to be succeeding in his efforts to empower employees toward continuous improvement, and change the culture of the Georgia Tech.

Research Observations

Participative Leadership. Despite his participative approach in involving faculty in the guidance and decision-making activities via the Georgia Tech Quality Council and the Continuous Improvement Curriculum Committee, Crecine’s efforts at engaging the faculty in continuous quality efforts were only slightly successful. On the other hand, some traction was realized with Crecine’s involvement of administrative leaders in the same councils and committees, and guidance and decision-making activities. Some senior leaders felt that Crecine did not have good people management skills, and hired some people who were totally incompetent. He had many good ideas, “but didn’t know how to get there, and he offended many people”, claimed Clough.

The Administrative Excellence Task Force, formed by Clough and chaired by Thompson, was comprised of senior administrative leaders. Georgia Tech’s Consulting Services and Strategic Consulting groups actively involved their customers in the continuous quality improvement projects. The involvement of academic and administrative leaders in defining

Georgia Tech's continuous quality improvement strategy, and customers and stakeholders in the continuous improvement projects may help increase the support and implementation of continuous quality improvement.

Transformational Leadership. Initial continuous quality efforts originated with administrative and academic individuals interested in and supportive of continuous quality improvement. Faculty were generally pleased to be engaged in the continuous quality improvement planning processes, as long as the primary focus was on administrative rather than academic processes. Initiating projects with individuals who were supportive of continuous quality improvement, and not mandating involvement by those who were not may have helped embed continuous quality improvement at Georgia Tech.

Continuous quality improvement was re-examined and re-vitalized with the arrival in 1994 of the charismatic Wayne Clough as president. Clough understood that transforming the organization required a commitment of financial and human resources to continuous quality improvement. As such, the Administrative Excellence Task Force invested in the necessary infrastructure to cultivate CQI efforts.

Bud Peterson assumed his role as president in 2009, and shortly thereafter declared his vision for Georgia Tech in the 2010 – 2035 strategic plan. Committing to a long-term focus on continuous quality improvement and increasing efficiency, the strategic plan included the bold goal to "Relentlessly pursue institutional effectiveness'. In alignment of this goal, Swant developed a vision in 2013 to take the Institute's continuous improvement efforts to the next level, and developed a strategy and mechanisms to communicate that vision to all levels of the Georgia Tech community. Swant's self-appointed mission was to inspire and help the Georgia Tech community understand and embrace the Institute's strategic goals and objectives, get

people energized and excited about change, and help people be successful. The findings suggest that Swant may have done just that.

The case study results suggest that the participative and transformational leadership styles of Irvin, Clough, Swant, and Irvin assisted in the development of a collegial and supportive environment with which to help embed continuous quality improvement and transform the Georgia Tech community and culture.

Collegial organizational system. Several administrators indicated that there was not much formal governance at Georgia Tech, and that most decision-making was pretty decentralized. The Faculty Senate was supportive of the continuous quality improvement focus on administrative processes, and senior leadership was very committed to quality management. “It’s not take some of this and throw it down and make them do it, or vice versa, throw it up here and make us do it”, claimed Swant.

Bureaucratic organizational system. The faculty’s discontent with Crecine as a result of his visionary, yet highly-contentious, organizational restructuring of Georgia Tech in 1990 coupled with his top-down bureaucratic management style may have been a factor in his inability to garner substantive faculty support and develop a collegial environment with which to launch and sustain the continuous improvement initiative on the academic side of the campus. In addition, some thought that the initial continuous improvement efforts were being done because “the corporate leaders thought it was the thing to do, and Georgia Tech was very focused on pleasing corporate leaders” claimed Irvin. These factors may have contributed to the initial lackluster success of continuous quality improvement at Georgia Tech.

External influence. Several external influences appeared to prompt and propagate quality management at Georgia Tech. Business and university leaders partnered to produce graduates

with the necessary quality management training that employers required. In addition, the Regents of the University System of Georgia and the Southern Association of Colleges and Universities called for increased assessment. Milliken & Company hosted several orientation and education events for Georgia Tech leaders, several of which were on boards of corporations that implemented quality management. The IBM TQM grant provided energy and focus to Georgia Tech's current and new continuous quality improvement activities. In addition, several business executives periodically provided guidance on Georgia Tech's continuous process improvement strategy and progress. While these external influences were important, there also appeared to be a strong internal desire by the campus community to increase the effectiveness of the Institute.

Adapting language and methodology. The research findings suggest that support of continuous quality improvement may have increased when the TQM terminology and methodology was adapted for the Georgia Tech community. Irvin indicated that "we didn't use the trappings or language that keep you in. There were times the terminology got in the way. Over time, we adjusted it and made it more of our own." In addition, concerted efforts to define and explain the strategic goal of 'Relentlessly pursue institutional effectiveness' and provide guiding principles rather than communicate a rigorously labeled process may have helped to entrench continuous improvement in Georgia Tech's culture.

Centralized support organization. The Office of Continuous Improvement and Assessment was established at the onset to facilitate Georgia Tech's quality improvement efforts. The Office of Continuous Improvement and Assessment quickly evolved into Georgia Tech Consulting Services group, an internal continuous quality improvement consulting organization. Most recently, Georgia Tech Consulting Services transformed into Georgia Tech Strategic Consulting, expanding its consulting services to support the implementation of the Institute's

strategic plan. The growing missions of these groups provided constant continuous quality improvement expertise and support to the university community. The research findings suggest that these factors may have helped continuous quality improvement endure at Georgia Tech.

Strategic planning integration. Early in their continuous quality improvement efforts, Crecine and senior leaders at Georgia Tech claimed to link quality management with their strategic planning processes, providing an operational framework to support and extend continuous quality improvement, throughout the campus. Demonstrating Clough's sustained commitment, continuous quality improvement principles such as benchmarking and Plan-Do-Check-Act were integrated into the strategic planning process, and Georgia Tech's 1996-2010 strategic plan included the corresponding 'Improving the infrastructure' goal, and the 2010-2035 strategic goal to 'Relentlessly pursue institutional effectiveness'. In addition, the Georgia Tech Strategic Consulting group evolved from Georgia Tech Consulting Services in 2013, and charged with supporting the implementation of Georgia Tech's strategic plan and continually increasing institutional effectiveness and efficiency.

Organizational performance assessment and results. Research uncovered little evidence of precise and consistent organizational performance measures or accountability processes. Several administrators indicated that the measures of continuous quality improvement success had often been anecdotal and very subjective, and others felt that assessment and measurement were not needed as Georgia Tech was in a prolonged development and growth mode. Perhaps in spite, or because, of the lack of performance measures and accountability mechanisms, continuous quality improvement appeared to still have endured at Georgia Tech.

The University of Maryland

The University of Maryland College Park (Maryland), founded in 1856, is a public research university located in the city of College Park, approximately 8 miles from Washington, D.C. With a fall 2014 enrollment of more than 27,000 undergraduate students, and 10,554 graduate students in 12 colleges, the University of Maryland is the flagship institution of the University System of Maryland, the largest university in the state, and the largest in the Washington Metropolitan Area.

In July, 1990, the Marryland announced it would eliminate one-third of the positions in central administration as a result of legislatively-imposed budget reductions (Winter, 1991). It was this environment in which President William 'Brit' Kirwan first took an interest in total quality management. By way of Maryland's deans of business and engineering, Kirwan had several encounters with business leaders from Ford Motor Company and Xerox who were far along in their TQM efforts. In addition, one of Maryland's board members was a huge advocate for TQM. Three factors motivated Kirwan to take a serious look at total quality: inconsistent quality of services, financial challenges, and the extent to which the business sector was utilizing the total quality framework (Roberts, 1995). Kirwan stressed, "I am convinced that universities must fundamentally alter their educational strategy and institutional infrastructure in order to meet the challenges of the global marketplace in the 21st century" (Seymour, 1993b, p. 25), his comment reflecting a personal commitment to a long-term perspective and sense of purpose (Seymour, 1993c). Judy Olian, business professor and principal investigator of the IBM TQM project, supported this sense of purpose.

> We recognize that universities of the year 2000 that will be successful will look substantially different from the universities of the 1980s and early 90s. If we want to be among those that are successful, we have to change. We have to change in relatively dramatic ways, and in that sense we view TQM as a process of cultural transformation (Seymour, 1993c, p. 47).

Early on in their journey, senior leaders and staff decided to refer to TQM as total quality, perhaps intentionally leaving out the word 'management' - a negative connotation with faculty -

and adjusting the TQM language to foster organizational buy-in and aid cultural transformation. Jay Dorfman, Maryland provost from 1989 to 1992, viewed 'Kirwan's total quality initiative' as a different sort of quality management. "I felt that the business model wasn't appropriate. There were issues that I felt were either a bit trivial or they lacked relevance as far as the academic side of the university. I was not the most enthusiastic participant in that particular process. I was, however, very involved in the process of dealing with the financial crisis." Dorfman added, nevertheless, that "whether it is called TQM or teamwork, the name is not so important. Sometimes over-emphasizing the name makes you lose track of what the purpose of the whole thing is. Ultimately it is an effort to try and find ways to improve the university."

From late 1990 to late 1992, the State of Maryland experienced its worst financial crisis since World War II, resulting in eight rounds of budget cuts, a 20% reduction in state support, and stringent accountability requirements for Maryland. Pressured by declining enrollment, Kirwan knew more had to be done with fewer people and less resources. Total quality provided the framework with which to radically reengineer and eliminate the bureaucracy generating non-value-added work, wasted resources, and slow customer service (Roberts, 1995). The State of Maryland legislature provided another impetus to focus on total quality as the measurement and feedback requirements of the State's accountability guidelines aligned well with the data and measurement needs of Maryland's total quality strategy (Seymour, 1993c). In an effort to build internal knowledge of total quality, leaders at Maryland leveraged the expertise of and information provided by the Maryland Center for Quality and Productivity, a nationally recognized center for training, technical assistance, and applied research (Seymour, 1993b). People with perspective, team members excited about change, and a visionary president

promoting measures of accountability marked the beginning of Maryland's total quality journey (Seymour, 1993b).

Seymour (1993c) indicated that during 1990-1991, Kirwan and his management team received formal total quality training. In late 1991, the Office of Continuous Quality Improvement and Accountability was formed by Kirwan with an internal charge to act as a clearinghouse and source of total quality training and expertise to the campus community, and an external focus to provide mandatory annual accountability reports to the Maryland Higher Education Commission (Seymour, 1993c).

Concurrently, Kirwan appointed a cross-functional committee consisting of faculty, staff, and students to develop Maryland' total quality implementation strategy. The Continuous Improvement Planning Committee was strategically chaired by the dean of engineering as Kirwan knew that the academic community would have resisted total quality efforts if the committee was chaired by an administrator (Roberts, 1995). The Continuous Improvement Planning Committee provided a rationale, implementation approach, organization structure, resource plan, and a series of guiding principles supporting total quality; and took the unique approach of focusing their total initial total quality efforts on academic and pedagogical processes, rather than administrative processes (Seymour, 1993c).

In early 1992, the University's senior management team endorsed the Continuous Improvement Planning Committee's implementation plan, and Kirwan publicly, but cautiously, launched Maryland's total quality initiative (Roberts, 1995). He believed that implementing new strategies for how to manage the institution would not be not easy, and there would be "skeptics, naysayers, and feet-draggers". Kirwan said during our interview that he chose to introduce total quality with the deans who were supportive of and advocates for the initiative, but admitted that

it was not universally popular. A few carefully chosen and realizable goals were initially selected. Continuous improvement training and support was voluntary, projects were started by Kirwan, and vice presidents became increasingly accountable for measurable improvement in key areas in their divisions. To further demonstrate his commitment to total quality, Kirwan's cabinet meetings were extended by one-and-one-half hours each week to include total quality discussions and review of accountability measures (Roberts, 1995).

