Chapter – 3

Total Quality Management
(A Theoretical Frame work)

Total Quality Management (TQM) is seen as an effective method that can accomplish the task of higher quality levels and increased productivity. The purpose of Total Quality Management is to implement a process that is long term to bring about continuous improvement initiatives throughout the organization. TQM integrates the fundamental techniques and principles of quality deployment. The primary objective of TQM is to incorporate quality and integrity into all functions at all levels of the organization.

Concepts of ‘Quality’

‘Quality is a much-debated term. To some it is like ‘beauty’ that lies in the eye of the beholders! Those who believe in this are ‘relatives’, whereas those who believe quality can be specific attributes treat can be identified, they are ‘objectives’. The word comes from the Latin word quails meaning ‘what kind of’. With a variety of meanings and connotations, it has been referred to as ‘slippery concept’

But some things are better than others that are they have more quality. There’s nothing to talk about it. But if we can’t say what Quality is, how do we know what it is, or how do we know that it even exists? If no one knows what it is, then for all practical purposes, it doesn’t exist at all. But for all practical purposes it really does exist.

Various Definitions of Quality:

There are several definitions of quality, which are given as follows:

- Fitness for purpose or use - Juran
- Quality is conformance to requirements - Crosby
- Total composite of product and services characteristics of marketing, engineering, manufacturing and maintenance through which the product and service in use will meet the expectation by the customer. - Feigenbaum
• Quality should be aimed at the needs of the customer, present and future – **Deming**

• Quality is the degree of excellence at an acceptance price and control of variability at an acceptable cost - **Broh**

• The totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs - **ISO 840: Quality Vocabulary**

• The totality of features and characteristics of a product or service that bear on its ability to satisfy a given need. - **The European organization for Quality control glossary**

• Quality meets the requirements of customers, both internal and external, the organization for defect-free product, services and business processes. - **IBM**

   Quality, the way we have defined it as meeting the customer requirements, gives people in different functions of an organization a common language for improvement. It enables all the people, with different abilities and priorities, to communicate readily with one another in pursuit of a common goal. When business and industry were small and local, the craftsman could manage more or less on his own. Business is now so complex and requires so many different specialist skills that everyone has to rely on the activities of others in doing their jobs.

   The organization which believes that the traditional quality control techniques and the way they have always been used will resolve their quality problems is wrong. Employing more inspectors, tightening up standards, developing correction and repair and rewarding teams does not promote quality. Traditionally, quality has been regarded as the responsibility of QC Department, and still it has not yet been recognized in some organizations that many quality problems originate in the service or administration areas.

   Quality management is far more than shifting the responsibility of inspection from the customer to the producer. It requires a comprehensive approach, which must first be recognized and then implemented if the rewards are to be realized. Today’s business environment is such that managers must plan strategically to maintain a hold on market share, let alone increase it. Consumers now place a higher value on quality
than on loyalty to their home-based producers and price is no longer a major determining factor in consumer choice. Price has been replaced by quality and this is true also in industrial services and many other markets.

Several leading management theorists expanded upon this idea. Shewhart applied statistics to industrial processes in the World War I era, using this mathematical tool to monitor processes. Shewhart’s concept was that the use of statistical process management methods could provide an early warning and allow the process to be adjusted prior to producing a defective product. Deming and Juran based significant portions of their work on Shewhart’s concept of using statistics to control processes, limit variation and thereby improve quality.

Deming’s message had essentially fallen on deaf ears in the United States, but not so in Japan. Japan, as a formerly industrialized nation, had to rebuild its industrial base from essential nothing. The Japanese had no preconceived approaches about sorting defective products from acceptable ones. They were willing to learn. Therefore, the Japanese listened more attentively when Deming advised them on methods of preventing the manufacture of defective products. They saw this as a natural approach to preventing waste or perhaps more to the point, as a way of maximizing their productivity and the output of the raw materials they had to import. Deming praised the virtues of using statistical quality control and manufacturing methods to do this.

What followed in Japan during the ensuing decades has been well studied and is now well known. The Japanese dominated almost every market they chose to enter electronics, cameras, automobiles, steel, shipbuilding, motorcycles and several others, Superior quality became a common theme of Japanese market dominance. Much of the Japanese quality superiority occurred as a result of statistical manufacturing methods and other management philosophies, now recognized as Total Quality Management. The Japanese made additional contributions to the TQM philosophy, most notably in the areas of variability reduction, problem solving, teamwork and defining the satisfying the customer expectations. Taguchi and Ishikawa contributed a lot to these disciplines.

A more effective management philosophy might focus on actions to prevent a defective product from every being created, rather than simply screening it out. Also, these and other theorists soon recognized that the concept of quality control need not be
restricted only to manufacturing processes. The idea of assuring quality could also be applied to administrative process and service industries.

From the above discussions, one is required to realize that the concept of quality is amorphous and contextual. It ranges from meaning ‘standard’ to ‘excellence’. Both are deeply rooted in their respective values operationalized in individual, institutional, and as you will see later, national practice. "Standards can be defined in terms of a minimum “threshold” by which performance is judged”. In this contest, quality is assessment in terms of a set of norm-referenced standards that are built around what is expected at the minimum and beyond. At the other end of the continuum is the consideration of quality as excellence. Excellence is a performance stage of exclusiveness that is distinctive from many others and stand out as demonstration of ‘Zero defect’ and highest level of satisfaction of the stakeholders. In higher education, our objective is to achieve the ‘standard’ and move towards ‘excellence’.

**Leading Thinkers on Quality**

Three of the most important contributes to the evolution of the evocation of the quality movement are: Edwards Deeming³, Juran, J.M.⁴, and Philip B. Crosby(1984)⁵. Though all three of them have concentrated on quality in the industrial and manufacturing sector, discussion on quality is incomplete without exploring their philosophies. Their contributors can also be other sectors, including education. As students of education, we should strive to extract the best of each of these thinkers and apply them in our own context. Our focus here is on thesis gurus of quality.

**W. Edwards Deeming** : Deeming is regards as the father of quality movement. He started his career in the late 1920s as a summer employee at Western Electric’s Hawthorne plant at Chicago, where Elton Maya and his team discovered the famous “Hawthorne Effect”. After he moved to US Department of Agriculture, Deeming started collaboration with Walter A. Shewahat working at bell Laboratory. Deeming worked on Shewahat’s statistical methods to provide constancy to industries in Japan, where he received more recognition. In 1982, Denim’s important book on transforming American management was published under the title “Out of the Crisis”. Here Deeming is concerned about the failure of the management to plan for future foresees problems before they arise. According to him fire-fighting and ort-term thinking bring in waste and
raises costs. He stressed that the responsibility for quality remains with the top management. He emphasized on prevention rather cure as the key to quality. Denim's Theory of quality management is often summarized as 14 points for ready references are given below.

1. Create constancy of purpose for improvement of product and service, with the aim to become competitive and to stay in business, and to provide jobs.

2. Adopt the new philosophy. Organization can no longer compete if they continue in the old way of accepting delays, mistake and defects. They have to make the required shift and adopt new ways of working.

3. Cease dependence on mass inspection to achieve quality. Instead of inspection at the end, staff should be trained to monitor and develop their own quality.

4. End the practice of awarding business on the basis of price tag alone.

5. Improve constantly and forever the system of production and service, to improve quality and productivity, and thus to constantly decrease costs.

6. Institute training on the job. Failure to use the available talent in the organization is a greatest waste. Training is a powerful tool to improve quality.

7. Institute leadership. Management must lead by example and not just supervise. Leadership should help people to do a job better.

8. Drive out fear, so that everyone may work effectively for the company.

9. Break down the barriers between departments.

10. Eliminate slogans, exhortations, and targets, asking for new levels of productivity without providing the workforce with the methods to do the job better.

11. Eliminate work standards that prescribe numerical quotes.

12. Remove the barriers that rob people of their right to pride of workmanship.

   This is to remove the appraisal system that encourages Compton among staff.

13. Institute a vigorous programme of education and self-improvement.

14. Put everyone in the company to work to accomplish the transformation.
**Juran, J.M.** : Juran defined quality as fitness for purpose’. According to him, a product or Seville can meet its specification and yet not be fit for its purpose. The specification may be faulty and thus the specification should be what the customer wants. He identified there steps to quality improvement:

1. Structural annual improvement plans.
2. Training for the whole organization.
3. Quality directed leadership.

Like Deeming, Juran too is highly respected in Japan and in 1981 received the prestigious order of the sacred Treasure in Japan. According to Juran poor quality is the result of the failure of the management. He also opined that 85% of the problems in an organization are due to systems failure and the remaining 15% due to individuals. Juran recommends a ten step approach to quality improvement as is given below.

1. Create awareness of the need and opportunity for improvement.
2. Set explicit goals for improvement.
3. Create an organizational structure to drive the improvement process.
4. Provide appropriate training.
5. Adopt a project approach to problem solving.
6. Identify and report progress.
7. Recognize and reinforce success.
8. Communicate results.
10. Build an annual improvement cycle into all company processes.

