

## The Role of Leadership in Implementing Total Quality Management ( TQM) in Higher Education: A Review

PATANJALI MISHRA Faculty of Education Banaras Hindu University, Varanasi India ASHA PANDEY Faculty of Education Banaras Hindu University, Varanasi India

## Abstract:

For the great success of any organization/institution top management, decision making and leadership quality are very important. Without better leadership we cannot imagine a great institution. Leadership quality can make any institution the best one. Implementing TQM requires a team effort headed by the organization's leadership team. Each person involved in change management has their responsibilities, and it is important for the entire organization to understand the role of leadership in TQM to make delegating responsibility more effective. This paper is a review of the role of leadership in implementing Total Quality Management in Higher education.

**Key words**: Total Quality management (TQM), Leadership, Top Management, Higher Education

Leadership emerges as a major theme in the quality management literature. Various scholars have argued that the successful implementation of quality management in higher education is difficult without the involvement, commitment and sponsorship of senior higher education leaders. A variety of leadership characteristics are highlighted in the higher education literature, including responsiveness, integrity, courage and passion, the capacity to champion change and adopt a collaborative approach to gain the necessary support for quality management initiatives (Drew 2006; Rosser et al. 2003). Osseo-Asare et al. (2007) investigated the role of leadership in TQM implementation in higher education institutions. They identified the following important leadership characteristics: the communication of a clear statement of mission, successful implementation of quality processes, utilizing an empowerment approach and the use of timely data, information and knowledge of best practices.

The past few decades were considered as pioneering work on educational leadership (Kezar 1998; Friedman 2004). The leadership component deals with examining senior management, use of leadership and involvement in creating and sustaining a customer focus, clear goals, high expectations and a leadership system that would promote performance excellence. It also examines the leadership system and internal policies that would impact staff and students and public responsibilities, establishing partnerships with industry, parents, and general community externally.

Improvements in leadership effectiveness could be achieved through a participative management style that includes inputs from a comprehensive 360-degree feedback system from these internal and external stakeholders. The strategic planning of this element would examine how the institution sets strategic directions and how it determines key plan requirements with a primary focus on customer satisfaction. This element examines the key aspects of process management, including learner-focused education design, education delivery, services and business operations. It examines how key processes are innovatively designed, effectively managed and continuously improved. The performance results of this element would examine student performance and improvement using key measures and indicators. This element examines how staff development and training is aligned with the institution's objectives. It would also examine the efforts to build and maintain a climate conducive to achieve performance excellence, full participation and organizational growth. Some of the strategic thrusts of this element would be on manpower development, such as staff recruitment, training and career development, staff performance and recognition and quality work environment.

The information management element should examine the management and effectiveness of the use of data and information to support overall mission-related performance excellence. It should ensure reliability and accessibility of the necessary key information required for day-to-day operational management. It would also focus on making analysis of facts and information and respond to situations in a fast and effective manner. This element examines how the institute determines the needs and expectations of students and It stakeholders. would include determining different performance measures and how the targets could be achieved. Some of the performance measures could be based on student satisfaction surveys, student forums and dialogue sessions, industry needs and satisfaction surveys and evaluation of teaching and learning effectiveness. This element should examine how partnerships at various levels, internal and external could be established. Effective leadership, good education management, efficient human resource management and versatile information management would definitely help in managing dynamic relationships with internal and external stakeholders. Implementing this proposed TQM framework involves complex and inter-related educational business processes. This would encompass various dimensions of quality (Lagrosen et al. 2004), including corporate collaboration, information responsiveness, teaching and non-teaching facilities/resources available, teaching and evaluation practices and the type of courses offered. But it is important to observe

that all six core values and elements of the proposed TQM framework have an obvious customer focus with an emphasis on customer satisfaction and continuous improvement. Realizing these six core values and elements is to identify the core educational business process, namely teaching and student learning, that provides the main vehicle for achieving customer satisfaction and quality improvements. Hence, it is important to focus on the TQM issues related to teaching and how continuous improvement provides the necessary foundation.

Walton et al. (1988, 211-219) advised educational administrators who are really committed to building strong, student-oriented educational institution and want to get that same commitment from both academic and non-academic employees to take the risk of encouraging and rewarding them. Educational Administrators must share and communicate stakeholders' information and feedback with all their personnel. This information should consist of the stakeholders' business description, personality, expectations, problems, opportunities and periodic survey feedback.