Contrary to the views of other Maryland academic administrators, Kirwan indicated during our interview that applying total quality was easier on the business side of the organization, some of which already had pockets of activity, but the academic side of the campus was more difficult. "Total quality is about collecting and analyzing data, setting benchmarks and measuring progress - something that comes naturally to the social and physical sciences, business, and engineering rather than the arts and humanities." One of Kirwan's senior-level administrators claimed that, at times, Kirwan operated by setting the administrative vice presidents against each other. "Despite that fact, we worked together as a team because we knew that it was the right way to go. On the other hand, he was probably one of the best university presidents I have run across in my administrative career, in part because he had a Clintonesque warmth to his personality."

In early 1992, Maryland was awarded a grant by AT&T to develop the AT&T Teaching Theatre, a highly interactive, multimedia electronic classroom (Seymour, 1993b). At the same time, Maryland submitted an application - which emphasized total quality focused on the academic side of the university - for the IBM TQM grant, and was awarded the grant in October, 1992. One of the primary objectives included in Maryland's IBM TQM grant application was the development of undergraduate students with an orientation toward and knowledge of quality

principles and skills in the workplace (Seymour, 1993c). Kirwan viewed industry as a primary customer as well as a critical ally in preparing students to compete in a rapidly changing economic environment. As such, total quality was spread throughout the curriculum of the engineering and business students via a sequence of four core total quality courses. The IBM TQM grant included a combination of cash and IBM equipment which Maryland partially used to develop the IBM Ultimedia Theatre, an electronic classroom, and a comprehensive set of multimedia materials for teaching and learning total quality in industry and higher education (Seymour, 1993c).

During our interview, Maryam Alavi, professor of information technology at Maryland at the time, indicated that it was a "golden opportunity to really experiment and innovate in learning and teaching processes, with the ultimate goal of enhancing the effectiveness of student learning". Still, some faculty felt it was inappropriate for the university to think of the student as a customer. As one Maryland senior-level administrator declared during our interview

> That's great for a business model, but the relationship between faculty, student, and university is the not the customer-salesperson attitude. It's much more intricate than that. We owe the students stuff, but they owe us stuff. To some extent, you have to get beyond that, and that can't be done in a service model. University faculty are not selling Toyotas. I think that part never got resolved.

The same senior administrator claimed that the Office of Continuous Quality Improvement experienced challenges with introducing cultural change in the academic areas for several reasons. There was disconnect between institutional goals and individual goals, norms and reward systems discouraged collaborative work, and measurement efforts were viewed as a way to rank and punish faculty rather than as a means of improvement. Activity - councils were created, vision statements issued, and training rolled out - were often confused with results, and quality management principles were just the means to an end. In addition, there was a lack of

urgency, with faculty's perception that there would always be students coming through (Seymour, 1993b). There appeared to be no 'burning platform' from the faculty. Most faculty were aware of total quality-based innovations in teaching, but few had actually changed their teaching processes (Roberts, 1995).

Alternatively, a review of the literature and interviews with senior academic administrators at the time revealed that there may have been some success in applying total quality in the classroom. Literature indicated that the primary academic focus was on curriculum change and delivery processes, and developing a total quality program of study integrated in the business and engineering core curricula in alignment with total quality principles (Roberts, 1995; Seymour, 1993b; Seymour, 1993c). There were several key insights learned from these initial quality efforts, including the importance of empowering students as part of the curriculum innovation, the idea that cross-functional learning enriches both learning and teaching, team teaching integrated course content is only the start, and the buy-in of faculty in total quality program goals is critical (Roberts, 1995).

Deans and selected staff attended total quality training in early 1993, and the Continuous Quality Improvement Council, chaired by Kirwan, was created in June. The council was comprised of vice presidents, and representatives from faculty, associate staff, classified staff, students, and alumni (Seymour, 1993c). In August, 1993, Maryland's Total Quality Challenge corporate partner, Westinghouse, hosted a quality orientation and training program for faculty and administrators, and developing a core group of total quality-trained change agents. Pilot total quality projects focused on administrative processes, with some successful and others abandoned due to setbacks (Roberts, 1995). Total quality was extended to non-administrative areas such as the Student Health Services Center, which completed a total quality project that resulted in

reducing student wait time by simply setting up two lines, one for those who needed to see a doctor, and one for those who needed a quick check able to be administered by a nurse (Hogg & Hogg, 1995).

Building on their experiences to date, Roberts (1995) indicated that the Office of Continuous Quality Improvement identified five key success factors to increase and enhance the participation of faculty in total quality. The first factor focused on overcoming the language barrier of total quality, using the term 'student' rather than 'customer', and replacing 'total quality' with 'continuous improvement'. The OCQI understood that universities are not hierarchal nor open to edicts from above, and as such, cultural change was not easily advanced. The OCQI opted for incremental cultural change with 'low-hanging fruit' and early successes to build support. The third factor was to intentionally not choose a particular quality methodology, but rather propagate total quality via voluntary buy-in and allowing groups to own and adapt the continuous improvement process to their needs. The fourth factor was acknowledging the importance of the president's role in articulating the need for change, and using his personal capital to drive change. Finally, the president and senior leadership must model total quality behaviors, frequently communicate, and periodically refocus and reenergize the institution around continuous improvement (Roberts, 1995).

Recognizing that Maryland was at a crossroads, in 1996 Kirwan, in conjunction with senior leadership, developed a five-year strategic plan, *Charting a Path to Excellence: The Strategic Plan for the University of Maryland College Park*[17], which detailed five initiatives, the last of which was 'Rationalizing resource allocation and administrative operations'. This initiative called for a review of the funding levels for every unit using the criteria of quality

[17] (http://www.provost.umd.edu/Strategic_Planning/OldPlan.html)

relative to peers, cost-effectiveness relative to best practices in higher education and the private sector, and developing more responsive and efficient means of delivering administrative services. In addition, specific steps for this initiative involved supporting the business process reengineering efforts and extending continuous improvement efforts across campus. The framework supporting the implementation of the strategic plan included components critical to successful acceptance and implementation of the strategic plan including informing the campus community, developing implementation assignments and timelines, realigning budgets to support strategic initiatives, and assessing the effectiveness of the strategic plan initiatives via key performance indicators. In addition, three common objectives spanned all five strategic initiatives: capitalize on academic strengths, meet the highest standards of quality and efficiency, and change current ways of doing business. A rigorous emphasis on the concepts of continuous improvement appeared to be fully integrated in Maryland's strategy. During Kirwan's tenure as president and provost, he claimed that the culture began to evolve, and total quality became more embedded in the culture of the institution. "We talked about it less because we didn't need to," said Kirwan.

Experiencing frustration at the State of Maryland's lack of financial support, Kirwan left Maryland in 1998 to become the president of Ohio State University (Dew & Nearing, 2004). That same year, the Joint Legislative-Governor's Task Force for the Study of the Governance, Coordination, and Funding of the University System of Maryland[18] designated that the "State's first priority is the enhancement of the flagship campus, University of Maryland College Park, to achieve national eminence." The State's intention was supported in subsequent state legislation which directed that funding and performance expectations based on selected peer institutions.

[18] msa.maryland.gov/msa/mdmanual/26excom/defunct/html/35univ.html

New president, C. D. Mote, Jr., called for an update of Maryland's 1996 strategic plan to reflect the significant changes that had occurred at the University.[19] While there was no mention of continuous improvement as a measure of progress of the 1996 strategic plan, the 2000 strategic plan, *Building on Excellence: The Next Steps*[20], acknowledged the contributions of business process reengineering. The 2000 strategic plan was initially developed through consultation with committees of academic leaders. "There were certainly discussions. Discussions with the deans, discussions with the faculty. It was an intense experience and I would say with a lot of buy-in, so it was a very, very important document for us. The administration of the University decided to change it all. I think it was just done by fiat," indicated a recently-retired academic administrator. Interestingly, the 2000 strategic plan listed as one of its strengths 'the long and valued history of shared governance which pervades the decision-making process of all University policies, and a challenge to accelerate efforts to redesign the bureaucratic and administrative systems and processes'. This statement suggests there appeared to be differing perspectives on the success of shared governance amongst Maryland's academic and administrative leaders.

The 1996 strategic goal, 'Rationalizing resource allocation and administrative operations', transformed into 'Ensure an administrative, operational, and physical infrastructure that fully supports a first-class university' in the 2000 strategic plan. The new strategic goal referenced extending business process re-design efforts to all administrative, academic, and student service units to create more flexibility and accountability, and to establish performance standards for decision-making at all department levels. One of the areas that Maryland

[19] A new provost was appointed in 1997, a new president in 1998, and by 1999 there had been a change in leadership in almost half of the 13 colleges and professional schools, and in several critical support units.
[20] http://www.provost.umd.edu/Strategic_Planning/Plan.html

administrators had undertaken in 1998 (well before the University System of Maryland's 2004 Effectiveness & Efficiency initiative) was business process redesign, which lasted several years and focused largely on the automation of records, forms, and processes. According to a senior-level administrator, "It was radical business process redesign. Changed the role of most, if not all, central administrative units in the University. It was a near death experience." Around phases three and four of the business redesign process, though, something changed claimed a senior-level administrator.

> I'll never forget the day when the chairs of various work groups at various phases were able to articulate exactly what the redesign initiatives were going to do. We went from work group to work group, whether they were from student affairs, from purchasing to accounts payable, to equipment to hiring to travel. The expressions on the faces of the steering group changed during that meeting . . . it dawned on them that this was going to happen. It wasn't easy, but from then on there was no question that we had the tools, the approach, and it was going to happen.

The business process redesign efforts appeared to help propagate and embed continuous improvement within the campus community, causing continuous improvement to be "become a full-fledge forest fire, not just a brush fire, sweeping the place clean for replanting," stated a senior administrator.

The framework supporting the implementation of the 2000 strategic plan included critical-to-success factors such as achieving community commitment, implementation assignments and timelines, resource allocations, and measuring progress. The State-mandated 'Managing for Results' process required annual reporting of certain goals, and Maryland's assessment process was extended to include an annual review of all available measures of quality, including the State-mandated measures. Then came the University System of Maryland's Effectiveness & Efficiency initiative.

In 2002, Kirwan returned to Maryland as the Chancellor of the University System of Maryland. While Kirwan felt that TQM had a shelf-life, he believed that continuous improvement was embedded in the culture of Maryland, but also needed to be embedded in the Maryland postsecondary education system as well. The situation facing Maryland's post-secondary education institutions as a result of an increase in enrollment - including students who may be not be adequately prepared - would strain capacity and services. As such, the *2002 Maryland State Plan for Postsecondary Education*[21] contained eight goals, the last of which was 'Achieve a cost-effective and accountable system of delivering high-quality, post-secondary education.' By 2004, various accountability systems were in place, national and regional accreditation-related self-studies conducted, and 'Managing for Results' reports submitted for Maryland postsecondary institutions indicated in the *2004 Maryland State Plan for Postsecondary Education*[22].