**Philip B. Crosby** : Crosby is probably the most influential management thinker in United States and Europe in the files of quality. He focuses on the senior management, and has given two popular statements—“Quality is Free” and “Zero defects”. According to him quality is: Not goodness or luxury; Not intangible; Not unaffordable; Does not originate in the workers; Origins in the quality department. Crosby is best known for his 14 absolutes of quality management and his 14 principles are given below.
Crossbar’s Fourteen Steps:

1. Management should be convinced of the need for quality improvement, and there should be full commitment.
2. Set up a quality team to drive the program.
3. Introduce quality management procedures.
4. Define and apply the principles of the cost of quality.
5. Institute a quality awareness program.
6. Introduce corrective action procedures.
7. Plan for the implementation of zero defects.
8. Implement supervisory training.
9. Announce zero defects day to launch the process.
10. Set up employee-management communications systems.
11. Set goals to bring about action.
12. Recognize those who have activity participated.
13. Set up quality councils to sustain the process.
14. Do it all over again.

Emergence of Total Quality Management

Thus, the TQM philosophy continued to emerge under Deming’s guidance for which many regard him as the father of what is now known as TQM. Interestingly, Deming’s quality management philosophies were first developed in the years prior to World War II. Deming believed quality management should be pervasive, and should not focus on merely sorting good products from bad ones. Deming believed everyone in an organization should share the responsibility for quality. Perhaps most significantly, Deming recognized that most quality problems were system-induced and were, therefore, not related to workmanship.

The quality concept developed under the guidance and teachings of Feigenbaum, Deming, Juran and others. Crosby later promoted the ‘zero defects’ concept in his series of excellent books, emphasizing adherence to requirements and employee motivation. All of them contributed to what has become known as TQM. TQM has continued to emerge as a predominant management philosophy in the United States and abroad. TQM emphasizes a number of concepts, which all support the philosophies of
customer focus, continuous improvement, defect prevention and recognition that quality responsibility is shared by all of us.

As specified above quality is easy to visualize and yet difficult to define. Quality is used both in absolute and in relative terms. Quality is neither mind nor mater, but a third entity independent of the two. It is ‘best’ with reference to the requirements of the purpose in mind. Therefore, the quality function includes all activities, no matter where performed or by who performed, through which we achieve quality.

Quality of education is a multi-dimensional concept, with varying conceptualizations. It includes, within its ambit, the quality of inputs in the form of students, faculty, support staff and the infrastructure, the quality of processes in the form of learning and teaching activity and the quality of outputs in the form of the enlightened students who move out of the system\textsuperscript{7}. Quality control is an effective system of ensuring quality, ensuring continuing excellence. Total Quality Management (TQM) is a modern term wider in scope than the total quality control (TQC). TQC considers the role of employees in improving the productivity. But it remains silent about the quality of work life, employee satisfaction and organizational development. TQM, however, is a holistic view and takes into its fold not only ensuring productivity and efficiency but also ensuring individual satisfaction and institutional building and human well being. TQM is not merely preventive, it is pro-active.

This new approach to quality control, which has come to be known as TQM, is not merely applicable to commercial organizations, it is equally relevant for classroom learning and more so, for management of educational institutions. TQM is a philosophy and a methodology which assists institutions and which introduces and manages change-a change of cultures: change of attitudes and working methods. Custodians of education must, therefore, realize that any educational institution is a system comprising many subsystems which interact with each other and with the total system as well, one affecting the other and in turn getting affected by the other. Thus, the systems must work collaboratively together to develop an effective and efficient total system. This will, in turn, ensure the effective and efficient goal fulfillment.

The importance of education for the development of excellence, expertise and knowledge leading to overall development in economy cannot be undermined. This has
necessitated a sound strategy for the development of higher education in almost all countries of the world. Establishing leadership in the world is possible only when we have a developed system of higher education in which efficiency remains the sole criterion to evaluate performance. The system of higher education is found efficacious in making available to the society a dedicated, committed, devoted and professionally sound team of human resources to decide the future of any nation. This is possible only when the principles of quality management are inculcated in the system of higher education. Total Quality Management (TQM) is inevitably common factor that will shape the strategies of higher educational institutions in their attempt to satisfy various stakeholders including students, parents, industry and society as a whole. This study is a theoretical attempt to explain the application of TQM in professional education. It deals with issues pertaining quality in higher education and moves on to identify variables influencing quality of higher education. It also conceptualizes a model taking the perceptions of the faculty members, students and parents for application of TQM in professional education.

The new economic growth theories have emphasized the role of human capital as the key of economic growth and development. The World Bank’s recent study of 190 countries reveals that it is higher education that helps in enriching the quality of manpower. Thus higher education is a basic investment necessary to improve the overall quality of life. The strong linkage between the economy and education was never so clearly visible a snow. It is the availability of employment in the market that makes the learners chooses their areas of study.

TQM is a management philosophy, which seeks to integrate all organizational functions (marketing, finance, design, engineering, production, customer service, etc.) to focus on meting customer needs and organizational objectives. It views organizations as a collection of process. It maintains that organizations must strive to continuously improve these processes by incorporating the knowledge and experiences of workers.

Total quality management is an approach to improving the effectiveness and flexibility of business as a whole. It is essentially a way of organizing and involving the whole organization, every department, every activity, and every single person at every level. For an organization to be truly effective, each together, recognizing that every person and every activity affects and in turn is affected by others is necessary.
Errors have a way of multiplying, and failure to meet the requirements in one part or area creates problems elsewhere, leading to yet more errors, yet more problems and so on. The benefits of getting it right first time everywhere are enormous. Everyone experiences – almost accepts problems in working life. This causes people to spend a large part of their time on useless activities – correcting errors, looking for things, finding out why things are late, and checking suspect information, rectifying and reworking, apologizing to customers for mistakes, poor quality and lateness. The list is endless and it is estimated that about one-third of our efforts are wasted in this way.

Some of the most exciting applications of TQM have materialized from departments, which could see little relevance when first introduced to the concepts. Following training, many examples from different departments or organizations show the use of the techniques. Sales staff can monitor and increase successful sales calls; office staff has used TQM methods to prevent errors in word-processing and improve input to computers; customer service people have monitored and reduced complaints; and distribution staff has controlled lateness and disruption in deliveries.

TQM is a method for freeing people’s lives of wasted effort by involving everyone in the process of improvement, i.e. improving the effectiveness of work so that results are achieved in less time. The methods and techniques used to TQM can be applied throughout the organization. They are useful to quality finance, sales, marketing, distribution, development, manufacturing, and the public relations. TQM needs to gain ground and become a way of life in many organizations. TQM approach keeps the organization goals at the supreme but there is a fundamental shift in philosophy from work centered to employee – centered. TQM believes in the following:

1. There are no workers and no managers; all employees of an educational institution have important roles to play. The role of each one is important. Therefore, we must realize that all are facilitators and team members, the head of them being the leader of the team. The team can never succeed unless everyone puts into his/her best.

2. Involvement and not merely participation in management is the key word. Involvement means participation plus commitment and pride. This requires both
empowerment of the employees and control also and when their actions go beyond addressing the institutional needs and objectives.

3. Everyone is made to identify oneself with the institution. Employees voluntarily come forward as the relationships should be family oriented, where everyone gives his/her best even without asking. The relationships should be informal, even though the formal authority remains intact beyond doubt.

4. TQM requires a new set of values. There should be openness, transparency, trust, patience, respect and discipline. There is a need for long-term thinking and emphasis on long-term objective. Short cut, short term gains and short sightedness should be avoided. The system of punishments and rewards is to remain open to every body’s evaluation. Thus, TQM is both practical and ethical.

**TQM AND ITS IMPLEMENTATION**

The following principles provide a framework for development of all quality management structures and improvements process.

**1. International quality management :**

External accreditation (or validation) agencies have traditionally evaluated institutions in relation to a set of expected standards. In some countries this is still a major focus and in all countries will remain an important element of accreditation. However, much more importance is now attached to an institution’s ability to manage effectively its own quality. This means external accreditation bodies want to find mature institutions that can successfully identify their own strength as areas for needed improvement, and areas for needed improvement, and then develop a strategy to bring necessary changes that are evidenced by outcomes.

For example, an accreditation report by a visiting team to one institution read as follows:” – Should be satisfied that the College has developed procedures and practice which will continue to give assurance that the College is meeting – requirements, and that it has demonstrated its viability and its capacity as an institution that has established its own planning and quality assurance process.” Or in other words, this
institution, in the opinion of the accreditation body should have no reservation in granting its future accreditation.

This focus on institutional quality management changes the way that higher education institutions should see external accreditation. It is still an important process, but it is one that helps guide the internal process, providing assistance in developing guidelines of accepted standards and monitoring the institution’s effectiveness in responding to these. If the institution is effectively developing and monitoring its own standards, then the external bodies are more likely to agree with the recommendations and direction already set up internally. However, the most importance reason for quality improvement is that it helps the institution focus continuously on doing its job better.