The concept of quality control entered into management in the 1930s. It found its expression mainly in two areas – inspection of finished products and statistical sampling. Two things have changed since then. Quality has now become universally defined in terms of customer perceptions and expectations rather than in terms of production specifications, as was the case in the past; and relative increase in customer requirements in terms of quality.

Active sponsorship of quality initiatives represents a major driving factor; however, where it is absent it is a significant barrier to successful implementation (Baidoun 2003). A variety of empirical studies have highlighted that commitment must be continuous, not simply at the initial stages of implementation. Csizmodia et al. (2008) highlighted that the higher the commitment of HE leaders within an institution, the faster the pace of quality management implementation and the wider its scope. The theme of sponsorship is highlighted as a particularly powerful dimension of leadership. Aspects of sponsorship that facilitate effective quality management in a HE context include: visible support from the sponsor throughout the implementation process; strong project management; and a focus on ensuring that other organisational priorities do not get in the way. It is also publicizes the results of important that the sponsor implementation and the leaders have a clear vision of what the system will add to the institution (Srikanthan & Dalrymple 2004). Negative aspects of sponsorship that will derail implementation include: a situation where the sponsor is ambivalent or uninvolved; the goals of the initiative are vague and there is a perception that there is no one involved (Ventatraman 2007). Other negative dimensions of sponsorship include a situation where HE leaders are more concerned with other issues and problems are not communicated by the sponsor when they arise.

There are, undoubtedly, problems with any initiative in higher education institutions which can be perceived as management-led. Amongst experts in TQM, there is a widespread acceptance that top management must demonstrate serious commitment to its implementation. Yet, if the implementation of TQM results in senior managers of HEIs trying to impose TQM philosophy and practice, without engaging fully in consultation with their staff, such an endeavour is likely to fail (Bolton 1995).

Moreover, according to TQM proponents, it is necessary for senior management to clearly demonstrate their Commitment to change through TQM by leading others its implementation (Cowles and Gilbreath in 1993). Management requires leadership, and leadership means setting an example to others and indicating the standards to which everyone in the organisation should aspire. There is no single perfect style of leadership, or management. Different organisations have different cultures and require different styles of management. However, successful leaders have a number of traits in common, not least a strong vision of the organisation's needs and an ability to communicate with others. Senior management need to get their 'internal customer' relationships right, i.e. with their own staff, if they are to provide excellent quality for their external customers. This often requires leadership by example (Hart and Shoolbred 1993). In management-speak, they must 'walk the talk' and lead by example. TQM is about the personal responsibility of everyone in the organisation, from top to bottom and in every job function.

According to the TQM literature, for a TQM approach to be successful, employees need to believe that management understand the problems they face each working day. Many senior managers in higher education will not have taught undergraduate classes. They may find it difficult to appreciate the full impact, on academic teaching staff, of larger class sizes and increasing staff student ratios. Academic staff, on the other hand, may feel that this lack of understanding has led to their managers continually asking them to do more, with less. As a result, they may perceive management initiatives with suspicion. if the senior staff seek better communications throughout the institution, they must excel at communicating with their colleagues and employees. If they want to aim for higher quality performance, they must look to their own performance first. If a TQM approach is to work in higher education, management must fully demonstrate their commitment to it through explicit action, rather than mere words. Only when staff see that actively involved in the their senior management are process, and are gaining results from their involvement, will they be sufficiently convinced to commit to it themselves. Managers therefore need to carefully balance the 'walk' (demonstrating quality management and service quality themselves) and the 'talk' (Liston 1999).

At one extreme, they need to develop a shared vision with their staff and help them develop strategies, through training and staff development, which will enable them to achieve the desired outcomes. At the other extreme, the 'walk' focuses attention of the completion of pilot projects, which can generate early success and encourage further action. Even where such success has been documented, academics may be put off by the evangelical fervour of some TQM proponents and especially when TQM is perceived as bringing in more committee work with no direct professional benefits for individual staff (Brown and Koenig 1993).

Additional problems can arise from the reluctance of staff members to disregard existing departmental boundaries. Most, if not all of these problems are documented in a study by the US educationalist, Entin, of the implementation of TQM in 10 colleges and universities around Boston. Entin (1993) found that while senior management were often extremely enthusiastic about the initiative, the reluctance of academic divisions to adopt it was alarming. This represented a serious disjunction between market forces and the academic enterprise. Entin concluded that it was essential that both academic managers and faculty were able to see benefits of adopting a TQM approach, the both for themselves and for their students and other customers. At the root of the problem observed by Entin was the academic staffs' perception of what academic enterprise was about. This points to a crucial problem. An academic enterprise, here as in the USA, cannot exclude the importance of market forces on the higher education sector.