Changing student demographics, reduction in state financial support for higher education, and the changing workforce needs of employers characterized the environment during which the *2004 Maryland State Plan for Postsecondary Education* was updated. "In many ways, we were applying the old principles of total quality management, but now in a sort of updated modality," claimed Kirwan. The *2004 Maryland State Plan for Postsecondary Education* plan consisted of five goals, one of which was 'Maintain and strengthen a preeminent statewide array of postsecondary education institutes recognized nationally for academic excellence and effectiveness in fulfilling the education needs of students, the State, and the nation.' This goal was modified from the original *2002 Maryland State Plan for Postsecondary Education* goal to

[21] Efforts to locate the 2002 Maryland State Plan for Postsecondary Education were unsuccessful, but the 2004 Maryland State Plan for Postsecondary Education detailed the eight 2002 goals. http://www.mhec.state.md.us/highered/2004plan/MHEC_PostSec04.pdf

[22] http://www.mhec.state.md.us/highered/2004plan/MHEC_PostSec04.pdf

include ‘academic excellence and effectiveness’. It was under this revised *2004 Maryland State Plan for Postsecondary Education* goal that the Effectiveness and Efficiency Initiative was developed to promote efficiencies and increase cost-effectiveness through the collaboration among state higher education institutions, use of best practices in cost management, and elimination of unnecessary duplication and redundancy. “We set about to analyze every process in the system, administrative and academic, and to assess whether or not they had the level of effectiveness that we desired, with a particular scrutiny on finding ways to take costs out of the system,” stated Kirwan.

The Effectiveness & Efficiency initiative was announced in late 2004 with the goal to realize $26.6 million in savings by mid-2006 in order to accommodate an additional 2,100 full-time equivalent students over the next three years at no additional cost to the State. The Effectiveness & Efficiency workgroup was established in June, 2004 and included the regents, chancellor and vice chancellors, and leaders from all University System of Maryland institutions, including Maryland. The driving force behind the Effectiveness & Efficiency initiative was to optimize resources to yield savings and cost avoidance by centralizing services, leveraging University Systems of Maryland buying power, and implementing cost effective energy management strategies[23]. “An extremely important element is a communications strategy about what you are doing and why you are doing it. There has to be, for sustainability, an ongoing communication plan and strategy. I think communication is absolutely vital to a successful effort,” stressed Kirwan.

Maryland had focused on effectiveness and efficiency via total quality and continuous improvement for many years, and some Maryland academic and administrative professionals

[23] www.umsa.umd.edu/usm/workgroups/EEWorkGroup/eeproject/eeoverview.html

skeptically viewed the Effectiveness & Efficiency initiative as a way for the Board of Regents to cut Maryland's budget every year. They felt the Effectiveness & Efficiency initiative was more appropriate for the smaller higher education institutions in Maryland where there were more improvement opportunities, rather than for Maryland. Other than periodic updates on their strategic goals, there is little information about Maryland's current internal quality efforts, suggesting that continuous improvement may have indeed been embedded in the Maryland culture, and/or that the continuous improvement efforts were conducted through and reported under the Effectiveness & Efficiency initiative.

In alignment with the *2004 Maryland State Plan for Postsecondary Education*, Maryland developed five goals, one of which was 'Ensure an administrative, operational, and physical infrastructure that fully supports a first-class university' with a specific task to ensure that the administrative operations of all campus units, including academic units, provide responsive, customer-oriented service to all of the University constituencies. This was the closest mention of a specific focus on continuous improvement. According to an administrator who has been with Maryland for almost 30 years, successful change management . . .

> . . . depends to a certain extent on the personalities of the leaders. It also depends on the understanding that some of these things are ventures that involve everybody. I think that part has disappeared. I think, now, when I watch the University confront a crisis, it's too much top-down.

By 2008, still experiencing chronic and unpredictable state funding, the new strategic plan for Maryland, *Transforming Maryland: Higher Expectations*[24], included 'Infrastructure and Academic Support' as an initiative. This strategic initiative contained five goals, the third of which was, 'The University will streamline administrative processes to decrease the time to completion of transactions and to increase the quality of critical as well as routine projects across

[24] http://www.sp07.umd.edu/StrategicPlanFinal.pdf

the campus.' The executive summary of the 2008 strategic plan referenced 'Relentlessly seeking greater efficiency in everything we do' and annual Maryland strategic implementation reports provided detailed updates on the progress of each initiative and it's supporting goals. While these goals were in alignment with the University System of Maryland's Effectiveness & Efficiency initiative, it is unclear if progress and results were also reported under the Effectiveness & Efficiency initiative.

The *10th Anniversary Report on the University System of Maryland Effectiveness and Efficiency Initiative*[25] indicated that since its inception in 2004, Phase I of the University System of Maryland's Effectiveness & Efficiency Administrative Action Plan had achieved impressive results reporting $356 million in cumulative savings, including the elimination of more than $130 million in direct costs, and significant savings through cost avoidance. Further, the Effectiveness & Efficiency business process reengineering initiative contributed $35.6M in savings. It is unclear what Maryland's contribution to the cumulative direct cost and cost avoidance, and/or business process reengineering initiative savings were under the Effectiveness & Efficiency initiative.[26]

Kirwan concluded our interview by clarifying that "I keep referring to continuous improvement, but I think it is really what every management strategy is, or called, at any given moment. It's all about an ongoing, continuous effort to get better. To do it in a way . . . with persistence and sustainability."

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[25] http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CB4QFjAAahUKEwjL3qbZy9jHAhUH0IAKHdT4CD4&url=http%3A%2F%2Fwww.usmd.edu%2Fusm%2Fworkgroups%2FEEWorkGroup%2Feeproject%2FEE10thAnniversaryReport.pdf&usg=AFQjCNHduTWsKOEl19rp0a-39TjdT74GaQ

[26] Phase II of the Effectiveness & Efficiency initiative reflected the University System of Maryland's continued commitment to cost-containment via the pursuit of financial best practices surrounding shared services, aggregate procurement, energy conservation, and a commitment to accountability and transparency.

Observations

Trait leadership. While some indicated that Kirwan wasn't great at helping resolve conflicts, he was described by others as having a Bill Clintonesque warmth. This charismatic trait may have contributed to Kirwan's ability to gain initial and ongoing support for continuous improvement at Maryland, and possibly the apparent support for the University System of Maryland's Efficiency & Effectiveness Initiative.

Participative leadership. Kirwan displayed an inclusive and transparent leadership style that appeared to foster the support of the campus when he developed and charged the cross-functional Continuous Improvement Planning Committee, strategically chaired by dean of engineering, with the development of Maryland's total quality strategy. The Continuous Improvement Planning Committee's recommendation to initially focus Maryland's total quality efforts on the academic and pedagogical processes may have contributed to the progress made with improvement projects focused on academic curriculum change and delivery processes. Including the participation of faculty, staff, student, and alumni representatives on the Continuous Quality Improvement Council may have also helped gather broad support for total quality.

On the other hand, there appeared to be some faculty discontent during the development of Maryland's 2000 strategic plan, when the original strategic plan was developed with input from the academic side of the campus, but later changed by administration. This situation suggests that participative leaders should take care when asking for, but not utilizing input and feedback from stakeholders.

Transformational leadership. As president, Kirwan publicly conveyed his vision in the early 90s for Maryland to be competitive in the global marketplace of the 21st century. A senior

administrator claimed that, "He really was at the forefront of the transformation [of Maryland] because he was there when we started the [total quality] process." When he launched total quality at Maryland, Kirwan was careful to initially *set realizable goals* and choose continuous improvement projects that had a *high probability of success*. Rather than make mandatory, *training and continuous projects were voluntary*. Kirwan wisely chose to introduce total quality via deans who were already supportive of and advocates for TQM. His intentional efforts to include deans and staff in training, avoid 'edicts from above' and focus on easy wins and incremental change, appeared to help garner acceptance from some facets of the campus community, including faculty. A long-time senior administrator at Maryland claimed, "We became interested in transforming our university. It was a deliberate change. It was deliberate. It was not something that sort of happened to us because of circumstances. It wasn't passive. Extremely active. It was extraordinarily active." Kirwan's leadership approach appeared to help minimize initial resistance to total quality, and his transformational efforts seemed to have paid off. By 1998, administrative leaders were already doing radical business process reengineering of administrative processes, and several administrators claimed to have embedded continuous improvement in their areas. "It's something you do all of the time. It's what you do when you are in administration," claimed Wylie. Further, a recent continuous quality improvement project led by a team of Maryland professors focused on providing high quality educational experiences to undergraduate students in large lecture hall[27] implies that continuous quality improvement may be embedded in the academic side of the university as well.

Collegial organizational system. When Maryland lost 10% of its budget in the early 90s, Kirwan's approach was not to cut everything by 10%, but instead focus on what was essential

[27] http://www.cte.umd.edu/library/teachingLargeClass/

and what wasn't. Faculty, students and, to some extent, secretaries and other service people were deeply involved in the budget reductions. While difficult, the collegiality of the cross-functional efforts resulted in the closing of seven departments. Continuous efforts throughout the past two decades to involved faculty and administration, as well as provide support for business process reengineering efforts and continuous quality improvement teams may have contributed to a sustained emphasis on quality management at Maryland.

Bureaucratic organizational system. Kirwan left Maryland in 1998, and returned four years later as the Chancellor of the University System of Maryland. In his new role, Kirwan announced in 2004 the Effectiveness & Efficiency Initiative for the state of Maryland post-secondary higher education system. Several Maryland administrators commented that a focus on continuous improvement was already embedded at Maryland, and as such they viewed the University Systems of Maryland's Effectiveness & Efficiency Initiative as a bureaucratic way to reduce Maryland's annual budget. "The large institutions, if they've got quality leadership, don't really need the Regents to tell them what to do. That efficiency and effectiveness enterprise, it was about the money," stated a senior-level administrator.

External influence. The research results suggest that a significant reduction in state funding coupled with the influence of and interactions with industry partners such as Westinghouse, Xerox, and Ford was a compelling motivation for higher education leaders to partner with external organizations to pursue and embed quality management initiatives. "All of the vice-presidents, president and the president's staff participated in what was roughly a year-long seminar on total management techniques. Given in part by people from the school of business and in part by people who had gone through the same kind of process at Xerox Corporation," stated Kirwan. A Maryland board member also provided external stimulus. "He

was a huge board member he was a huge advocate for total quality management, so as I learned a bit more about it I thought the principles were all about getting better," explained Kirwan.

In addition, leveraging expertise provided by organizations such as the Maryland Center for Quality and Productivity helped develop a core group of change agents to adapt and implement quality tools and methodology at Maryland. The funding provided via the IBM TQM and AT&T grants appeared to have contributed to a financial foundation with which to launch and build a continuous improvement initiative.

Adapting language and methodology. The case study findings suggest that the early decision to adapt the language of total quality management seemed to enhance acceptance and support of quality principles and techniques. In addition, allowing continuous improvement teams to select and adapt their own quality management methodology as necessary may have reduced resistance to continuous improvement efforts.

Centralized support organization. The university-funded Office of Continuous Quality Improvement and Accountability assisted in the training and implementation of continuous improvement within the campus community. The group appeared to provide institutional guidance and support to help reduce apprehension of continuous improvement principles and techniques and embed continuous improvement in the university's culture. The services offered by the Office of Continuous Quality Improvement and Accountability were provided free-of-charge to the campus community, which may have also increased usage and support. Currently, there appears to be no separate group focused solely on continuous quality improvement, only the Office of Institutional Research, Planning and Assessment, a potential indicator of how continuous quality improvement is truly embedded in the culture of Maryland.

Strategic planning integration. The research results suggest that the commitment of Maryland's senior leaders to continuous improvement was sustained when it was consistently included in the institution's strategic plans, and supported by a strategic framework. In addition, aligning Maryland's strategic goals with the University System of Maryland's Effectiveness & Efficiency Initiative may have also helped to sustain continuous improvement as a strategic initiative at Maryland.

Goal alignment. The case study findings suggest that continuous improvement may have been hindered on the academic side of the university when faculty measurement and reward systems were not aligned within the efforts, indicating an apparent disconnect between individual faculty and institutional goals. Alternatively, new president, C. D. Mote, Jr., acknowledged the seeming success of the previous business process reengineering contributions on the administrative processes. The 2000 strategic plan included extending business process reengineering throughout the university, possibly indicating an effort to better align unit goals with institutional goals.