2. Objectives should be linked to the institutional strategic plan:

Strategic planning and quality management looks at different aspects of the present and future of an institution. However, there are clear areas of overlap and effective coordination between the two will strengthen the institution and avoid unnecessary duplication of effort.

The most important area of overlap is in setting of goals. While a strategic plan looks widely at institutional identity and direction, some of the institutional goals and objectives identify in the planning process will be directly or indirectly related to institutional quality. This will be particularly the case if key performance indicators is used to characterize institutional goals. The overlap will be even more significant at unit levels, particularly academic departments. Institutions should ensure that there is enough communication (ideally through overlap of individuals involved in decision in both areas) to ensure that goals and objectives responding to the same issue are not in conflict, and ideally are the same issue are not in conflict, and ideally are the same.

The action plans developed to respond to goals will similarly have areas of overlap. Once again good communication will ensure that these plans work together, not against each other, and that that faculty and staff are not overloaded in implementing agreed changes. It may be that while quality improvement process may still need to operate with some independence, that one “standing” area of the strategic plan should be the area of quality. This would neatly tie the procedures together.
3. Institutional culture and learning organization:

In broad terms a “learning organization” is an organization that is open to (even enthusiastic about) change and improvement. This isn’t always the automatic culture in a higher education institution, where traditions can be strong and departments or divisions/schools can operate with a high degree of independence. A learning organization will be open to wide-ranging input, communicate across departmental and/or school lines and be willing to challenge long-held traditional positions—not for the sake of change, but when changes may be necessary for positive change and growth. Is means, in effect, that there are no “sacred cows” at any level or in any area of the institution? Transparency, openness, responsiveness and creativity are the words that best describe a learning organization.

It is possible to have effective quality improvement in an institution not characterized in this way, but the effectiveness may be limited. In fact, it is likely that most campuses have not fully developed the culture of a “learning organization.” However, if the present institutional quality effectively, then the administration has the responsibility to initiate change to enable that to happen.

4. Institutional Stakeholders:

The need for quality and management of quality in the delivery of academic programs has been generally accepted in higher education procedures may have been informal, or may have relied on external evaluation process, but they have been accepted as necessary. However, an institution-wide quality improvement plan moves beyond the area of academic quality. Its concern is equally with the physical campus, the quality of student life, the attitude of faculty and staff, the satisfaction levels of faculty and staff, the spiritual environment and the service o external constitutions. In effect it is concerned with every area of campus operation. It must be comprehensive.

5. Accurate Information:

It is important that the documents gathered by an institution support the quality improvement process and is relevant and accurate. This is where all administrators involved in quality issues need to recognize that they do not operate in a vacuum. Ideally the institution should have a regular process to gather factual and quantifiable data about institutional quality. It is important that the information gathered by institutional research (research about the institution) supports both quality improvement process and strategic management processes. Once again, communication between different institutional groups is vital. The individual(s) leading o quality management
need to inform the necessary individuals/groups of what information they need on a regular basis, and need to take advice back on what may not be possible or objective.

Not all information that is part of quality improvement process will be factual or objective and not all information will be gathered centrally. That is inevitable. Neither is it possible to look at all campus areas and issues simultaneously. However, those making decisions about what changes need to be made must have a good understanding of the total picture. For example, no one localized the vocal group should be given more opportunity to impact the process than others should.

6. TQM Implementation process:

An institutional quality management structure can be very complex. It deals with many areas of the campus, it seeks to be inclusive and it wants to bring positive change at every operational level. However, despite its broad ranging impact, whatever structure is introduced must appear simple and comprehensible to those who need to implement any part of the process. Although it may be useful for the whole campus to understand how the total plan works, in practice, what employees really need to know and understand are the principles of the procedure and how it impacts them in their work. And what the whole campus needs to know is how they can give input into the process of quality improvement in a way ensures each person will be heard.

7. TQM Evaluation:

Whenever evaluation is involved, there is always a level of summative evaluation involved this gives a final judgment on a situation. A quality management process that does not draw some end conclusions will be a weak one. Such summative evaluation, for example, might be that the programs operated in the school of education are weak in technology training and pedagogy. This may be concluded after considering feedback from a number of sources. A summative conclusion that identifies areas of concern should result in major recommendations for change and improvement.

A formative evaluation, on the other hand, is feedback that leads to re-evaluation and change in a situation where immediate changes are possible and may correct identified issue of concern. For example, a teacher may take an evaluation of a class midway through a semester to see if his or her goals are being reached. If not, there is still opportunity to re-evaluate the structure or teaching methodologies being used. Or students in four-year program may be invited to give feedback after two of the four years. Based on the feedback, the department may decide some refocusing of some
content courses is needed in the next two years if program outcomes are to be achieved.

Good quality management procedures will be concerned with both formative and summative evaluation and finding the correct balance of these for institutional improvement.

8. Quality Improvement Process:

Confidence in quality improvement process is often as much related to the effective communication of the process as they are the decisions that are made. So, for example, if students are invited to complete an end-of-year’s survey on their educational experience that year, a summary of the main conclusion should be given back to them, including an identification of actions that will be taken as a result of the feedback. The only time a feedback loop cannot be completed is when the feedback that is given is confidential, such as in student evaluations of individual teachers.

9. Institutional Structures and Responsibilities:

Ensuring that a strong quality management plan is in place and operating effectively is the responsibility of senior administration. Managing the process of quality improvement is the responsibility of all faculty and staff. Everyone employed on campus should recognize this as a priority expectation. However, developing structures to ensure quality management happens in an effective and cost-effective way (cost related here to both financial and human resources) is more complex. The actual structure adopted by an institution will vary, dependent on other institutional structures. However, that choice of structure needs to take the following questions into consideration:

- How can the institution best structure a process that ensures all areas of the campus get attention?
- How will the structure relate to the strategic planning structures?
- How will the cycles of quality improvement take place at each level (i.e. the combination of setting objectives based on data; following through on plans; evaluating success, and revising action in line with evaluation)?
- How will there be co-ordination between different areas of campus operation?
- Who will have overall responsibility for the management of the agreed process?

Here are some suggestions of how the structure could work.
10. Constitution of Monitoring Committee:

The group will not be responsible for the day management of quality improvement but for goal-setting, coordination between areas of campus life and receiving reports. It may be, particularly in a small institution that the central strategic planning committee could be given this as one of its functions to ensure there is no unnecessary overlap or duplication of work. Or the senior administrative team may serve as the central management body, with one or two additional invites. If a separate committee is formed, this could be called the quality Council, for example.

Sub-Committees: These groups will be the ones are responsible for implementing the quality improvement process in the various areas of campus operation. One of the groups will need to be academic. Depending on the structure of the rest of the campus, there could be one or more other groups dealing with the non-academic side of campus life and experience. It may be that other than in the academic area, where specific focus on academic program quality is essential, other existing committees can be asked to take the responsibility for quality management as one of their committee terms of reference for example, if there is a spiritual life committee, or a student life committee, or a plant services committee, each of these could have a fixed agenda item which focuses on quality. However, if this model is used, there must be sufficient accountability so that the issue of quality is not lost amidst other more immediately pressing issues. The person(s) selected to manage the total process should ensure that does not happen.

11. Continues Quality Improvement Cycle:

As identical already, a traditional quality improvement cycles starts with evaluation of them present, and then sets goals (with action plans) for the future. Plans) for the future. Plans are implemented and then after a reasonable period of time, the effectiveness of the implementation is evaluated, and appropriate conclusions are drawn and appropriate actions taken. At that point the cycle starts again.

The quick answer is “everyone”. Each group responsible for quality improvement at its own level evaluates itself, sets its own goals, evaluates the success of implementation, and refocuses. However, just as external accreditation bodies that visit institutions monitor the institutional quality management structures and determine if they are working, so each institutions group is responsible for providing enough
information on quality improvement process to the group above, for them to make that same assessment.

For example, each academic department will have its own quality improvement process in place. However, the Academic Quality Committee (a unit committee) will expect each department to report what its process is and the results of its process to that group. In turn, the Academic quality Committee will ensure that the Quality Council (central committee) knows its process and receives its report. A simple annual report may be the best means of ensuring that information is passed on in a regular way. And if the receiving committee is not satisfied with the report, it is their responsibility to react and make recommendations back to the other group. In fact, that will be part of their report to the group monitoring their effectiveness.

**Quality in Higher Education**

The phrase “quality of education” is a difficult one to discuss in a concrete way, since it is almost always related to some specific goals (and can involve a related argument about whether such goals are legitimate or not). Quality is also a difficult word because it evokes a wide range of attributes, and the usual way of acknowledging the existence of quality is to appeal to observation and experience of a range of possibilities. The philosophy behind the quality movement is to convey the message that customer satisfaction is paramount, and, that through a process of continual improvement involving every member of the organization; quality outcomes can be achieved with a structured, well-managed system.