A large percentage of higher education funding comes from the fees of students - whether paid by the government, in whole or in part, or privately by the individual. What academics do, within their enterprise, will affect their attractiveness to the market and their ability to attract students. Similarly, changes in market demand for example increasing demand from employers for IT-literate graduates - must impact on the types of courses offered by the higher education. Aside from the desire to improve efficiency and effectiveness, it was the belief that more students would be attracted to the university, which drove South Bank to adopt a TQM initiative in 1992 (Chadwick 1995a).

A mere awareness of these changes, however, does not suffice. Rather, they require specific responses which may involve the participation of a large number of staff. The market for students is, nonetheless, only one of many markets in which HEIs operate. There are multiple markets, e. g. the market for research grants, for private consultancy and for public reputation. In each of these areas, competition and marketisation has grown. It is interesting that the staff in Boston's universities and colleges, whom Entin studied, had not made this connection. Chadwick (1995) saw the attitudes and behaviour of staff - particularly academic staff, who were loathe to allow scrutiny of their teaching quality - as a major obstacle in the implementation of a TQM approach.

An alternative explanation for the disjunction between market demands and staff perception of academic work may be poor communications between senior management of the institutions and the rest of the academic staff Management is responsible for the bigger picture of the organisation and its relationship to the wider environment. If a TQM initiative is to be adopted, this must be fully explained and communicated approach the organisation, if throughout it is to be adopted wholeheartedly and effectively. Entin's study suggests that it is not enough for management to enthuse about the concept, and then expect everyone to follow suit. In many cases, a cascading programme of communication and training may be essential if TQM is to work (Chadwick 1995b); a point we will examine in greater detail later in this paper.

Like Entin, Fry (1995) found a major obstacle to the implementation of TQM measures in the lack of ownership by individuals, and institutions, of the changes brought about by the quality movement. In addition, she noted an attitude of cynicism with regard to the motives behind the introduction of TQM and a perceived conflict with traditional ways of operating, long cherished by academic staff. This analysis closely mirrors the concerns expressed by Barnett (I 992a). According to Barnett, the idea of management for quality may be both appropriate and desirable in a higher environment, however the idea of the education of quality is one which many management academics distrust. Barnett states: 'Academic management is more like that of the leadership and direction exerted by an orchestra's conductor than by an army's general'. (Bamett 1992a, 80)

In an environment where so much depends on individual interaction with students, parents, employers and the like 'ownership' of the quality agenda, by employees, is essential. To use Barnett's analogy, are orchestras and armies really so different? An orchestra contains a number of people, in different roles, all working (playing) together to achieve a single goal, to make the right sound. If one member of the orchestra makes a mistake - does not 'get it right first time' the whole sound of the orchestra and quality of the piece of music is affected. An army also needs people with different specialist skills cooks, medics, drivers, and maintenance engineers as well as ordinary foot soldiers and generals. Each has to be in the right place, at the right time, and with the proper training to do the job correctly. Just as the orchestra needs all its different instruments, and players, so does the army need all its support mechanisms to be able to carry out its main purpose and achieve its goal. It is also worth noting that there are good conductors and poor conductors just as there are good generals and poor generals. History is littered with the disastrous outcomes of poor decision-making or leadership by army generals. So, if Barnett is saying that one should lead / direct / influence, rather than dictate to the workforce, then that is a point of view with which few might disagree. However, in the context of quality initiatives, the standards to which everyone is aspiring will most likely have to be set by the senior management. They must

commit to excellence and lead by example. They must understand, and value, the role of everyone in the orchestra, armv or higher education institution. A good conductor demonstrates to his orchestra what he wants. The signals are clear, unambiguous and effectively communicated. The players trust him and have been trained to respond to his direction. Where he leads, they will follow. A general too needs trust if he is to maintain legitimacy. He will have difficult decisions to make and needs support. Not blind, unthinking obedience but the trust and belief of his men that his judgment is right and that the action which is about to be taken is in their, or their countries, best interests. Once the decision has been made, good communications are again essential. Generally, orchestra conductor or university principal, the issues are often the same. Good leadership involves communicating your message and gaining the trust of your colleagues and employees. Barnett distrusts the concept of the management of quality. If, by this, he means that you cannot manage quality from the top alone, then he is right. The responsibility for quality has to be accepted by each individual within the organisation, for his or her particular sphere of operation. According to the TQM imperative, management's role is to convince, motivate and lead by example. Those at the top of the organisation must set the tone for quality, expressed in everything they do, and aim for continuous improvement of their own performance.