Organizational performance assessment and results. Kirwan devoted time at his regular cabinet meetings to discuss total quality progress and review performance measures, perhaps highlighting the importance of accountability and support of total quality at Maryland. Then again, the case study results suggest that, at times, activity surrounding continuous improvement was mistaken for results. The accountability measures in Maryland's strategic plans coupled with the State's 'Managing for Results' annual reporting requirements may have helped to build and embed a culture of accountability years before the University System of Maryland's Effectiveness & Efficiency Initiative.

Pennsylvania State University

The Pennsylvania State University (Penn State) is a public, state research university, founded in 1855, with campuses and facilities throughout Pennsylvania. The University Park campus, the flagship campus and the focus on this case study, lies within the Borough of State College and College Township. Penn State has 24 campuses, 17,000 faculty and staff, and 100,000 students.

Penn State's continuous quality improvement and planning efforts go back more than 30 years, and their approaches have evolved over the past three decades. In 1983, the office of planning and analysis was established, and strategic planning had begun (Sherlock, 2010). Faced with a potential loss of $40 million in state appropriations in the late 1980s, Penn State began exploring options and opportunities for enhancing productivity and planning, and improving quality (Everett, 2002). An additional motivation surfaced when corporate partners expressed concern that recently-hired college graduates had to be retrained in systems thinking, teamwork, and quality principles (Sherlock, 2010). "As dean of engineering, John Brighton, tried to convince his fellow deans to look specifically at what employers wanted, and whether higher education was producing graduates to meet the expectations and requirements of the workforce, but did not meet with much success," stated Louise Sandmeyer, manager of the human resource development center at the time.

Penn State began their continuous quality improvement journey in 1991 when newly appointed provost and executive vice president John Brighton believed there were too many layers of bureaucracy and it took too long to get things done (Everett, 2002). As a result, new president Joab Thomas and Brighton appointed the University Council of Continuous Quality Improvement in 1991. Brighton assigned 80% of his senior leadership to the council, which met every two weeks for one year. Chaired by Brighton, the University Council of Continuous Quality Improvement was charged with exploring the applicability of TQM concepts for the university, initiating a program to train the university community, promoting the continuous

improvement of processes, and defining the core processes and customers (Seymour, 1993c). Penn State's vision statement at the time further highlighted their commitment to institutional change and revitalization via continuous quality improvement.

> Penn State as a premier public research university is respected for the quality of education it provides to its students, for the excellence of its research and scholarship, and for the service it renders to the citizens of the Commonwealth, the nation, and the world. Our distinction will be recognized further by our commitment to continuous quality improvement, creating an environment in which everyone takes ownership of the educational enterprise and in which high value is placed on teamwork, collaboration, and communication (Seymour, 1993c, p.26).

Sandmeyer emphasized that, "We never called it quality management. We always called it continuous improvement. No one is going to argue with the idea of improving, but if you talk about management, faculty resist the idea of being managed. We were very careful with terminology." Still, there appeared to be push back from faculty about the appropriateness of viewing the students as customers.

Penn State partnered with DuPont on their continuous improvements efforts (Seymour, 1993c). Sandmeyer suggested that the external influence to adapt continuous quality improvement to higher education and learning from industry how to implement continuous quality improvement was very significant. At the same time, Penn State submitted their application for the IBM TQM grant, which they were awarded in 1992. In Penn State's IBM TQM grant application, Brighton declared, "I have made a personal commitment for implementation of continuous quality improvement at Penn State" (Seymour, 1993c, p. 41). The IBM TQM grant guidelines allowed the recipient to choose a combination of cash and/or IBM equipment (Seymour, 1993c); as such, several grant recipients sought to identify ways in which to use technology to help improve curriculum development. The most common approach was

electronic classrooms, including Penn State's TQM Laboratory for Engineering (Seymour, 1993c).

The unique Penn State Integrated Model worked with K-12 'suppliers' to implement an integrated continuous quality improvement approach that viewed teaching and learning as a continuous educational process from pre-school through graduate school (Seymour, 1993c). In addition, Penn State leaders followed Deming's systemic view of organizations whereby quality stems from the comprehensive interface between suppliers, design, processes, output, and customers (Seymour, 1993c; Hogg & Hogg, 1995). This comprehensive and integrated approach appeared to permeate Penn State's continuous improvement efforts.

> By improving the competencies of incoming students, by developing curricula more responsive to customer needs, by improving the effectiveness and efficiency of instruction and administrative operations, and by developing an effective feedback loop from customer to process, 'we will be institutionalizing the continuous improvement of the entire educational process' (Seymour, 1993c, p. 27).

Senior leadership at Penn State made a commitment to implement continuous quality improvement across the university. There were many quality improvement teams looking at administrative processes, but "it was very important that this actually was not seen as only for the administrative side of the university," stressed Sandmeyer. Seymour (1995) stated that the colleges of engineering and business led the continuous quality improvement efforts from an academic perspective. One of the first quality improvement teams included engineering and physics professors. This team met every two weeks to ensure that the knowledge obtained in physics classes adequately prepared students for their engineering classes. In the subsequent three years, surveys, tests, and interviews provided information about faculty perception, student satisfaction, and student learning in physics and engineering courses. Consequently, several activities were developed to enhance student learning (Seymour, 1995; Sokol, 1993). As a result

of feedback from a student survey, the college of business' academic advising center used quality tools including flowcharts, root cause analysis, and benchmarking to re-design and simplify the intake and reception process (Seymour, 1995), and realized benefits beyond process improvement as a result of working in teams (Winch, 1993). Winch (1993) further claimed that promoting cooperation by establishing team ground rules, decision by consensus, avoiding blame, and viewing the students as customers resulted in positive attitude changes in staff, supervisors, and students. There appeared to be differing opinions of viewing the students as customers, though, with administration open to the concept, but faculty not amenable.

Research was an important part of the IBM TQM grant criteria, and the Penn State application succinctly stated that, "The incorporation of research results into our curriculum is considered an inherent part of our research effort" (Seymour, 1993c, p. 29). As an example of Penn State's commitment, the college of engineering partnered with General Motors Corporation to develop a 5-year quality and management research agenda (Seymour, 1993c).

In alignment with the objectives of the IBM TQM grant, the *IBM TQM Partnership with Colleges and Universities* Report (Seymour, 1993c) indicated that a group of professors formed an improvement committee in 1991 to recommend curricular revisions in the undergraduate business program. The committee recommended that well-defined core TQM knowledge be required of all undergraduate students, with the knowledge taught integrating TQM principles across all four college-wide team-taught courses. The faculty at the college of business adopted the plan in 1992, and a master degree in quality and manufacturing, jointly offered by the colleges of business and engineering, was developed (Seymour, 1993c). Concurrently, several Penn State administrators spoke at the TQM Sharing Conference about the need to "improve critical processes such as teaching and learning; advising; recruiting faculty, staff, and students;

developing curriculum; and scheduling classes" (Seymour, 1993c, p. 6). These quality improvement projects suggest Brighton was successful in his efforts to make continuous quality improvement an institution-wide initiative.

In 1992, Brighton created the Continuous Quality Improvement Center to assist faculty and staff in the implementation of continuous quality improvement across campus (Everett, 2002). The Continuous Quality Improvement Center, led by Sandmeyer, was responsible for planning and conducting continuous quality improvement education and training, identifying processes and creating quality improvement teams, serving as consultants and facilitators, and overseeing and distributing quality improvement results (Everett, 2002; Seymour, 1993c). The Continuous Quality Improvement Center was centrally funded by the university and did not charge for its services (Everett, 2002).

One of the first things the Continuous Quality Improvement Center did, explained Sandmeyer, was ask senior leaders to identify practices that inhibited quality improvement. Approximately 100 processes and practices were identified, including topics such as unnecessary signatures, lack of transparency, and length of processing time. "There were a number of policies where people even questioned if it was necessary to do," claimed Sandmeyer. As part of their efforts to develop a continuous quality improvement culture, the Continuous Quality Improvement Center was deliberate about communicating the rationale to the process quality improvement teams as to why processes were still needed, whether processes could be streamlined, or even completed eliminated. Success was initially measured by the number of quality improvement teams, and by outcomes in terms of increased efficiency and/or effectiveness. "Were the processes streamlined? Was there a reduction in bureaucracy and complexity?" explained Sandmeyer.

Sandmeyer suggested that culture was important to the success of Penn State's continuous quality improvement efforts as well. "When they hired me for the Continuous Quality Improvement Center position at the main campus, three other people applied, one of which was a retired executive who had run a total quality management program for a major corporation. He knew a hell of a lot more about continuous quality improvement than I did, but he knew nothing about the culture of higher education."

A strong communication strategy also appeared to be a factor in the initial success of Penn State's continuous improvement efforts according to Sandmeyer. The Continuous Quality Improvement Center consciously took a back seat in terms of self-promotion, instead promoting the successes of the academic and administrative quality improvement teams. Continuous quality improvement panels were held every few weeks where the quality improvement teams would talk about the processes they improved, how they measured success, and what they learned from their efforts.

Another key component of Penn State's continuous quality improvement program was recognizing and celebrating the work accomplished by the quality improvement teams declared Sandmeyer. One format to do so was the Quality Expo. In 1993, the University Council of Continuous Quality Improvement sponsored the inaugural Quality Expo, featuring the efforts of 28 quality improvement teams, which were comprised primarily of staff. The number of quality improvement teams showcased at the Quality Expo had grown each year, and by 2001 had included the interdisciplinary and multi-unit quality improvement efforts of students, faculty, and staff, as well as attracting Penn State faculty and staff, and visitors and exhibitors from other Big Ten universities (Everett, 2002). "The Quality Expo really helped embed [continuous quality improvement] in the culture," stressed Sandmeyer.

While there was always continuity of senior leadership, oftentimes "people in middle-management created the bottlenecks," stated Sandmeyer. The Continuous Quality Improvement Center would receive requests to initiate a quality improvement team where the manager already had identified the solution. "Why create expectations that the team would have input when in fact they did not?" stressed Sandmeyer. "The success of the [continuous quality improvement] effort depended on whether leadership at the top is really able to communicate the importance of the initiative to mid-level managers."

Another barrier encountered was when quality improvement teams developed a solution, but were subsequently told that the money was not available to implement the changes. "Those parameters should have been created right off the bat," explained Sandmeyer. Or when a quality improvement team suggested a process improvement not supported by their management. It was important for the Continuous Quality Improvement Center to explain that the issue was the manager who charged a quality improvement team for the wrong reason. "What you are angry about it isn't CQI, it's that somebody did something under the guise of continuous improvement, which wasn't continuous improvement. Don't throw the baby out with the bath water," explained Sandmeyer.

In 1996, the Continuous Quality Improvement Center merged with the Office of Planning and Analysis to form the Center for Quality and Planning[28]. Barbara Sherlock, an Office of Planning and Analysis planning and improvement associate, indicated that "This merger represented the beginning of the cultural integration of planning, improvement, and assessment at Penn State" (Sherlock, 2010). "The merger really gave considerable gravity to the whole continuous quality improvement effort when we linked improvement with planning and

[28] www.opia.psu.edu.about-office

assessment," acknowledged Sandmeyer. "It was one of the reasons why the [continuous quality improvement] efforts have been sustained." Higher education institutions such as the University of Alabama, the University of Michigan, and Rutgers had launched their quality own initiatives by learning from Penn State's successful and comprehensive model (Dew & Nearing, 2004). In the following years, Penn State developed its first university-wide strategic plan, identified university-wide strategic performance indicators, and established an integrated planning model (Sherlock, 2010).