During the 1990s, quality in higher education moved to being the foremost concern in higher education alongside funding issues. Harvey explains that national governments expect higher education to be more relevant to social and economic needs; widen access; be more cost effective; ensure comparability of provision and procedures, within and between institutions, including international comparisons; and, be responsive to a range of stakeholders”.

Potter identifies the key elements necessary for success as: commitment and example from top management; awareness of the cost of quality; knowledge of the tools and techniques; understanding of customers’ specifications and satisfaction;
pursuit of continuous improvement; and, belief that everyone has a responsibility for quality.

Sabar identifies five approaches to defining quality; transcendent (innate excellence); product-based (some attribute); user-based (needs); manufacturing-based (conformance to requirements; and, value – based (costs and prices). While Garvin’s classification mainly applied to industry, it has been widely used in relation to higher education. Harvey & Green discuss the nature of quality in the context of a university and identify five discrete but interrelated ways of thinking about quality in higher education: exceptional.

The challenges in achieving higher education excellence are many and difficult to deal with as for any other industry. Vazzana et al, identify three main areas of quality improvement in higher education: curriculum, non-academic functions and academic administration.

Student survey, student feedback and measurement are also important elements in quality improvement for quality management applications and student satisfaction. Indeed, student feedback on their experiences has emerged as one of the central pillars of the quality process. Students so long taken for granted have been recognized as the principal stakeholders in higher education and their own voice on their experiences is now being heard more clearly by institutions and governments.

In higher education there are problems of structure, personalities, students, academic staff, university staff and management. All this creates a complex situation in which higher education is assessed as to how well students are satisfied, what is valued by students, how students perceive the quality of education and how these can be improved. The aim of this research study is to examine the major factors affecting students’ perception of cumulative satisfaction. A conceptual model including behavioural dimensions of faculty, students and parents’ satisfaction have been used. The factors included in this cumulative summation are technical, functional, infrastructure, interaction and atmosphere of higher education institutions. The model was adopted from Zineldin, originally having been developed for the healthcare industry and then revised for education.
A more inclusive definition is provided by Harvey & Green⁴¹, who refer it as “those mechanisms and procedures designed to reassure various ‘stakeholders’ in higher education that institutions accord a high priority to implementing policies designed to maintain and enhance institutional effectiveness”. Therefore, it is a combination of several principles (e.g., setting of quality objectives, planning activities to meet these objectives) and philosophies that promote commitment and motivation. Frazer⁴² in his critique of quality control argues that the overall quality of a university is dependent on all aspects of the university’s activities.

**Quality Assurance Approaches:**

These include:

(i) **External Approaches**: It is frequently stated that in institution’s internal committees of faculty are kept on track through the guidance of external review committees⁴³. External review committees can be formed by a group of universities and their faculties⁴⁴. To Frazer⁴⁵ the first stage of external review “must be a document reporting the self-evaluation”, but further visits should be for the purpose of meeting with both small and large groups at the institution. However, quality assurance might be achieved within an individual program in a university as a process of internal review.

(ii) **Internal Approaches**: Loewen⁴⁶ mentioned that “quality assurance is first and foremost up to the institutions themselves. Central agencies are not there to do the institution’s job, but to ensure that they do it properly and, if necessary, more satisfactorily”. According to Becher⁴⁷, it has a positive effect on faculty involvement, interest, and teaching effectiveness.

(iii) **Outcome Assessment**: It is the assessment of institution as well as of students.

The above three components are clearly evident in most quality assurance systems. These three components must be part of an integrated approach to the quality of teaching and programs offered at an institution.

Quality in higher education is a multidimensional concept, which includes all the related functions and activities that from part of the academic life in a university system. Therefore, any framework for an assessment of quality should take into account
the quality of students, teachers, infrastructure, student support service, curricula, assessment and learning resources. A number of factors, such as internationalization, marketing, proliferation, competition, expansion of higher education and greater accountability have brought the concern of quality of higher education to the forefront of national debate. Given below are some of the main indicators of quality education:

1. Quality of staff and Faculty:

   (a) Faculty Development Focuses on the knowledge, skills, sensitivities and techniques of faculty members, rather than on the courses they teach.

   (b) Organizational Development: Seeds to change the structure, policies and organizational environment in which instruction takes place.

   (c) Instructional Development: Focuses on the systematic design, development, implementation and evaluation of instructional materials, lessons, courses and curricula.

   (d) Teacher training programs: These include
      i) Pre-service training programs
      ii) In-service training
      iii) Seminars, conferences and workshops

2. Quality of Students:

   The quality of the students constitutes the raw material of higher education, which requires special attention to their problems of access in the light of criteria related to merit (abilities and motivation); proactive for the benefit of the disadvantaged.

3. Quality of Curricula:

   The quality of curricula calls for: special care in the definition of objectives of training provided in relation to the requirements of the world of work and the needs of society; an adaptation of teaching methods to make students more active and to develop an enterprising spirit; an expansion of, and greater flexibility in, training facilities so as to make full use of IT and networking of curricula, students and teachers.

4. Quality of Infrastructure:

   The quality of the infrastructure of the internal and external environment.
5. Quality of Management and Governance:

The quality of the management of institution as a co-ordinate the coherent whole interacts with its environment, it being impossible for institutions of higher education to exist as isolated enclaves. Rapid growth of knowledge useful to management will demand a higher quality of managers. The functions of the management are: (a) Decision-making; (b) Organizing; (c) Staffing; (d) Planning; (e) Controlling; and (f) Communicating.

6. Quality of Accountability:

The quality of higher education is closely dependent on systemic evaluation and regulation. This entails inculcating a culture of evaluation within the institution, i.e. a concern to set up systems for the gathering of relevant, valid, reliable data to enable those with a role to play in this respect to take the necessary decisions to improve activities and outcomes.

Higher education plays a vital role in the development of society. “Universities, for centuries, had a crucial role in educating the potential professionals, businessmen, political leaders, religious and social scholars, who serve the society, to enrich its values and develop its resources”25. There are also highlighted in the national objectives of higher education. The Dearing Report26 underlines the importance of higher education in these words: “For the state, higher education has become a crucial asset. It must recognize what it will gain from ensuring the well being of higher education. In return, higher education must recognize its obligation to society as a whole.”

It is observed that with knowledge based economies and globalization, higher education has become more important, and in particular the quality of education is critical to national development. The problem with developing countries including Pakistan is that they have given a relatively low priority to higher education. The World Bank27 in a report states that “without more and better higher education, developing countries will find it increasingly difficult to benefit from the global knowledge-based economy”. The US Department of Education28 defines the quality of education by its fulfillment of the national educational goals and objectives. These objectives may broadly be classified into three categories:
1. Social Excellence

2. National Excellence

3. Academic Excellence

There are a range of statistical and non-statistical indicators intended to offer an objective measure of how a higher education institution is performing. Some of the indicators are: user satisfaction, Use of entry qualification, Student retention, Learning/teaching output, Research, Graduate employment, Change in attitude of the students.29

Quality indicators can be divided into three classes: educational inputs, educational outputs, and educational processes. Inputs include financial measures, physical measures and manpower measures associated with the resources that are provided for students at each educational level. Financial measures are generally summarized by educational expenditures per student. Physical measures include the age, condition, and comprehensiveness of such facilities as classrooms, laboratories, and libraries and the provision and use of international materials and equipment. Manpower or human resource measures include the number of personnel of different types, often expressed as ratios in relation to student numbers at each level. They also include background information about these personnel such as educational qualifications, experience, and perhaps knowledge competencies and attitudes.30 (Murnane, 1987).

Educational outputs refer to the consequences of the educational process as reflected in measures such as the levels of knowledge, skills and values acquired by students while educational processes refer to all processes from curriculum development to final assessment including admission, teaching and learning. These quality indicators are difficult to measure. There are different approaches to address this problem. Harvey and Green31 identify five different approaches in measuring quality in higher education. These include the definition of quality:

- In term of the exceptional (higher standards)
- In terms of consistency (zero defects and getting it right the first time)
- As fitness for purpose (meeting stated purposes)
- As value for money and
- As transformative (transformation of the participant)
However, it is imperative that quality should be initially defined before specific mechanisms are identified. One of the most difficult problems in quality management and in assessing quality is how to strike a balance between external evaluators and internal evaluators. The current situation enjoys the benefit of nearly four decades of thinking in this regard, including the various conflicting approaches about whether attention should be given only to the output or whether both the inputs and the throughput should be taken into consideration. The current thinking appears to favour a distinction between Quality Audit and Quality Assessment.

1. **Quality Audit:** the main features of quality audit procedures are:
   - They operate at the institutional, rather than course/program, level.
   - They are concerned with processes, procedures and their operations
   - They are not concerned with any assessment or evaluation of the objectives or with the appropriateness of the outcomes.

2. **Quality Assessment:** Quality assessment is the responsibility of the funding agencies. The aim is to assess the social relevance of the institution’s programs and the worth of its products in terms of societal goal.