Quality leadership by top management has been emphasized and supported by many researchers as the basis for proper implementation of TQM in order to achieve customer satisfaction, quality product, continuous improvement and job satisfaction. In order to achieve total quality it is imperative that the top managers should clearly define the quality goals and as well treat quality as an important aspect. They are expected to set quality as a priority while allocating adequate resources to continuous quality improvement and evaluating employees based on their performances (Minjoon et al. 2006).

Many organizations have failed in implementing TQM because of the reluctance of top management in delegating some authorities and empower employees (Minjoon et al. 2006). This is a very crucial aspect because if the managers are committed in empowering the employees, the employees will be responsible for the quality of their work and this will go a long way to enhance continuous improvement. Top management should demonstrate empowerment by allowing its project managers to take full responsibility and make decisions (Pheng Jasmine 2004). TQM initiative programs, and always emphasizes on the importance of top management as the main driver of TQM activities. Lawler (1994) further perceived TQM as a culture. He pointed out that priorities should be set by top managers by ensuring that commitment to the principle of TQM exists throughout all departments in their organization. Other advocates of TQM such as Deming (1982) pointed out that most quality problems are caused by management and the system they create and operate (Minjoon et al. 2006). Pearson et al. (1995) also pointed out that managerial leaderships require management at all level should shift their role from authoritarian decision maker to coaching facilitator.

When the top management is committed in TQM implementation it will enhanced employee empowerment, teamwork, training and employees job satisfaction. From a study carried out by Minjoon et al. (2006), on some come companies between the Mexican and US borders implementing TQM, management leadership was seen as an important aspect. It showed that significant changes could be brought to an organization, company or institutions, based on the nature of management commitment. Their work resulted in five fundamental hypotheses that relate to the relationship between top management commitments.

1. Top management commitment has a positive impact on the level of employee empowerment

2. Top management commitment has a positive relationship on the level of employee training

3. Top management commitment has a positive impact on teamwork

4. Top management commitment has a positive relationship on the impact performance appraisal system

5. Top management commitment has a positive impact on employee compensation system.

Owlia and Aspinwall (1997) discussed the importance of leadership in Higher Education and noted that the effectiveness of leadership can be adversely affected by individualism among academic staff. The same is also true for team working which is an essential element of TQM.

Handy (1993) claims that leadership as a topic has "a dated air about it" and that given the influence of contingency theories organizational behaviour literature has tended to focus on structure, systems and climate rather than the individual. He suggests, however, that recently the significance of the individual in determining style and culture is being reasserted. The TQM literature provides some evidence to support this view giving considerable attention to leadership, emphasizing the need for leaders to demonstrate their commitment to the principles of TQM acting as "mentor, guide, coach, counsel" and "educating, training and heartening their staff to see TQM as a way to increase the opportunities they have to succeed and increase their own job satisfaction" (Murgatroyd & Morgan 1992, 68). Leadership is seen less as a control function but as providing and communicating a sense of vision and direction based on the following assumptions.

• TQM leadership is about imagination, enabling and empowerment, not status.

• The role of the TQM leader is to activate, assist and support colleagues so that they focus on a shared vision, strategy and set of intended outcomes. TQM visionary leaders realize that it is cost-effective to empower those nearest to a process to manage that process themselves. TQM leaders concentrate on the whole picture and keep it at the forefront of people's thinking. (Murgatroyd & Morgan 1993, 68-9) These are evident

in contemporary North American literature on educational leadership that has taken a holistic view of the principal and the school/college differentiating between leadership and management but emphasizing the necessity for both (Smith & Andrews 1989; Louis & Miles 1990). Leadership is used in a manner that is congruent to its usages TQM: articulating a vision, developing shared ownership and evolutionary planning. The management function, on the other hand, is related to negotiating with the environment and problem-solving. & Morgan (1993.68) Murgatrovd summarizes the characteristics of the traditional form of leadership:

• Solving problems quickly, ensuring that the work of the school proceeds in as 'problem-free' way as possible. Problems are seen as disrupting the 'normal flow' of work within the institution.

• The assumption that change is modest and moderate and should not affect the basic work of the institution.