Under new president Graham Spanier's leadership, Penn State's 1997–2002 five-year strategic plan, *Academic Excellence: Planning for the Twenty-first Century*, was developed by the cross-functional University Planning Council which included senior academic and administrative leaders as well as the executive director for the Center for Quality and Planning. Using integrated 'top-down' and 'bottom-up' approaches, six goals were defined, the last of which was 'Reduce costs through improved efficiencies'. The introduction for this goal reiterated the university's continued commitment to continuous quality improvement.

> Penn State has, for a number of years, been involved in an aggressive effort to reduce costs and create more effective and efficient ways of operating. The CQI process is one example of this approach. The efficiency improvements of forty-three CQI teams are estimated to save $1.2 million annually in time costs. This figure is expected to grow in the coming year. To date, 244 teams have identified ways to improve processes and increase customer satisfaction. In addition to an ongoing commitment to CQI, the UPC recommends [four tactical objectives].

In the spring of 2000, Penn State in cooperation with three other universities hosted Total Quality Forum IX[29] attracting 130 participants from 34 universities and 24 companies. The attendees were largely corporate CEOs, university presidents, chancellors, and deans interested

[29] In 2003, the annual Quality Expo was redesigned and renamed the Quality Issues Forum and Luncheon (Everett, 2002).

in discussing innovative strategies and collaboration opportunities (Everett, 2002). According to Louise Sandmeyer, executive director for the Center for Quality and Planning,

> CQI has made a difference at Penn State in that it has made the university more aware of whom we serve and how we meet and exceed expectations through improved processes. It has showcased the tools for organizational change, resulting in many improved processes and practices. And it has supported a culture where teams are valued and innovation and change are encouraged (Everett, 2002, p. 46).

From its inception in 1993 until 2000, the structure and membership of the University Council of Continuous Quality Improvement - approximately 25 senior administrators and faculty - remained relatively unchanged. The council met at least six times per year to develop guiding principles for the practice of continuous quality improvement, identify critical processes for study, break down barriers to progress, strengthen intra-organizational communication, and monitor their own progress (Everett, 2002). Everett (2002) stated that In July 2000 the newly appointed provost and executive vice president Rodney Erickson decided to re-examine the purpose and structure of the University Council of Continuous Quality Improvement, reconfiguring the group to 10 members meeting three times per year. The new University Council of Continuous Quality Improvement identified critical university processes that crossed organizational boundaries that could be improved using continuous quality improvement tools and practices, suggesting a more university-wide strategic selection of improvement projects. The University Council of Continuous Quality Improvement chose two quality improvement projects in the 2000-2001 academic year, and designated cross-functional teams including involved key stakeholders (Everett, 2002).

In January 2003, senior leadership at Penn State combined the strategic planning, continuous improvement, and institutional assessment functions to form the new Office of

Planning and Institutional Assessment[30], reflecting new ways of managing change, controlling cost, and improving quality. The Office of Planning and Analysis was charged with creating a data-driven comprehensive planning, assessment, and improvement model to further disseminate the continuous improvement culture (Dew & Nearing, 2004). In addition, Sherlock stated that the Office of Planning and Analysis facilitated the University's planning, improvement and assessment initiatives, and used organizational change management tools to help departments and units develop strategic plans, improve key processes, assess institutional needs, and develop collaborative team environments. Services provided by the Office of Planning and Analysis continued to be offered free of charge, and included consulting, coaching, and facilitating planning or improvement events and customized workshops. Office of Planning and Analysis staff also assisted quality improvement teams with the design and facilitation of activities such as surveys, focus groups, and benchmarking indicated Sherlock.

Penn State's 2003-2006 strategic plan, *Progress Amidst Challenge: The Penn State Strategic Plan*, articulated common themes and directions that emerged from the strategic plans of its 34 budget units. The fifth goal of the three-year strategic plan aimed to 'Develop new sources of income and reduce costs through improved efficiencies,' specifically seeking 'cost efficiencies through the further consolidation of administrative and academic units'.

By 2004, Penn State's integration of strategic planning and quality management via the Office of Planning and Analysis had apparently resulted in hundreds of successful quality improvement projects in academic and administrative processes. In addition, cross-functional teams worked on specific activities and processes in less-traditional areas, e.g., a joint project with alumni relations and the college of liberal arts process to develop a process for identifying

[30] www.opia.psu.edu.about-office

the addresses of international alumni (Dew & Nearing, 2004). Continuous quality improvement appeared to have become a part of Penn State's culture, as evidenced by the following statement in Penn State's 2005 *Innovation Insight Series, Number 10*.

> CQI is both a philosophy and set of guiding principles that represent the foundation of a continuously learning, developing, and improving organization, readily able to adapt to the changing needs of its constituents. The four hallmarks of Penn State's CQI efforts are a focus on service to stakeholders, study of processes, decisions based on data, and teamwork.

In July, 2006, the board of trustees approved the 2006-2009 strategic plan, *Fulfilling the Promise: The Penn State Strategic Plan.*[31] This plan was an update to the previous three-year strategic plan, and contained six strategic goals that built on the University's approach to strategic management, particularly becoming even more cost-effective while attaining greater success in the University's mission of teaching, research, and service.

Penn State's 2009-2014 strategic plan, *Priorities for Excellence*[32], articulated seven goals and related university-wide strategies. This strategic plan differed from previous strategic plans in that it included a clearly defined process for implementation by assigning responsibility for each goal, assessing fiscal impact, and defining measures of performance. Administrators with responsibility for each strategic goal were required to periodically submit a progress report to the Board of Trustees, Academic Leadership Council, Faculty Senate, and other stakeholders. While many goals focused on improvement permeate the strategic plan, the seventh goal 'Control costs and generate additional efficiencies' spoke specifically to Penn State's continuous quality improvement efforts. Responsibility for this goal was assigned to and led by the executive vice president and provost and the senior vice president for finance and business. Goal 7.7 endeavored to 'promote continuous quality improvement and reward innovation'.

[31] http://www.opia.psu.edu/fulfilling-promise-penn-state-strategic-plan-2006-07-through-2008-09
[32] http://strategicplan.psu.edu/StrategicPlancomplete.pdf

> Over the past 18 years, over 850 CQI teams have worked to improve University processes across a wide range of academic and administrative units. These teams have brought together individuals from affected units, made a comprehensive analysis of existing processes, and recommended significant changes that have saved the University millions of dollars while improving overall service to students, faculty, staff, alumni, and other members of the Penn State community. The University must re-dedicate itself to a new focus on CQI and making process improvements wherever it can to achieve even greater efficiencies and effectiveness.

Appearing to leverage existing internal expertise with the intent to continuously improve and re-fresh their continuous quality improvement efforts, goal 7.7 further stated that

> We believe that Penn State faculty and staff represent a wealth of creativity and innovation, and these capabilities should be harnessed for even greater efficiency and effectiveness in service delivery. The University should consider developing an incentive program in which faculty and staff who bring forward workable ideas should be rewarded by sharing in the benefits of such changes.

To further this and other goals and strategies, in October, 2009, Spanier developed and assigned the Academic Program and Administrative Services Review Core Council - chaired by executive vice president and provost Rodney Erickson, and comprised of 13 faculty, staff, and administrators - to analyze programs, find efficiencies, and free resources for strategic investment. The council's work was supported by three coordinating committees made up of faculty, staff, and administrators (Sherlock, 2010).

Recognizing and celebrating continuous quality improvement successes had always been a part of the Penn State culture beginning with the Quality Expo from 1993 to 2002, which was replaced with the Quality Issues Forum and Luncheon in 2003[33]. In 2012, the Office of Planning and Analysis began their next generation of recognizing, celebrating, and sharing quality improvement information by launching Quality Team Highlights which provided a certificate

[33] www.opia.psu.edu/qif

recognizing team members' work as well as a description of the improvement project on the annual Quality Team Highlights web page[34].

What does the future hold for continuous quality improvement at Penn State? David Gray, vice president for finance and business, shared his thoughts in the *2013 Penn State Plan for Continuous Improvement* update.

> Ultimately, it is our charge as university leaders to maintain and strengthen Penn State's position as a world-class academic institution and as a great place for faculty and staff to build a rewarding career. A dedicated focus on continuous improvement always will be critical to those efforts.

Further supporting the continued commitment of continuous quality improvement at Penn State, Sandmeyer stressed, "If you are talking about transparency, if you are talking about accountability, if you are talking about being more student-centered, which you can translate into customer-driven, those tenets are just as significant now as they were when CQI was embraced in the early nineties."

Observations

Trait Leadership. When Brighton retired as provost in 1999, traits such as passionate, committed, loyal, fair, inclusive, and supportive were used to describe the man and his accomplishments. These appealing traits, coupled with leadership style, suggests that Brighton played an important role in embedding continuous quality improvement in the culture of the university.

Participative leadership. John Brighton, Penn State's dean of engineering prior to becoming provost, appeared to have a participative leadership style when he initiated and led Penn State's continuous quality improvement efforts. As dean of engineering, Brighton's initial efforts to initiate TQM in the academic arena were not successful, although his efforts as provost

[34] www.opia.psu.edu/qth

realized more success, suggesting that positional authority may be a factor in introducing change initiatives. The cross-functional University Council of Continuous Quality Improvement helped steer the quality improvement efforts for many years. In addition, the campus community participated in numerous quality improvement teams and projects. The research findings suggest that the involvement by and active participation of academic and administrative leaders in the development of the Penn State's continuous quality improvement strategic planning, decision-making, and implementation activities may have garnered greater acceptance and ownership of CQI. In addition, the results propose that focusing continuous quality improvement efforts on both academic and administrative processes may have further institutionalized continuous quality improvement across the campus. Moreover, positioning TQM as an area for academic research appeared to foster internal academic support and generate external partnerships such as the college of engineering's 5-year research agenda with General Motors Corporation.

The case study results also suggest that involving relevant stakeholders in the continuous quality improvement teams may also foster institutional buy-in. In addition, because the scientific nature of TQM principles aligned well with engineering focus and the early adoption of TQM by the business sector, the findings also suggest that academic leaders from the colleges of engineering and business may have provided a natural ally and credible channel with which to initially introduce and champion academically-related continuous quality improvement efforts. Furthermore, ensuring academic-related continuous quality improvement projects consisted of cross-functional and academically-led committees and teams supportive of continuous quality improvement may have reduced faculty resistance to and cultivated continuous quality improvement as an institution-wide initiative. Finally, Penn State's comprehensive total quality model involving suppliers of the educational process from K12 through graduate school may

have helped nurture buy-in from various stakeholders and assisted in the institutionalization of CQI throughout the university and the entire educational process.

Transformational leadership. The case study results suggest that transformational leaders may be effective in successfully leading change initiatives. John Brighton made a *personal commitment* to continuous quality improvement, and continued to *clearly and consistently communicate at all levels the vision and purpose* of continuous quality improvement as a university-wide strategic initiative. He formed and led cross-functional groups to *provide guidance and institutional support* for continuous quality improvement efforts.

The findings also suggest that continuous quality improvement initiatives can be sustained when leaders continually assess their effectiveness and periodically revise and refresh quality strategies as needed. Brighton and the senior leadership *established continuous quality improvement as a philosophy and set of guiding principles*, and demonstrated *continual and consistent communication, support and funding* of the university's continuous quality improvement activities. In addition, Penn State leadership *regularly communicated the progress and results* of continuous quality improvement projects, and continually *recognized and celebrated improvement team* efforts via mechanisms such as the Quality Expo events. These efforts appeared to propagate continuous quality improvement internally, and externally with other organizations and higher education institutions who *learned from and modeled their quality initiatives* on Penn State's continuous quality improvement approach.

The findings suggest that the ability to *explain to quality improvement teams why recommended improvement changes could not be made* may have helped reduce skepticism of continuous quality improvement efforts. In addition, ensuring that the continuous quality

improvement projects were *not used as an avenue to implement someone's personal agenda* may have also helped to reduce cynicism and advance continuous quality improvement efforts.