   There are two current players in the quality standards field. One is the ISO 9000 series of auditable quality standards and the other is the evolving global alliance for transnational education (GATE). GATE proposed the following principles for quality of higher education programs:

   1. Goal and objectives
   2. Standards
   3. Legal matters
   4. Student enrollment and admission
   5. Human resources
   6. Physical and financial resources
   7. Teaching and learning evaluation

   A range of criteria for each principle clarifies requirements to external review.

**TQM Process in Educational Institutions**

In an educational institution, the TQM process brings with it the commitment to quality, commitment to the employees and commitment to the organization.
Principals, administrators and teachers as parts of the educational partnership really want good things to happen for students. All those who contribute to the system should be involved, with a clear understanding of the purpose – the employees and the students, the environment and the strategic planning that go to make it a success. It is an approach to improve the effectiveness and flexibility of the organization as a whole. The improved performance is directed towards satisfying cross functional goals as quality, cost, manpower development, quality of work life, etc. these activities ultimately lead to increased students and employee satisfaction. The process to introduce TQM in colleges should generally have the following steps:

1. **Mission and Passion:** Total quality is an idea which has to be communicated. The determination and announcement of mission statement is the first and foremost task on which the whole TQM will depend. It helps everyone to focus on the central theme. It gives directions to the institution. There is no or minimal conflict. Everyone shares a passion to move continuously close to the ideal vision. The students, the teachers, the employees and the administrators push the college in one direction. Action of each one of them will be directed and moved by a common philosophy.

2. **Administrator as a Role Model:** Have you completely identified yourself with your institution and are you always thinking of making it a better and better college every day and fighting with your entire strength all the vested interests which want to come in the way of your realizing the vision of an ideal college. It must also be clear from the side of administrator/principal of the institution that he/she is committed to total quality. The commitment should communicated in meetings with employees and students and must be practiced i.e. it must be by word of mouth and by action visibly demonstrated. The process of pursuing this agenda should be continuous and never lost sight of.

3. **Environment factors:** The next step is identification of the factors of internal and external environment, which have a bearing on the institution building. These include factors effecting the work environment in the institution (proper cleanliness, lighting, teaching aids, projectors, computer labs, lab materials, canteen, sports, gardening, water, etc) and factors helpful in image building of
the institution (industry-institution interaction, debates, conferences, seminars, public relation including media management etc.) In managing total quality, endeavour should be to involve both internal and external environment factors. Involve students to help create environment for better learning/activity process. Involve outsiders for mutual benefit. In conclusion, there is a need to develop self-motivation for TQM in everybody who matters. Liberalization and globalization have set new trends in domestic and global competitive environment. This has led to a great disparity between what is taught and what is needed at that work place. Due to the socio-economic, cultural and technological transformation which has taken place during past decade, newer demands are being placed upon educational institutions. Educational system can effectively react to these internal and external challenges only when it emphasizes on total quality. Engage in the delicate balancing act of ensuring quality to external customer (students, parents, taxpayers) while at the same time paying attention to the needs of internal customers (teachers, board members, and other co-workers).

4. **Accountability:** We have to develop the system in which every group (student, teachers, researcher, and manager) in accountable to all other groups and members of each group are accountable to one another. Accountability is defined in terms of explicitly stated objective criteria, in which students are accountable to teachers because they have to submit regular assignments and they are subject to regular and continuous open internal assessment and accountable to taxpayer who wants them to receive their education by hard work. We should develop a system in which teachers accountable to students through instruction surveys and are accountable to management through self assessment and assessment of teacher by outside organizations and in which researchers are prepared to be assessed by outside agencies and funding agencies for their work. We have to develop a system in which managements are accountable for their work through assessment by accreditation process. Moreover all accountability at all levels has to be in terms of criteria laid down sufficiently in advance.

5. **Human relations:** There is a need to enthuse quality in the whole setup, including the relationship. All individuals, small or big must be viewed as
important human beings with physiological, psychological, social and ego needs. Establish systematic and continued communication among everyone. Develop skills in conflict resolution, problem solving and negotiations while displaying greater tolerance for and appreciation of conflict. The informal relations must be turned to help the formal organization.

6. Feedback: TQM is a continuous process. There is a need for continuous performance appraisal of all the subsystems as well as the system as a whole. The quality standards may be fixed in advance and performance compared both in qualitative and quantitative terms. The standards may also be reviewed as the graph of performance rises. For this purpose, independent assessment machinery should be created in the form of a Quality coordinator or TQM committee. The machinery should be such as may have high moral credentials and faith of everyone, completely independent of the management/administration.

During the introduction of TQM or several years into its implementation, problems may arise. After several years of TQM, organizations may find it useful to carry out surveys to ensure that real commitment at the top is still present. The quality council should be introspect regarding its:

- Commitment
- Strategies
- Teamwork
- Problems and results
- Development

Commitment: A survey should be carried out to examine the success of the initial drive towards management commitment and its current level. Senior management may be, or perceive themselves to be, fully committed, at least to the TQM ideology, but middle management need to have the right attitude and be sure of the practical implications. This approach should draw attention to a number of problems, including staff struggling due to lack of direction.
The workforce may be committed to the concept to a far greater degree than management believes, but they may doubt the sincerity of management’s application. A survey of several companies has shown the following:

- Communication is the key to the programme
- Commitment from the workforce is tied to the amount of training they receive
- Involvement is linked directly to the training emphasis.

**Strategies:** The strategy for TQM implementation is often underdeveloped. This can lead to intermittent tactics and ‘add-on’ fads, which contribute greatly to a ‘favour of the month’ reputation for TQM. The lack of long-term strategies, objectives and targets will cause the scheme to lose credibility with the workforce. If, for example, teams are formed, meet and make presentations to management without really knowing the ultimate purpose or aims of their operations or the goal posts are moved during a project, frustration and even anger will destroy the TQM drive very quickly. It helps if part of the strategy is to develop proper measurement indices for all departments, including administration.

Another valuable aid is to obtain an outside independent view to help with and develop the strategy. This will usually be seen, by top management and the workforce, as a positive step to keep up the momentum.

**Teamwork:** Some basic misconceptions may develop during the first few years of operating TQM. For example, Quality Improvement Team(QIT) and quality circles may become distorted. In one organization, for example, it was found that the workforce felt that QITs were for professional staff and quality circles for the rest of the workforce.

There was also a belief that teams worked best in a production environment because the progress of results could be measured against definite parameters. This led to team not being formed in the administration departments as quickly as hoped. Communications were also poor in those areas, since half the staff did not know about the scheme or had not been asked to join a team. When people did find out about the teams, they asked for training and wanted to become involved.
Problems and Results: Everyone in an organization, which is, say, five years into TQM will realize that TQM is not without its problems. The application of measurement to administrative practices, for example, will cause a number of headaches. Other problems that have been seen blocking the road to TQM include:

- No formal strategy
- Failure of provide incentive by recognition
- Lack of effective communication
- Narrowly based training

One approach, which should definitely not be used to try to correct these difficulties, is a financial incentive, it does not form part of the TQM culture and would defeat many of the objectives. Recognition and involvement are the only effective incentives.

The successes of TQM will be measured by a number of features:

- The involvement and recognition by external customers
- Reduction in complaints
- Improved attitudes at and to work
- Reduction in errors, scrap, rework, etc.
- Increased productivity
- Improved conditions.

Development: Following a review of progress using surveys or other means, thought must be given to how TQM is to develop in the organization. Suggestions for consideration may include:

- Development of the long-term TQM strategies
- Re-emphasis of the TQM culture
- Reorganization of the TQM structure
- Increase in QITs and quality circles membership
- Additional training and resources
- Improvements in measurements –especially for administration areas
- Improvements in communication of progress, results.
Where TQM Fails:

The following are the major reasons for the failures of TQM:

- TQM approaches must be customized to each company. Many a time it so happens that companies buy solutions off the shelf, often sold by consultants.
- Managers sometimes become impatient with a short-term focus, they will not understand the importance of long-term gains. Lack of this leads to implementation failure in several organizations.
- Managers may focus too much on tools and techniques and may not properly understand how to transform themselves, their employees and the organization.
- Managers use TQM as ‘quick fix’ to solve a variety of problems. These actions may be shortsighted and the managers may become frustrated when there is no quick achievement. This may lead the programme to be abandoned and all the efforts may be wasted.
- Culture plays an important role in the transformation. Inability to change the culture leads to failure of the TQM programme.
- Lack of discipline requires transforming.
- Issues of strategic concern to be addressed along with the issues related to the ‘quality of work life’ for employees. If the TQM efforts are mis-focused and limited, it leads to failure.
- Inability to maintain momentum for the transportation.
- The advantages with TQM are that it will require its managers to concentrate immensely on internal processes of the company. But a major drawback in that if managers concentrate too much on internal processes, the external processes like keeping in touch with shifting perceptions and preferences of customers will be ignored and the company is bound to take beating.
- In a lot of cases managers fail to understand the angles of relationship with suppliers and customers. Mutual trust and support are the key to success.
- Achieving certifications like ISO 9000 – 2000 or ISO 14000 or QS 9000 or any other awards is not the end to TQM but a beginning in the
journey of quality. Managers often feel they have achieved quality by certification or awards.