• Planning after the event.

• Management requires the exercise of rational, problemsolving, logistical skills - omitting emotions and creativity.

• The majority leave those in charge to worry about the big picture, preferring to concentrate on the details.

Such characteristics appear to be broadly supported by recent realist empirical studies summarized by Thompson & McHugh (1990, 137). Management practices are described as "opportunistic, habitual, tactical, reactive, frenetic ad hoc, fragmented and concerned with fixing". Such are attributed to managers having "to adapt to contradictory pressures, not least on time and energy" which result in "routines ... shared by short-term spans, the domination of face-to-face interaction and lateral communication in gathering and using information". This presentation of managers muddling through in an ad hoc manner with little purpose or coherence may be due to the research focus on leadership and individual jobs rather than on management as a holistic practice and which leads to the neglect of institutional context and function and leaves behavior unsituated (Hales 1986).

Gregory (1996) in his model of distributed leadership for managing change in higher educational institutions suggests four dimensions of institutional leadership, symbolic, political, managerial and academic. Leader embodies the whole institution by winning commitment of others to organizational goals, obtaining resources and presenting corporate image to the external world. Leaders managerial skills pertains to controlling, representing, staffing, structuring, setting goals and communicating apart from handling budgets, costs, information flow, employee relations, external funding and relations with validating and awarding bodies.

Michael et al. (1997) recommended that top leadership is the key to any TQM programme and driving force behind success and failure. Leadership must make the programme attractive and necessary to employees having good communication, proper training and using benchmarking and research on TQM philosophies and programmes can enhance the success rate. Roffe (1998) considers that due to open competition, students are becoming more customers as well as consumers and expected to pay a growing share of the costs of education. This leads to competitive forces that generate different programmers for different student groups. The conceptual problems include whether TQM in higher education should be people or problem oriented, difficulty in introducing the application and acceptance of TQM in higher education institutions, which have not embraced tenets of TQM, team vs. individual orientation towards TQM, maintaining the rate of innovation amongst others. Osseo-Asare and Longbottom (2002) in their model for TQM implementation in higher educational institutions, proposes enabler criteria which affect performance and help organizations achieve excellence. These "enabler" criteria are leadership, policy and strategy. people management, resources and partnerships and processes. They also suggest "result" criteria including customer satisfaction

and impact on society. Sangeeta et al. (2004) considers education system as a transformation process comprising of inputs of students, teachers, administrative staff, physical facilities and process. The processes include teaching, learning, and administration. Output includes examination results, employment, earnings and satisfaction.

Top management commitment to quality is critical for TQM implementation; and is needed to create values, goals, and systems to satisfy customer expectations and improve organization's performance (Ebrahimpour 1985). an Commitment of top management is required to provide adequate resources for implementing quality management (Aly & Akpovi 2001); and is demonstrated by appointing wellqualified and knowledgeable teachers who can impart quality education to their students (Sureshchandar et al. 2002a). Commitment of the executive management of a university department, faculty or institute (including the commitment of the dean, associate deans, department/institute heads) is important for implementation of a meaningful quality system (Karapetrovic & Willborn 1999). Leadership efforts consume a greater share of top management's time and effort (Sureshchandar et al. 2001). Kanji & Tambi (1999) emphasize that the higher education system has to be guided through the TQM principles and core concepts by top management leadership in order to achieve excellence. Davies et al. (2001) point out that for universities to survive in this age, leadership is essential to create vision communicate policy and deploy strategy. Lozier & Teeter (1996) point out that Leadership comes from the president or chief academic officer in many colleges and universities; whereas in many institutions, a vicepresident, director or dean has assumed the TQM mantle. Tang Zairi (1998) bring out that the Vice-Chancellor and & senior executive are responsible for leadership and the commitment to quality applies to all university elements.

For the great success of any organization/institution top management, decision making and leadership quality are very

important. Without better leadership we cannot imagine a great institution. The elements of leadership in education for excellence are: vision for future competitiveness, goals, communication, support infrastructure, corporate commitment and management, process-focus and performance management (Zairi 1995). Pascale (1997) states that the success of any changed programme depends on the leadership quality. Unless leadership is utilized throughout the organization, a college or university has little chance of a successful transformation (Srikanthan & Dalrymple 2004).

## BIBLIOGRAPHY

Baidoun, S. 2003. "An Empirical Study of Critical Factors of TQM in Palestinian Organisations." *Logistics Information Management* 16 (2): 156-171.