Continuity of leadership. The case study findings propose that continuity of leadership was also an important factor in sustaining continuous quality improvement at Penn State. "John Brighton was provost for a number of years, and the person that replaced him was the dean of the graduate school. A lot of people who were early adopters, moved in to senior leadership positions. There was continuity of leadership . . . that was significantly helpful," underscored Sandmeyer.

Collegial organizational system. The promotion of quality improvement teams by the Continuous Quality Improvement Center and the frequent and interactive continuous quality improvement panels seemed to help to build a community. The research results suggest that the senior management's participative and transformational leadership styles may have helped to foster a collegial organization in which change initiatives such as continuous quality improvement could flourish and endure.

External Influence. Pressure from industry and employers to produce graduates trained in systems thinking, teamwork, and quality management principles appeared to provide a compelling motivation for Penn State leaders to pursue quality management. In addition, Penn State's collaboration with DuPont, who was already experienced in TQM principles, helped adapt and implement quality tools and methodology in a higher education environment. Finally, the findings suggest that external funding and grants may provide a financial foundation with which to launch and build a continuous quality improvement initiative.

Adapting language and methodology. The case study results appear to indicate that adapting the total quality management terminology to be less-threatening and autocratic, and

more applicable to a higher education environment, may have increased acceptance and support of continuous quality improvement principles and initiatives at Penn State. In addition, the findings suggest that adjusting the quality improvement methodology as appropriate to different audiences, e.g., not viewing the student as the customer may have reduced faculty resistance of continuous quality improvement efforts.

Centralized support organization. The research findings suggest that developing centrally-funded Continuous Quality Improvement Center (later renamed the Office of Planning and Institutional Assessment) to assist in the training and implementation of continuous quality improvement throughout the campus community may have helped embed CQI in the University's culture. Further, appointing Sandmeyer - who understood the higher education culture - to lead the organizational unit may have allowed leaders to successfully navigate and overcome organizational barriers, and even propagate continuous quality improvement throughout the institution.

Strategic planning integration. The case study results suggest that the integration of continuous quality improvement principles in the University's strategic planning process, and using cross-functional team and a participative bottom-up and top-down approach to develop strategic goals may have helped CQI to endure in the management and culture of the university. In addition, the findings suggests that the development of the Office of Institutional Planning and Assessment which integrated strategic planning, continuous improvement, and assessment may have also helped to sustain quality improvement efforts in the culture and strategic management of the institution.

Organizational performance assessment and results. In addition to integrating continuous quality improvement principles in the strategic planning process and management of the

university, the findings suggest that continuous quality improvement endured when responsibility was assigned and measures of performance defined for strategic and continuous improvement projects and goals.

Sandmeyer sums up the apparent success of Penn State's continuous quality improvement journey quite well. "I think culture is a really important determinant. I think language is really important. I think leadership is important. I think recognizing and rewarding people who do this is really important. I don't think [continuous quality improvement] can be done unless there is some recognition, some rewards, and some understanding of the culture and the importance of communication and leadership," emphasized Sandmeyer.

Summary

Many of the same pressures encountered by universities and colleges in the late 1980s and early 1990s still exist today. Higher education leaders face issues of increased competition, rising tuition, increasing costs, decreasing enrollments as well as new pressures such as compromised access, legislative demand for greater accountability, external perception of higher education institutions as expensive and inefficient, and decreasing federal and state funding (Balzer, 2010; Christensen & Eyring, 2011). Eckel et al. (1998) note that "for most American colleges and universities, the pendulum has swung from the heyday of growth, prosperity, and public favor to times that call for institutions to adapt themselves to current, harsher realities.

The challenges of institutional change presented by this new environment are daunting. To aid in addressing these challenges, higher education leaders may need to get smarter at both what they do and how they do it. The use of quality management tools and methodologies may assist higher education academic and administrative leaders in doing so. Maryland and Georgia Tech successfully utilized business process improvement and re-engineering techniques to

automate and streamline institution-wide administrative processes, whereas Penn State often involved external stakeholders and suppliers in their process improvement efforts. While the approaches and journeys for each of the three case study institutions are unique, the findings suggest some similarities and differences that have contributed – to varying degrees – to the endurance of quality management at the Georgia Institute of Technology, University of Maryland College Park, and Pennsylvania State University – University Park.

CHAPTER 5

CONCLUSION

The objective of this research was to identify the factors that contributed to the successful or unsuccessful implementation of quality management principles in three four-year public higher education institutions, specifically Georgia Institute of Technology, University of Maryland College Park, and Pennsylvania State University- University Park. As indicated in Chapter 1, the two primary research questions guiding this study were:

1. What factors indicate the continuation or abandonment of quality management initiatives in higher education?
2. In what ways have quality management efforts evolved on campuses since the early 1990s?

Leadership theory and organizational theory provided frameworks to present two of the factors affecting the success of change initiatives. Each of the three case studies include a within-case analysis using these two frameworks, as well as several other emerging factors. This chapter utilizes the analytical frameworks to present the leadership and organizational factors, and details additional emerging factors of the between-case analysis results.

The first section of this chapter uses cross-case analysis to explore the similarities and differences between case study institutions. The findings are organized using the two conceptual frameworks, as well as five emerging factors. The second section of this chapter uses the cross-case analytical research findings to consider the relevance and implications of the research findings for higher education leaders.

The Seven Factors

Through cross-case analysis of the three institutions' quality management journey over the past two decades, seven themes surfaced indicating that quality management initiatives had been integrated into institutional practice. Additionally, this analysis contrasted and compared how quality management efforts have evolved on campuses since the early 1990s.

Two Framing Factors: Leadership and Organizational Systems

The following section considers the experiences of the three case study institutions using leadership and organizational system frameworks. The research findings are presented by means of four leadership styles, and three organizational systems.

Leadership. Four styles of leadership theory were considered during the research analysis: trait, participative, transformational, and situational. The findings suggest that of the four individual styles, trait or engaging, participative and/or transformational leader styles may be more successful in initiating and maintaining quality management change initiatives; however, minimal instances in the research reflected where a situational leadership style led to the continuation of quality management initiatives. It should be noted, though, that the leaders may have had varied leaderships styles including situational, but did not use all of them to implement and/or support quality management at their institutions. As indicated in the Penn State case study, it is also worth noting that the continuity of leadership committed to quality management may help to sustain quality principles in the institution.

Successful leaders are often referred to in terms of traits, personal attributes, interpersonal abilities, and technical management skills. Penn State's provost, John Brighton, was described as passionate, committed, loyal, fair, inclusive, and supportive. Maryland's Brit Kirwan was described as having a Bill Clintonesque warmth, although others felt that he was not always

skillful at resolving conflicts. Steve Swant displayed a passion for Georgia Tech that inspired and energized the campus community. The research findings suggest that the personal attributes and interpersonal skills of these leaders, amongst many others, were influential in integrating and embedding total quality management within their institutions.

Participative leaders believe in involving others in decision-making processes. The Georgia Tech Quality Council, Maryland's Continuous Improvement Planning Committee, and Penn State's University Council of Continuous Quality Improvement are examples of participative leadership. Each council involved academic, administrative, student, alumni, and other stakeholder groups in the strategy development, decision-making, and guidance of their institutions' quality management initiatives. There are numerous examples at each case study institution where presidents, provosts, academic and administrative leaders were actively involved in establishing strategy and ongoing guidance for total quality management at their institution. In addition, all three institutions involved academic and administrative employees at varying levels in quality improvement project teams. The research results suggest that involvement of key stakeholders in establishing strategy and direction for a change initiative may help to foster acceptance of and support for quality management initiatives, particularly in a shared governance environment typical of higher education. A word of caution, though. Participative leaders should take care when soliciting, but not utilizing, input and feedback from stakeholders as this can result in cynicism and lack of support.

Communicating a clear vision is an important initial step when embarking on a change initiative, as demonstrated so effectively by Kirwan. Kirwan put forth publicly a clear and simple vision statement for Maryland to be competitive in the global marketplace of the 21st century. Similarly, Brighton clearly and consistently communicated the vision and purpose of continuous

quality improvement as a university-wide strategic initiative. On the other hand, Crecine - in what would later be defined as a visionary decision – executed a controversial 1990 restructuring of the colleges. His bureaucratic decision-making approach likely contributed to his inability to muster support for quality improvement initiatives a few years later. The research findings suggest that while articulating a vision is important, articulation alone will not create the support necessary for a change initiative to succeed. The ability to inspire, motivate, and lead the campus community are critically important to transform the culture of an institution.

Leaders in all three case study institutions began their quality improvement initiatives with community evangelists, often deans and faculty from the colleges of business and engineering. Initially, 'low-hanging fruit' and 'easy win' projects with measurable and realizable goals were strategically chosen. Quality management training and projects were voluntary, not mandated. Penn State intentionally chose to begin their quality management efforts on the academic side of the university at the suggestion of faculty. In contrast, Maryland and Georgia Tech focused their quality management efforts on administrative processes, although some academically-led projects were conducted. The deliberate decision to focus first on projects with a high probability of success, led by individuals already supportive of quality management, appeared to have built credibility and momentum for quality management initiatives.

Finally, leaders inspired their organizations to varying degrees and in many ways. Leaders demonstrated a personal commitment to the quality initiative, avoided self-promotion, provided the necessary financial and human resources, ensured continual and consistent communication of the vision, and celebrated progress and successes. In an attempt to reduce skepticism and maintain trust and credibility, leaders were quick to communicate to quality improvement teams why a recommended change could not be made. At varying times over the

past two decades, senior leadership at all three institutions intentionally revised and re-energized their quality management initiative to better align with their vision and strategy. The case study results suggest that leaders who are authentic, supportive, and transparent help contribute to the cultural transformation of an institution.

Situational leaders adjust their leadership style based upon the internal and external influences driving the pursuit of quality management, and the stakeholder(s) involved in implementation, e.g. faculty, administration, alumni, students, trustees, etc. The research provided few examples of situational leadership at the three case study institutions. Having said that, situational leadership may not have been evident because quality management was the situation and called for collegiality, not politics.

Organizational Systems. Three types of organizational systems were considered during the research analysis: Collegial, Bureaucratic, and Political. The research findings suggest that institutions operating under a collegial organizational system may be more effective in building and sustaining support for quality management initiatives. There were limited instances where a bureaucratic or political organizational system led to continuation of quality management in the institution.

Collegial organizational systems stress consensus, shared power, common commitments and aspirations, emphasizing consultation, and collective responsibility. Academic and administrative leaders served as active sponsors, and coupled with the involvement of the campus community, were able to develop quality management strategies that firmly built on the existing collegial and collaborative environment. While the faculty may not have always embraced quality management in the academic realm, they appeared to be supportive of the administrative quality management efforts. In addition, organizations that celebrate and rewards

successes and share best practices tend to promote a culture of collegiality in which change initiatives can endure.

Bureaucratic organizational systems are often described via an organizational chart representing formal lines of authority, with leaders concerned with planning, directing, organizing, controlling, and evaluating. Most higher education institutions operate in a shared governance system and leaders with a top-down management and decision-making style may not acquire adequate campus support to successfully implement and sustain change initiatives. In addition, leaders that reflexively act on external state and public pressure to implement quality management without campus consensus and buy-in may also may fail to inspire evangelists to join in the change which will hinder widespread acceptance and support.

In political organizational systems, power is derived through negotiation using personal power and mutual dependencies. The research did not identify situations where university political organizational systems were utilized to advance quality management initiatives.