- Quality should be understood in the same spirit and language both by the management and the employees, otherwise implementation becomes difficult.

The policy imitative of the government of India and industrial and fiscal fronts has thrown the economy to the international competition. To survive in this scenario, it is very necessary for the industry to be cost effective and to build good quality products with low response time. Being a nation starved of resources and at the initial stages of establishing credibility in the international market, the best route towards achieving this goal is Total Quality Management. One of the normal features in Indian organizations is absence of documented systems and procedures and a casual approach to the adherence to the systems and procedures. In the route of TQM the first step will be one of operating a proper quality management system preferably ISO 9000. This will be a building block on which TQM activities could be initiated.

**Applying TQM in Education**

According to Melhotra, the concept of TQM is applicable to Education. Many educators believe that the Deming’s concept of TQM provides guiding principles for needed educational reform. In his article, “The Quality Revolution in Education”, Bonstingl outlines the TQM principles he believes are most salient to education reform. He calls them the “Four Pillars of Total Quality Management”.

**Synergistic Relationships:**

According to this principle, an organization must focus, first and foremost, on its suppliers and customers. In a TQM organization, everyone is both a customer and supplier; this confusing concept emphasizes “the systematic nature of the work in which all are involved”. In other words, teamwork and collaboration are essential. In a classroom, teacher-student teams are the equivalent of industry’s front-line workers. The product of their successful work together is the development of the student’s capabilities, interests, and character. The student is the teacher’s customer, as the recipient of educational services and the teacher and the school are suppliers of
effective learning tools the atmosphere. Quality of services was the main competitive weapon for the private institutions.

All the policies and plans are intended to increase the technical and functional quality of higher education institutions. However, the 5Qs model is an instrument that assures a reasonable level of relevance, validity and reliability, while being explicitly change-oriented. In this article, the 5Qs model will be used to help set the quality strategies for higher education institutions.

**4Qs Model of TQM:** In the literature, service quality is commonly attributed with two dimensions; technical quality and functional quality. Technical quality refers to what are customer buys and whether the service fulfils its technical specifications and standards. Functional quality describes how the service product was delivered and the quality of customer relationship with the company. Although technical and functional qualities are the important in measuring customer satisfaction, they often reflect the concerns of manager. Thus, Harvey et al. developed a student-driven satisfaction approach reflecting the requirements and concerns of the students instead of the senior management.

The interaction process between the provider and the receiver of a service is influenced by the atmosphere in a specific environment where they cooperate and operate. The atmosphere of a university can affect the perceived service quality and student satisfaction by improving it or by making it worse, which will also affect the quality of education. Service quality in education does not only depend on the quality of academic staff but also includes the administrative staff, assistants, buildings, classrooms, laboratories, technical apparatus and machines used in education. It can be said that education quality and student satisfaction are more detailed than just dividing the quality of service into technical and functional quality.

Most academic studies of the services sector have looked only at the link between services quality and satisfaction. Few studies have been conducted to investigate the link between the technical and functional quality dimensions and the level of student satisfaction in the higher education sector. None of the identified studies has examined how atmosphere, interaction and infrastructure might impact on overall student quality perception and satisfaction. The importance of such factors is presented and explained in this article. Zineldin expanded the traditional technical –
functional quality models into a framework of five quality dimensions (5Qs). The dimensions are revised for education, as follows:

Q1. Quality of object: the technical quality (what customers receive). It measures the education itself; the main reason why the student is studying at the university.

Q2. Quality of processes: the functional quality (how higher education institutions provide the core service). It measures how well education activities are being implemented.

Q3. Quality of infrastructure: measures the basic resources, which are needed to perform the education services.

Q4. Quality of interaction: measures the quality of information exchange (for example, the percentage of students who are informed about the course, examination results), financial exchange and social exchange.

Q5. Quality of atmosphere: the relationship and interaction process between the parties are influenced by the quality of the atmosphere in a specific environment where they cooperate and operate. Especially in poor developing countries lack of friendly atmosphere contributes to poor quality of education; in order to avoid this, the atmosphere indicators should be considered critical.

This study provides a theoretical and conceptual base to understand the complex and multidimensional nature of the quality of higher education and student satisfaction.¹⁹

Management System View of TQM

This management philosophy is based on a number of core values, which differ between authors and can change time to time.²⁰ Some of the most common ones of these core values are customer focus, continuous improvement, process orientation, everybody’s commitment and so on. However, what they call here as core values almost named principles, dimensions, elements or cornerstones of TQM in literature. They believe that this term will emphasize that statements found for core values should work together to form the culture of the organization, which also means that they are
basic notions. Harvey\textsuperscript{21} presented a more detailed discussion about core values connected to organizational cultures and TQM.

Although, often TQM has been exemplified by quality award’s models such as Malcolm Baldrige National Quality Award in the USA\textsuperscript{22} or the European Quality Award established by the European Foundation for Quality Management (EFQM), the relation between these concepts is considered as being diffuse by Hellsten and Klefsjo\textsuperscript{23}. They also believe that these award models and their criteria have had more effects on the implementation of TQM than the academic articles.

The Core Values of TQM

As we know, quality issues are considered as an integral and common part between private and public companies and organizations. TQM is “a constant endeavor to fulfill and preferably exceed customer needs and expectations by making the costs lower, continues improvement, focusing on the processes, involving and committing everyone in an organization”. (Berg, B. and Ostergren B1979) \textsuperscript{48}

In implementing the TQM in an organization or manufacturing company, leadership is the main issue. The top management must consider the goals of the company, those actions that must take in place, quality financially, and resources (such as management resources) that are necessary for achieving the vision of the company, in all aspects of quality. Hence, for improving the quality of an organization, commitment and knowledge of the leadership is the first step. After that, a culture must be existed based on some core values, which are:

- Customer focus
- Decisions based on facts
- Process focus
- Continuous improvement
- Commitment of everybody
These core values are interrelated, and effective and appropriate methodologies and tools must support them.

**Customer Focus** means that organization must know what customer requires exactly, and try to fulfill customer needs and expectations by producing the right product and service. Both external and internal customers must be satisfied with the organization. Although in total quality management the strong focus is on external customers, the satisfaction of internal customers who are employees of the company must not be forgotten. In quality, progression satisfaction of employees is essential because in this case they do their job better and feel happy and motivated with their performance.

**Decisions Based on Facts** is about how an organizations’ top management make their final decisions, and are these decisions based on relevant facts. For instance, in a university for developing a program, there must be sufficient knowledge about both student needs and society needs. Therefore, the need for a systematic data collection about the needs, requirements, reactions, and opinions of the customer and society is unavoidable.

In fact, for quality improvement and variation reduction we need to collect, structure, and analyze relevant numerical data and verbal information, hereby it does seem very important to use different quality control tools such as Pareto Diagram, Control Chart, and Histogram and Management Tools such as Affinity Diagram, Interrelationship Diagraph, and Process Decision Program Chart.
**Process** in an organization is “a set of interrelated activities which are repeated over time”. Within every process, there are some well-defined inputs such as information and material and they will transform into outputs in the forms of goods and services for customers by allocating minimized resources. Consideration of the process suppliers is another necessary performance to make optimal results in process, which are satisfying customers. Three kinds of processes are available:

1. Main processes are focusing on fulfilling the requirements of external customers by developing the product, production, and distribution.

2. Support processes are focusing on providing resources for main processes and satisfying internal customers like recruitment and information processes.

3. Management processes are focusing on making decisions through organizational targets and improving aspects in other processes.

**Continuous Improvement** in quality of products and services of the organization is necessary because, the demands of external customers of an organization increase during the time. Furthermore, there are always some technological promotions as well as running new business activities, therefore organizations and businesses should all improve the quality of their products and services continuously.

Moreover, for attending in completion and being survived, a company must improve the quality of its products continuously. Continuous improvement emphasizes on improving products, processes, and methodologies while consumption of resources is minimized and fewer budgets are allocated to achieve higher quality.

In order to have a success in quality issues it is necessary to provide a situation that brings up participation of all parties due to customer satisfaction with a continuous quality improvement. On the other words, the commitment of everybody in organization should be more in focused.

Therefore, all the employees in a company must feel committed and responsible for doing the job in a good manner. For improving quality, it is positive point to care of participation of all involved people and make them satisfied with their job condition.
Designation of responsibility and authority must be effectively in focused, in order to achieve the participation and commitment of all interested parties. In this context, we need to change vicious circles into good ones. Currently, providing more job opportunities is not just the main concern, and creating meaningful and goal oriented tasks within great responsibility is desired.  

High quality achievement due to job satisfaction not only is an important target but also is a vital means, indeed. To sum up, in the quality work, the participation of everybody is important and this includes everyone within the company and all suppliers of material and components.