Barnett, R. 1992a. *Improving Higher Education: Total Quality Care.* SRHE, Open University Press, Buckingham.

Barnett, R. 1992b. "The idea of quality: voicing the educational." *Higher Education Quarterly* 46(1): 3-19.

Bolton, A. 1995. "A rose by any other name." *Quality* Assurance in Education 3(2): 13-18.

Brown, D. J., and H. F. Koenig. 1993. "Applying total quality management to business education." *Journal of Education for Business July*/August.

Chadwick, P. 1995a. "TQM at South Bank University: issues in teaching and learning." *Quality Assurance in Education* 3(1): 39-44.

Cowles, D., and G. Gilbreath. 1993. "Total quality management at Virginia Commonwealth University: an urban university struggles with the realities of TQM." *Higher Education* 25(3): 281-302.

Csizmadia, T., J. Enders, & D.F. Westerheizden. 2008. "Quality Management in Hungarian Higher Education: Organisational Responses to Government Policy." *Higher Education* 56: 439-455. Drew, G. 2006. "Balancing Academic Advancement with Business Effectiveness?" International Journal of Knowledge, Culture and Change Management 6: 117-125.

Entin, D. H. 1993. *TQM on campus: case study number one*. Boston, Change, May/June.

Friedman, A. A. 2004. "Beyond mediocrity transformational leadership within a transactional framework." *International Journal of Leadership in Education* 7(3): 203-24.

Fry, H. 1995. "Quality judgments and quality improvement." *Higher Education Ouarterly* 49(1): 59-77.

Gregory, M. 1996. "Developing effective college leadership for the management of educational change." *Leadership Org. Dev. J.* 17(4): 46-51.

Hart, C. and M. Shoolbread. 1993. "Organisational culture, rewards and quality in higher education." *Quality Assurance in Education* 1(2): 22-29.

Kezar, A. J. 1998. "Exploring new avenues for leading community colleges: the paradox of consultative models." *Community College Review* 25(4): 75-87.

Lagrosen, S., R. S. Hashemi, & M. Leitner. 2004. "Examination of the dimensions of quality in higher education." *Quality Assurance in Education* 12(2): 61-9.

Lawler, E.E. 1994. "Total quality management and employee involvement: are they compatible." *Academy of Management Executive* 8: 68-76.

Liston, C. 1999. *Managing Quality and Standards*. Buckingham: Open University Press.

Michael, R.K., et al. 1997. "A comprehensive model for implementing total quality management in higher education." *Benchmark. Qual. Manage. Technol.* 4(2): 104-120.

Minjoon, J., C. Shaohan, and S. Hojung. 2006. "TQM practice in Maquiladora: Antecedents of employee satisfaction and loyalty." *Journal of operations management* 13: 791-812.

Osseo-Asare, E. A. Jr. and D. Longbottom. 2002. "The need for education and training in the use of the EFQM model

for quality management in UK higher education institutions." *Qual. Assur. Edu.* 10(1):26-36.

Osseo-Asare, A.E., D. Longbottom, & P. Chourides. 2007. "Managerial Leadership for Total Quality Management in UK Higher Education." *The TQM Magazine* 19: 541-560.

Pearson, J.M., C.S. Mccohon, and R.T. Hightower. 1995. "Total quality management. Are information managers ready?" *Information Management* 29: 251-263.

Pheng, L.S., and A.T. Jasmine. 2004. "Implementing Total Quality Management in Construction firms." *Journal of management in Engineering*. 20 (1): 1-9.

Roffe, I.M., 1998. "Conceptual problems of continuous quality improvement and innovation in higher education." *Qual. Assur. Higher Edu.* 6(2): 74-82.

Rosser, V.J., L.K. Johnstrad, & R.H. Heek. 2003. "Academic Deans as Directors: Assessing their Effectiveness from Individual and Institutional Perspectives." *The Journal of Higher Education* 74: 1-25.

Sangeeta, et al. 2004. "Conceptualising total quality management in higher education." *The TQM Magazine* 16(2): 145-159.

Srikanthan, G. & J. Dalrymple. 2004. "A Synthesis of a Quality Management Model for Education in Universities." International Journal of Education Management 18(4): 266-279.

Ventatraman, S. 2007. "A Framework for Implementing TQM in Higher Education Programs." *Quality Assurance in Education* 15: 92-112.

Walton, Mary, and Demings W. Edwards. 1988. Deming Management Method. Perigree. 211 – 219.