The research results suggest that leaders possessing appealing trait, participative, and/or transformational leadership styles in a collegial organizational environment may be well poised for successfully implementing and sustaining quality management initiatives. The engaging, inclusive, and inspiring nature of the leaders may be supported by and/or result in a collegial campus community. The research results are unclear if institutions with congenial trait, participative, and/or transformational leaders working in bureaucratic and/or political environments would have the same level of success in implementing quality management. Furthermore, the research is silent on the effectiveness of collegial organizations without engaging, participative, and/or transformational leaders to be successful in change initiatives.

Five Secondary Factors

In addition to leadership and organizational factors, the following section details five emerging factors that surfaced during the analysis of the research results. These factors are external influences, adapting language and methodology, centralized support organization, integration with strategic planning, and organizational performance assessment and results.

External Influence. Financial stress and pressure from external stakeholders appeared to be a strong motivation for the case study institutions to pursue quality management. Persistent reductions in state funding may help sustain the institution's efforts to improve effectiveness and efficiency. Influence from governing bodies such as the Board of Regents, trustees, and board members, as well as pressure from industry and employers to produce graduates with adequate and marketable skills may be strong incentives to embed quality management principles into the university culture. Finally, quality management training, expertise, and/or financial support from external stakeholders may also help launch and maintain quality management initiatives.

Adapting language and methodology. All three institutions made the deliberate decision to adapt the total quality management language and methodology as appropriate, e.g., while some factions within the campus were opposed to viewing the student as the customer, others were not. In addition, Maryland and Penn State allowed their quality improvement teams to select their own quality management methodology. The research results suggest that adapting the quality management language to a higher education environment may increase acceptance and support of quality management efforts. In addition, permitting quality improvement teams to utilize their preferred quality management methodology may reduce resistance to and increase acceptance of quality management initiatives.

Centralized support organization. Another similarity across all three institutions was the early development of a centralized support organization to provide quality management training and campus support. Georgia Tech's Office of Continuous Improvement and Assessment evolved over time into the Georgia Tech Consulting Services, an internal consulting organization focused initially on continuous improvement projects. Recently, the re-focused Georgia Tech Strategic Consulting group provided robust consulting services supporting the implementation of the Institute's strategic plan. Maryland's Office of Continuous Quality Improvement and Accountability morphed into the Office of Institutional Research, Planning, and Assessment, and the mission of Penn State's Continuous Quality Improvement Center was later expanded and the organization renamed the Office of Planning and Institutional Assessment. Maryland and Penn State's support organizations provided their consulting services free-of-charge, while Georgia Tech's internal consulting organizations charged for their services. In this study, it appears that a centralized organization providing training, support, and expertise – whether free or for a fee – helped launch, sustain, and propagate quality management efforts.

Strategic planning integration. All three institutions integrated quality management principles such as benchmarking and Plan-Do-Check-Act within their strategic planning processes, and some form of continuous quality improvement strategic objective(s) in their strategic plans. Georgia Tech's 1996-2010 and 2010-2035 strategic plans included goals related to improving institutional effectiveness and efficiency. Maryland's 1996 and 2000 strategic plans referenced business process reengineering, and their 2008 strategic plan aligned the university's goals with the University System of Maryland's Effectiveness & Efficiency Initiative. Penn State's strategic plans over the past twenty years included goals to reduce costs through improved efficiencies. These findings strongly suggest that utilizing quality management

principles in the strategic planning process, and including continuous quality improvement goals into the institution's strategic plan may help integrate and embed quality management into the culture of the institution.

Organizational performance assessment and results. To varying degrees, institutional key performance indicators and benchmarking against peer and aspirational institutions were commonly used by all three organizations. The use of key performance indicators to measure quality management progress is an area where the three institutions differ in their approach. Georgia Tech did not have formal continuous quality improvement performance measures. On the other hand, Kirwan devoted time in his cabinet meeting to discuss quality management progress and review performance measures. Additionally, Maryland's strategic plans and the State of Maryland's annual reporting requirements included detailed accountability and performance measures. Penn State's strategic plans historically included performance indicators, but their most recent 2009-2014 strategic plan clearly assigned responsibility, assessed fiscal impact, and defined measures of performance for each goal. The research findings suggest that quality management endured at Maryland and Penn State when measures of performance were defined and responsibility assigned for strategic goals. Maryland's experiences with faculty, though, highlight the potential issues that may occur when strategic goals are not aligned with departmental or individual goals. The lack of performance measures related to the success of quality management initiatives at Georgia Tech suggests that organizations may be accountable and effective in their continuous improvement efforts even without formal performance metrics, proposing that the culture worked well enough to encourage performance with informal review and oversight.

Final Thoughts on Quality Management Initiatives in Higher Education

Globalization; the shift of public-sector governance focused on decentralization, entrepreneurship, markets, competitiveness and performance measurement; and continual pressures exerted on public universities by state leaders for increased effectiveness and efficiency has created stress for higher education leaders. In addition, Sandmeyer provides another example of external pressure.

> There is a considerable push from our accrediting agencies on establishing learning outcomes. There is also a lot of energy around accountability and transparency. You can call it whatever you want to call it, but I think the tenets of continuous quality improvement are just as important now as they were in 1991.

Christensen & Eyring (2011) stress the need for higher education leaders to avoid the pitfalls of disruption and think of disruptive innovation constructively and creatively in order to find innovative, less costly ways of performing their functions and processes to ensure future success. As such, the use of quality management systems in higher education to increase efficiency and effectiveness may see a resurgence in the coming years.

Dew & Nearing (2004) indicate that there are many examples of enthusiastic efforts to start quality management systems and projects, but those that focus only on fixing the immediate problems tend to disappear when the immediate problems are resolved. Those quality management efforts that mature into focusing on an institution's management systems are sustained because they continue to add value.

There are three predominant ways in which quality management had evolved over the past two decades at the three institutions examined in this study. The first focuses on the development and increased sophistication of internal consulting organizations providing strategic and quality management training and support. The second centers around the integration of quality management principles and objectives in the strategic planning process and plan. The last

highlights the increased emphasis on accountability and strategic performance measures. In addition, some of the common quality management tools and techniques used by all three institutions included benchmarking, and the use and continual assessment (often via Plan-Do-Check-Act) of key performance indicators.

Higher education leaders considering quality management may consider the aspects associated with the success of such change initiatives. Strong, committed leadership is required when contemplating change initiatives. Higher education leaders with a participative and/or transformational leadership style may be more successful with initiating and sustaining change initiatives, although there may be times when a situational leadership style may be useful as well. Furthermore, leaders that are perceived as honest, committed, truthful, and persistent; and who are able to build teams, resolve conflicts, and shape the culture may be best equipped to inspire and lead an organization through a quality management initiative. In conjunction with leadership styles, collegial organizations appear to support a culture of continuous improvement more so than bureaucratic organizational systems. The involvement of stakeholders in defining the strategic direction and participating in decision-making activities related to quality management helps build an open and collegial environment in which change initiatives may grow and flourish.

While leadership and organizational culture are very important, other factors may influence the success of quality management initiatives. Partnering with relevant business and industry organizations may provide strategic direction, funding, and/or expertise with which to launch and nurture a change initiative. In addition, embracing (rather than just ticking the proverbial box) the accountability requirements of professional and/or regional accreditation organizations as well as state legislative requirements may help build a genuine culture of

continuous improvement. Also, adapting the quality management language and methodology to the institution's unique culture is critically important to garner acceptance and engage various constituents in improvement projects across the campus community

Change may be continual, but change can also be scary. Investing in a centralized organization to train, support, and advance quality management efforts may demonstrate leadership's commitment, help reduce the campus community's apprehension of quality management techniques and methodologies, and provide confidence and assurance to sustain continuous improvement in an organization's culture.

Quality management is not a short-term initiative, but building a culture of continuous improvement. As such, the inclusion of continuous improvement as an institutional strategic goal, and the linkage of quality management principles in the strategic planning process may help build and embed a culture of continuous improvement. A major tenet of continuous improvement is performance measurement and assessment. Developing and assigning responsibility for performance measures for both strategic and departmental goals may help a quality improvement mindset endure. Although, to avoid conflict, leaders should insure that individual and departmental goals are well aligned with the institution's strategic and quality management goals. Quality management may indeed see a revival and/or resurgence in coming years. If so, the research results may offer valuable guidance and advice to higher education leaders.

Suggestions for Future Research

Suggestions for further research include following up with additional higher education institutions that began quality management projects in the mid-1980s and 1990s to determine if and why their quality initiatives were embedded and/or abandoned. Specific attention may be

given to institutions that may have abandoned quality management to understand that factors that led to that circumstance.

Another topic for further research could include a detailed analysis of the political/legislative control issues, economic needs of the state, and accreditation requirements that had changed over the past two decades, and the impact, if any, on the institution's total quality management. Similarly, a comparison of the evolution of higher education institutions' performance-based funding model and total quality management journey over the past two decades may yield some helpful insights as well.

Furthermore, a study of quality management initiatives at higher education organizations by several variables may yield valuable information for higher education leaders looking to embark on a quality management journey. Interesting variables may include institution type, institution size as measured by enrollment, and an institution's continuous improvement focus on administrative, academic and/or research processes.

Finally, an examination of higher education institutions that have initiated a formal quality management initiative and/or created an internal quality management organization in the past five years may provide insight into the future trends of quality management in higher education.

REFERENCES

Alvarez-Robinson, S. (2014). Relentless pursuit of institutional effectiveness presentation. Paper presented at the 2014 Network for Change and Continuous Innovation national conference in Seattle, Washington on July 17-19, 2014.

American Association for Higher Education (1994). 25 snapshots of a movement: Profiles of campuses implementing CQI. Washington, DC: Author.

Balzer, W. K. (2010). Lean higher education: Increasing the value and performance of university processes. New York, NY: Taylor & Francis Group.

Banta, T., Rudolph, L. B., Van Dyke, J., & Fisher, H. S. (1996). Performance funding comes of age in Tennessee. *The Journal of Higher Education, 67,* 23-45.

Barnard, C. I. (1938). Functions of the executive. Harvard University Press, Cambridge, MA

Barnett, R. (1992). Improving higher education: Total quality care. London: The Society for Research into Higher Education and The Open University.

Bemowski, K. (1991). Restoring the pillars of higher education. *Quality Progress, October, 1991,* 37-42.

Bergquist, W. H. (1995). Quality through access, access with quality. San Francisco, CA: Jossey-Bass.

Birnbaum, R., & Edelson, P. J. (1989). How colleges work: The cybernetics of academic organization and leadership. *The Journal of Continuing Higher Education, 37(3),* 27-29.

Birnbaum, R. (2000). Management fads in higher education: Where they come from, what they do, why they fail. San Francisco, CA: Jossey-Bass.

Bok, D. (2013). Higher education in America. Princeton, NJ: Princeton University Press.

Calek, A. (1995). 1995 quality in education listing. *Quality Progress, 28(9),* 27-77.

Chaffee, E. E., & Sherr, L. A. (1992). Quality: Transforming postsecondary education. *ASHE-ERIC Higher Education Report No. 3*. Publications Department, ASHE-ERIC Higher Education Reports, George Washington University.

Christensen, C. M., & Eyring, H. J. (2011). The innovative university. San Francisco, CA: Jossey-Bass.

Coate, E. (1993). The introduction of total quality management at Oregon State University. *Higher Education, 25(3)*, 303-320.

Cornesky, R. A., & McCool, S. A. (1992). Total quality improvement guide for institutions of higher education. Madison, WI: Magna Publications.

Crosby, P. B. (1979). Quality is free. New York, NY: McGraw-Hill.

Dehne, G. C. (1995). The silver bullet syndrome. *AGB Trusteeship, November/December*, 13-17.

Deming, W. E. (1986). Out of the crisis. Cambridge, MA: MIT, Center for Advanced Engineering Study.

Dew, J. R., & Nearing, M. M. (2004). Continuous quality improvement in higher education. Westport, CT: Praeger Publishers.