**Assessment of Quality in Higher Education**

The Assessment of quality in higher education includes self evaluation, best practices in bench marking and external quality monitoring.

**Self- evaluation/ self- study**

Real quality that is sustainable is one that is assessed by self. This is how we know what our strengths and limitations are. Self-evaluation is like looking at ourselves in a mirror”. The self-study report required for submission at the time of assessment for accreditation should be self-critical and reflective, as inspection and quality control imposed from outside would not work. Self-evaluate would be an indicator for continuo improvement and a first step for ensuring qualify.

**Best Practices Benchmarking**

Benchmarking is a common topic in business and industry. What it entails is a process of recognizing ‘best practices’ in the industry and implement them. It is defined as “a continues systematic process for evaluating the products, services and work process of organizations that are recognized as representing the best practices for the purpose of organizational improvements”. Benchmarking as a process has four main activities:

- Comparing one thing with the other
- Creating and using criteria to evaluate differences between two things and recognizing which is better
- Use the experience to identify the direction for change
- Implement the required change to improve (Jackson and Lund, 2000)
Benchmarking in education is a relatively new concept and can bring huge benefits in terms of continuous improvement of quality. As it is based on identification of the best practices, it inculcates completion and consistent compression. At the same time, it is also criticized for being a system of limitation. Moreover, something that has produced satisfactory results in one organization, if replicated, may not produce the same results. Nevertheless, as we compare with the best, and follow the best university or college, it becomes a tool for motivation to change. By following the best model, other institutions can improve their own quality.

In higher education, we are concerned with functional benchmarking, where comparisons are made between higher education institutions as they use similar processes and practices, for example, a best practice in higher education is to have maximum number to teaching days in a semester. Then every Higher Education in India should strive to achieve this. Another example of best practice could be that X institute has 100 per cent placement record of its graduates. It could be a benchmark for others to follow. The NNAC criteria can be used to compare institutions and develop benchmarks. Moreover, the A++ grade institutions can also be identifies as the ‘best practice’ and others can emulate what they do. Thus, quality can be assured through following an example, or striving to meet a benchmark developed throughout rigorous process of benchmarking. NAAC is bringing out a series on the reports of the peer teams visiting some of the best institutions in the country. This will pave the way for following the best practices.

**External Quality Monitoring**

EQM has become mandatory in many countries; through it could be a voluntary process. The process of external quality monitoring/assurance reassures external stakeholders such as employers, professional bodies and the general public about the legitimate quality of a higher education institution. It also offers an impartially and objective mechanism for assessing the educational institution by a peer team not directly related to the institution. Visit by a peer team is a common activity in EQM, which critically analysis the self-study report and the quality provisions based on established criteria.

**Unit of Assessment**

Quality assurance and accreditation can be performed at different levels, though the institutional quality assessment model is quite popular in India. Many academic believe that in institutional accreditation, the strengths of good departments and
weakness of poorly performing units cannot be categorized. Thus, these set of intellectuals favor department-level assessments are not alternatives, but are mutually complementary to each other.

**Market-driven Approach**

The issue of quality in education has become so important these days that ranking of educational institutions have become a huge business. Universities around the world are being assessed and ranked by media such as the Times Higher Education Supplement and US News. Globally, for MBA programs, the ranking of institutions are too competitive with many ranking available to the consumers. Some of these are by the Economists, Business Week, financial Times, etc. In India too media groups like the India Today rank colleges. While these rankings are helpful to the student community to choose the institutions of their choice, the process of arriving at the ranks is quite often criticized and institution accept the ranks as long as they are at the top. Most of these rankings depend on the “Voices of the alumni” and thus are perception based. The criteria and weight given to the criteria (if any) are never transparent; a most importantly theses are not arrived at as a consensus.

**Tools for Quality Assessment**

Quality assurance is a conscious and planned process, and therefore, we should have some tools and mechanisms to ensure quality. Though quality as such is a ‘qualitative’ abstraction, there are many ‘quantitative’ tools available to us for assuring quality. Some are analytical tools and the others are facilitation tools. Using these tools and techniques, we can endure quality in higher educational institutions. Ishiwaka has identified a set of seven tools that can be used by teams and individuals to interpret available data to derive maximum information. These seven tools are: process flowchart, graphs, Pareto analysis, fishbone diagram, scatter diagram, check sheets and control charts.

**Models of Quality Assessment**

As there are different meanings and interpretations of quality, there are different models of quality assurance as well. Across the world, institutions follow different models of quality assurance; particularly country specific and institution specific models. These models are mostly process oriented and emphasize on the development of a system of quality
assurance. There are five popular models of quality assurance: Baldrige criteria, ISO 9000-2000, Capability Maturity Model, Six Sigma and Total Quality Management.

**Higher Education – Fundamental Functions:**

Traditionally, the higher educational services include the three fundamental functions:

- Teaching
- Research; and
- Extension.

Teaching serves to transmit knowledge and skills from the teacher to the taught ones. The purpose of research is to explore new knowledge whereas the function of extension focuses on developing the application of the developed knowledge for addressing the common problems of the society.

The functions of the higher education can also be elaborated as under:

1. To seek and cultivate new knowledge, to engage vigorously and fearlessly in the pursuit of truth and to interpret old knowledge and beliefs in the light of new needs and discoveries;
2. To provide the right kind of leadership in all walks of life by helping the individuals develop their potential;
3. To provide society with competent men and women trained in all professions who, as cultivated individuals, are inclined with a sense of social purpose;
4. To strive to promote equality and social justice and to reduce social and cultural differences through diffusion of education;
5. To foster in the teachers and students, and through them in the society generally, the attitudes and values needed for developing the ‘good life’ in individuals and society;
6. To bring the universities closer to the community through extension of knowledge and its applications for problem solving.

**Total Quality Management Models:**

TQM has been adopted as a management paradigm by many organizations worldwide. Quality movement in across the world starts with quality improvements project at manufacturing companies. But later it spread to other service institutions including banking, insurance, non-profit organizations, healthcare, government and
educational institutions. TQM models, based on the teaching of quality gurus, generally involve a number of “principles” or “essential elements” such as teamwork, top management leadership, customer focus, employee involvement, continuous improvement tool, training, etc. awards like Deming in Japan, Malcolm Balridge in USA; European Quality Awards, etc. are reflection of growing concern in this area.

TQM is the process of changing the fundamental culture of an organization and redirecting it towards superior product or service quality (Giather, 1996). TQM can be defined as a general management philosophy and a set of tools which allow an institution to pursue a definition of quality and a means for attaining quality, with quality being a continuous improvement ascertained by customers’ contentment with the services they have received. According to Brennan, TQM is composed of three terms: Total: meaning that every person is involved including customer and suppliers, Quality: implying that customer requirements are met exactly and management: indicating that senior executives are committed.

Most of work of quality and TQM can be traced to the work of gurus W.Edwards Deming and Joseph Juran’s teachings and statistics in Japan during the 1950’s and the revolution that followed in the USEA in the 1980s to meet or preferably exceed customer expectations. Common theme in quality management includes consistency, perfection, waste elimination, and delivery speed and customer service. The objective of TQM is to build an organization that produces products or performs services that are considered as quality by those who use them. The quality of a product or a service is the customer’s perception of the degree to which the product or service meets their expectations.

**TQM in Professional Education**

According to the reports of UNESCO and the World Bank, social and private returns of the higher education are less than those of primary and secondary education. It is estimated that social return of primary education is 25% while that of higher education is only 1%. This has led to the thinking that the returns of higher education are largely personal/private and therefore, subsidy on this should be reduced. There are three generic approaches to TQM in higher education; firstly there is a customer focus where the idea of service to students is fostered through staff training and development,
which promotes student’s choice and autonomy. The second approach has a staff focus and is concerned to value and enhance the contribution of all members of staff to the effectiveness of an institution’s operation, to the setting of policies and priorities. This entails flatter management structure and the acceptance of responsibility for action by defined working groups. The third approach focuses on service agreements stance and seeks to ensure conformity to specification at certain key measurable points of the educational processes. Evaluation of assignments by faculty within a specified timeframe is an example.

**A Learning Organisation:**

An ideal institution is devoted to continuous improvement of its products, services and processes through learning. This can trigger a better job satisfaction, customer satisfaction and goodwill among all sections of the people dealing with particular institution. A learning organization believes that learning should be fun, participation should be the norm, and communication should be open and that the customer is the king. The core organizational beliefs include.

1. Learning
2. Empowerment
3. Attitudes

The core organizational beliefs under Learning are:

- Learning is fun.
- Lifelong learning is encouraged
- Reflection is a normal part of learning
- Learning is accessible to all employees
- The aim is to create an environment conducive to learning
- Senior management support learning

The core organizational beliefs under Empowerment are:

- People are the organizations’ most important resource
- Teams are the building blocks of the organization
- A win-win approach to negotiation is essential
- A democratic leadership style is essential
- Open communication between management and staff is essential
Information technology is used to inform and empower the many rather than the few.