Eckel, P., Hill, P., & Green, M. (1998). On change: En route to transformation. Washington, DC: American Council on Education.

Entin, D. H. (1993). Boston: Less than meets the eye. Change, 25, 28-31.

Everett, C. L. (2002). Penn State's commitment to quality improvement: How the annual Quality Expo has helped the university reduce costs and increase customer satisfaction. *Quality Progress*, January 2002.

Ewell, P. T. (2002). An emerging scholarship: A brief history of assessment. In Banta, T. W. & Associates (Eds). Building a scholarship of assessment, 3-25. San Francisco, CA: Jossey-Bass.

Feigenbaum, A. V. (1956). Total quality control. *Harvard Business Review*, 93-101.

Fincher, C. (1991). Assessment, improvement, and cooperation: The challenge of reform in higher education. Athens, GA: University of Georgia, Institute of Higher Education.

Freed, J. E., Klugman, M. R., & Fife, J. D. (1994). Total quality management on campus: Implementation, experiences, and observations. Paper presented at the annual meeting of the Association for the Study of Higher Education, November 10-13, 1993 in Tucson, Arizona.

Freed, J. E., Klugman, M. R., & Fife, J. D. (1997). A culture for academic excellence: Implementing the quality principles in higher education. *Higher Education Report, 25(1)*. Washington, DC: The George Washington University, Graduate School of Education and Human Development.

Gaston, P. L. (2014). Higher education accreditation: How it's changing, why it must. Sterling, VA: Stylus Publishing, LLC.

Harvey, L., & Green, D. (1993). Defining quality. *Assessment & Evaluation in Higher Education, 18(1),* 9-26.

Heverly, M. A. & Parker, J. S. (1993). Hoshin planning applies total quality management to the planning process. *New Directions for Institutional Research, 78,* 45-47.

Hoffman, A. M., & Julius, D. J. (Eds.) (1995). Total quality management: Implications for higher education. Tyler, TX: Prescott Publishing Company.

Hogg, R.V, & Hogg, M.C. (1995). Continuous quality improvement in higher education. *International Statistical Review, 63(1), 35-48*

Hubbard, D. L. (Ed.) (1993). Continuous quality improvement: Making the transition to education. Tyler, TX: Prescott Publishing Company.

Imai, M. (1986). Kaizen: The key to Japan's competitive success. New York, NY: Random House.

Irvin, H. (2000). Tapping the talent within. *NACUBO Business Officer*, December 2000, p. 32-34.

Ishikawa, K. (1985). What is total quality control? The Japanese way, translated by David J. Lu. Englewood Cliffs, NJ: Prentice-Hall.

Jones, S. (2003). Measuring the quality of higher education: linking teaching quality measures at the delivery level to administrative measures at the university level. *Quality in higher education, 9(3),* 223-229.

Juran, J. M. (1989). Juran on planning for quality. New York, NY: Free Press.

Koberna, S. & Walter, P. (1993). Using total quality management tools to improve organizational wellness. *New Directions for Institutional Research, 78,* 83-87.

Koch, J.V. (2003). TQM: Why is its impact in higher education so small? *The TQM Magazine, 15(5),* 325-333.

Kouzes, J. M., & Posner, B. Z. (2006). The leadership challenge. San Francisco, CA: John Wiley & Sons.

Lebioda, K. (2014). A gamble with consequences: State lottery-funded scholarship programs as a strategy for boosting college affordability. *Policy matters: A higher education policy brief, September, 2014*.

Leveille, D. E. (2006). Accountability in higher education: A public agenda for trust and cultural Change. Berkeley, CA: Center for Studies in Higher Education.

Lewis, R. G. & Smith, D. H. (1994). Total quality in higher education. Delray Beach, FL: St. Lucie Press.

Main, Jeremy (1994). Quality wars: The triumphs of defeats of American Business. New York, NY: Free Press.

Masland, A. T, (1985). Organizational culture in the study of higher education. *The Review of Higher Education, Winter 1985, 8(2), 157-168.*

Mayhew, L. B., Ford, P. J., & Hubbard, D. L. (1990). The quest for quality: The challenge for undergraduate education in the 1990s. San Francisco, CA: Jossey-Bass.

McLendon, M. K. (2006). Called to account: Analyzing the origins and spread of state performance-accountability policies for higher education. *Educational Evaluation and Policy Analysis, March 20, 2006.*

Mergen, E., Grant, D., & Widrick, S. M. (2000). Quality management applied to higher education. *Total Quality Management, 11(3),* 345-352.

Merriam, S.B. (2009). Qualitative research: A guide to design and implementation. San Francisco, CA: Jossey-Bass.

Miller, R. I. (1991). Applying the Deming method to higher education. Washington, DC: College and University Personnel Association.

Miselis, K. A. (1993). Realizing financial savings through total quality management. *New Directions for Institutional Research, 78,* 53-55.

Mizikaci, F., (2009). Total quality management in higher education: An evaluation model for practitioners. Cologne, Germany: Lap Lambert Academic Publishing.

Mouradian, G. (2002). The quality revolution: A history of the quality movement. Lanham: University Press of America.

Natarajan, R., Martz, R. E., & Kurosaka, K. (1999). Applying QFD to internal service system design. *Quality Progress, 32,* 65-70

Newton, J. (2002). Views from below: Academics coping with quality. Quality in Higher Education, 8(1), 39-62.

Pettigrew, A. M. (1979). On studying organizational cultures. *Administrative Science Quarterly, 24, 570-581.*

Roberts, H. V. (1995). Academic initiatives in total quality for higher education. Milwaukee, WI: ASQC Quality Press

Ruben, B. D. (Ed) (1995). The quality approach in higher education: Context and concepts for change. *Quality in Higher Education*. New Brunswick, NJ: Transaction Publishers.

Scott, P. (1994). Recent developments in quality assessment in Great Britain, in D.F. Westerheijden et al. (Eds). Changing concepts in quality assessment: Recent trends in West European higher education, 51-73. Utrecht, Netherlands: Uitgeverij Lemma B.V.

Seymour, D. T. (1991). TQM on campus: What the pioneers are finding. *American Association of Higher Education, 44(3),* 10-13.

Seymour, D. T. (1992). On Q: Causing quality in higher education. Phoenix, AZ: American Council of Education/Oryx Press.

Seymour, D. T. (1993a). TQM: Focus on performance, not resources. *Educational Record, 74(2),* 6-14.

Seymour, D. (1993b). Quality on campus: Three institutions, three beginnings. *Change*, 25(3), 14-27.

Seymour, D. (1993c). The IBM TQM partnership with colleges and universities: A report. Washington, DC: American Association for Higher Education.

Seymour, D. (1995). Once upon a campus: Lessons for improving quality and productivity in higher education. Phoenix, AZ: American Council on Education and Oryx Press.

Sherlock, B. J. (2010). Realizing strategic priorities through integrated planning and improvement. *ASQ Higher Education Brief, April 2010.*

Sokol, P. E. (1993). Improvements in introductory physics course. *New Directions for Institutional Research, 78,* 41-44.

Spanbauer, S. J. (1992). A quality system for education. Milwaukee, WI: ASQC Quality Press.

Tyler, C. R. (1993). Total quality management at Fox Valley Technical College. *New Directions for Institutional Research, 78,* 59-63.

Wallace, J. (1999). The case for student as customer. *Quality Progress, 32,* 47-51.

Williams, G. (1993). Total quality management in higher education: Panacea or placebo? *Higher Education, 25(3),* 229-237.

Williams, J. M. (1993). Simplifying a process with flowcharts. *New Directions for Institutional Research, 78,* 89-93.

Winch, S. K. (1993). Teamwork improves office climate. *New Directions for Institutional Research, 78,* 57-58.

Winter, R. S. (1991). Overcoming barriers to TQM. *New Directions for Institutional Research, 71*, p. 59.

Woodhouse, D. (2004). The quality of quality assurance agencies. *Quality in Higher Education, 10(2)*, 77-87.

APPENDIX A

INTERVIEW QUESTIONS

1. Interviewee background and profile
   - Tell me about your career since the mid-1990s.
   - Why did you choose that path?

2. Evolution of quality management since inception
   - Why did the officials at < > choose to pursue quality management?
     Prompt question: Were there internal or external pressures? Tell me about those pressures.
   - In what ways have quality management efforts evolved on your campus since their earliest years?
     Prompt question: Can you explain the impetuses of the evolution?
   - How has your institution defined and measured the success and cost-effectiveness of quality management efforts over the years?
     Prompt question: Were there specific metrics used? Goals to achieve?
   - What were some of the challenges encountered?
     Prompt question: What were some of the barriers?
   - What lessons have been learned?

3. Factors which led to the continuation or abandonment
   - How have < > organizational and governance structures impacted the evolution of quality management over the years?
     Prompt question: Tell me about how decisions have been / are made at <>.
   - How have the leadership styles of < > academic and administration leaders impacted the evolution of quality management over the years?
     Prompt question: Tell me about the leadership styles of the provosts and chief administrative officers at <> over the past two decades.
   - What factors are associated with the continuation or abandonment of quality management initiatives since its inception at <>?
     Prompt question: Why do you think that quality management was <abandoned or embedded> at <>?

Finally, one last question

- How will quality management be utilized at <> in the coming years?

APPENDIX B

INVITATION EMAIL TO PROSPECTIVE PARTICIPANTS

Subject: Dissertation Research Interview Request

Dear <>

For a research project on quality management in higher education, I am writing to ask if you would be willing to participate in an interview with me either via phone or on your campus the week of <>.

I am a doctoral student at the University of Georgia's Institute of Higher Education in Athens, Georgia under the guidance of Professor James Hearn, Professor at University of Georgia's Institute of Higher Education. With this email, I invite your participation in *Quality Management in Higher Education: Abandoned or Embedded?*, a study of the quality management journey for three higher education institutions over the past 20 years.

To expand my knowledge of <> quality management journey, my research design calls for conducting semi-structured interviews with previous and current administrative and academic leaders at <>. The study presents an opportunity for you to share your general perspectives based on your experiences of the extent to which the quality management movement during the late-1980s and 1990s continued at <>, and the factors that led to the continuation or abandonment of quality management at <>.

Your participation would entail participating in an interview with me via phone or at your institution for about 30–45 minutes, with the possibility of follow-up interviews and/or questions after the initial interview. The interview comprises general questions about the factors that led to quality management tools and methodologies being embedded or abandoned at <>. Unless otherwise preferred, our interview would be audio-recorded and deleted after verbatim transcription. You may also provide documents such as reports and historical records, and recommend additional participants to interview.

Precautions will be taken to protect your identity. Only I will access your information, and a code linking you to your transcript, and the transcript itself, will be stored in a password-protected computer in my locked work or home office. In papers from this study, quotations from or references to your interview will be attributed to a generic title.

Your involvement is voluntary, and you may decline or stop participation at any time. If you withdraw, your materials will be included in the research unless otherwise requested by you in writing. I hope you will participate, for your contributions will add to the literature, and inform

and guide higher education leaders on the factors that contribute to the successful and unsuccessful implementation of quality management principles in higher education institutions.

There are no known risks or discomforts associated with participating in the research. While you will not be compensated for your participation in this research, you will receive a copy of the final research paper.

For additional information about the research project and/or your involvement, please contact me at llabuda@uga.edu or 404-791-4211. Questions about your rights as a study participant may be directed to: The Chairperson, Institutional Review Board, University of Georgia, 629 Boyd Graduate Studies Research Center, Athens, Georgia 30602-7411; Telephone 706.542.3199: Email address irb@uga.edu.

Thank you for your consideration. Please know how much I appreciate your help. I will contact you within one week to address any questions you may have about the study. I am very grateful for your time, and hope to have a chance to talk with you.

All the best,

Lynn Labuda
Doctoral Candidate