The core organizational beliefs under Attitudes are:

- Focus on continuous improvement rather than the “one right answer”
- Focus on solutions rather than problems (“challenges”)
- Collaboration rather than competition
- Creativity is encouraged through a questioning approach
- Customer is the focus of the business.

*Total Quality Approach*

Certain things must be done to achieve a learning organization. They include:

1. Policies of decentralization and delegation must be adopted.
2. Structures must be put in place to facilitate learning.
3. Employees must be made responsible for their own learning.
4. Strategic alliances should be created to benefit the company.
5. Team work should be encouraged.
6. Reward system should be put in place to encourage learning.

The Total Quality Management philosophy provides an overall concept that fosters improvement in an organization. This stresses a systematic, integrated, consistent organization-wide perspective involving every one and every thing. It focuses on total satisfaction for customers and to bring about improvement from within the organization, by giving emphasis to the use of people in multi-functional teams.

**Quality in Higher Education is Multidimensional:**

Quality in higher education is a multidimensional concept which should embrace all its functions and activities; teaching and academic programmes, research and scholarship, staffing students, buildings, facilities, equipment, services to the community and the economic environment. Internal self-evolution and external review, conducted openly by independent specialists, if possible with international expertise, are vital for enhancing quality.60

According to *UNESCO*61, the four pillars of learning are: learning to know, learning to do, learning to be, and learning to live together. Thus, the key to development is a holistic approach, optimizing physical, mental, intellectual and
spiritual potentialities. For Swami Vivekananda, education is the manifestation of perfection already in man. The conforms to the contention of the goal of ‘learning to be’ and not ‘become’.

Major differences between a quality institution and on ordinary institution are enlisted below:

**Fig.2 : Differences between Quality Institution and Ordinary Institution**

<table>
<thead>
<tr>
<th>Quality institution</th>
<th>Ordinary institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has a quality policy and plan</td>
<td>Has no policy and plan</td>
</tr>
<tr>
<td>Has a distinctive mission</td>
<td>No distinctive mission</td>
</tr>
<tr>
<td>Well-defined quality features for all areas</td>
<td>Vague about quality standards</td>
</tr>
<tr>
<td>Quality facilitator for leading the change</td>
<td>No quality facilitator</td>
</tr>
<tr>
<td>Creativity encouraged</td>
<td>Process and rules important</td>
</tr>
<tr>
<td>Plans long term</td>
<td>Plans short term</td>
</tr>
<tr>
<td>Inspirational leadership for quality</td>
<td>Focus on control</td>
</tr>
<tr>
<td>Focus on preventing problems</td>
<td>Detecting problems</td>
</tr>
<tr>
<td>Customer-focused</td>
<td>Focused on internal needs</td>
</tr>
<tr>
<td>Complaints are seen as learning opportunities</td>
<td>Complaints are treated as nuisance</td>
</tr>
<tr>
<td>Clear evaluation strategies</td>
<td>No evolution strategies</td>
</tr>
</tbody>
</table>

**TQM – Foundations, stages and principles:**

The concept of TQM emphasizes on continuous improvement, hence it is also referred to as Continuous Quality Improvement (CQI)\(^62\). Indeed quality is a never-ending journey. But TQM, to be exact, promotes planned development. *Involvement of all, customer focus, and continuing quest for excellence* are the three pillars of TQM. In the context of an educational institution TQM endeavours towards comprehensive development of the students in the four planes viz., physical, emotional, intellectual and spiritual. Crawford\(^63\) recommended eight stages in implementing TQM:

1. Vision: How the institution would like to be

2. Define mission: comparable with mission
3. Set objectives: transformed into specific, attainable, measurable goals

4. Customers requirements broken into elements.

5. Detailed process to satisfy customer needs

6. Specify materials, facilities, and standards to be met

7. Plan to bring together human, physical and financial resources

8. Build in quality assurance mechanism.

Mukhopadhyay (2005) has listed 15 fundamental principles for TQM in education mentioned below:

1. Nurture a vibrant familial ambience in the institution.

2. Ensure proactive participation of all the partners in the institution: parents, students, teachers, non-teaching staff, persons and organizations interested in the institution.

3. Create awareness that learning is a holistic living experience.

4. Create mechanisms for the expression of mutual concern among the stakeholders and document them.

5. Develop collective future vision and long and short term plans.

6. Develop indicators of quality and benchmarks for each and every activity in the institution.

7. Define quality parameters and insist on quality in every sphere and activity.

8. Review and redefine goals and targets for continuous improvement.

9. Develop data and information systems for each activity and function.

10. Introduce cost analysis and develop cost consciousness.

11. Create mechanisms for inter-departmental and inter-subject group dialogue and planning, thereby ushering interdisciplinary and multidisciplinary functionality within the system.

12. Come up with a staff development blue print for each staff member and execute it with care.

13. Mentor a leadership.
14. Innovate and encourage innovation; the entire innovative strategies identified and implemented have to be documented and then the outcome of those should be discussed formally.

15. Celebrate organizational success and failure.

It should also be noted that a clear understanding of the strategic planning process, participatory management, team building and effective leadership are required to adopt TQM in educational institutions. In fact, main concern in this work is about definition of quality of higher education that has proved to be even more difficult rather than manufacturing products and services. There is no doubt about the point that quality plays an important role in today’s higher education, Aspin, Feigenbaum (1994) believes that in “invisible” competition between countries the quality of education is the main and important factor, and this is because quality of products and services is defined by the action, decision-making and thoughts of manager, engineers, workers, and teachers in the quality work. Like other business, in today’s market, education and in particular higher education has entered to commercial competition, which is due to economical forces. Therefore, identifying what does the quality mean in higher education as the first phase of quality work seems to be essential. However, still there is no one unique definition about the quality of higher education, there are plenty of these explanations that in somehow have industry perspective.

Furthermore, Duin suggest, “Education quality is a rather vague and controversial concept” and Durlabhji argues that quality is a “notoriously ambiguous term”. Nevertheless, some other gurus in the context of quality in higher education prefer to correct those definitions coming form industry and use the revised version of definition of quality in higher education.

For instance Mizikaci, F. and Campell, have defined the concept of quality of higher education in several ways related to industry:

- **Quality as excellence**: this definition is considered to be the traditional academic view that holds as its goal to be the best.

- **Quality as zero errors**: this is defined most easily in mass industry in which product specifications can be established in detail, and standardized measurements of uniform products can show conformity to them. As the
products of higher education, the graduates, are not expected to be identical, this view is not always considered to be applicable in higher education.

- **Quality as fitness**: for purposes: this approach requires that the product or service has conformity with customer needs, requirements, or desires.

- **Quality as transformation**: this concept focuses firmly on the learners: the better the higher education institution, the more it achieves the goal of empowering students with specific skills, knowledge and attitudes that enable them to live and work in the knowledge society.

- **Quality as threshold**: defining a threshold for quality means to set certain norms and criteria. Any institution that reaches these norms and criteria is deemed to be of quality.

- **Quality as value for money**: the notion of accountability is central to this definition of quality with accountability being based on the need for restraint in public expenditure.

- **Quality as value for money**: the notion of accountability is central to this pursuit of continuous improvement and is predicated on the notion that achieving quality is central to the academic ethos and that it academics themselves who know best what quality is at any point in time.

Despite of these different definitions on quality of education, quality of output and reputation in academic research are most likely to be valued in HEIs. However, quality systems adapted from business and industry operations need to be reoriented, and reinstalled for higher education conditions to turn the focus from the management-based to the education-based practices, according to Mizikaci (2006).72

In this circumstance, Tribus (1994)73 believe that we must keep in mind some differences between education and businesses, which some of them are as follows:

- The school is not a factory.
- The student is not a “product”.
- The education of the student is the product.
Successful completion of the product requires the student to participate as a worker, co-managing the learning process.

According to Minguzzi, A & Passaro, R (2002), the differences between education and industry are in four ways, objectives, processes, input and outputs. For industries, the measure in which they use as an indicator of the effectiveness of organization is the profit, while the objectives in education are not simple.

In fact, the objectives of every higher education institution should cover the answer to this question precisely, that what should a good education provide for learners? Tribus (1994) believes that the objectives of every school, or university, should be to give each student, opportunities to improve in knowledge, know how, wisdom, and character. The first concept enables students to understand, and the second one facilitates them to do, accordingly the third one enables students to set priorities, and finally the character provides the possibility for them to cooperate, to preserver and to become respected and trusted members of society.

Customer of Professional Education

However, it is important to identify the customer of higher education; on the other hand many higher education institutions think that it’s really big challenge to do so, Lawrence and Robert (1997). According to Owlia and Aspinwall, (1998), “From different customers of higher education, students were given the highest rank. The remainders, in rank order, were employers, society, faculty, and families”. The philosophy behind ranking was that since needs/expectations of different groups of customers may differ or even oppose each other, giving a priority to them is essential.

Michael and Sower (1997) claim that no university or college wants to have a specific definition of customer in higher education, while they see it even worse to define students as customer of higher education. This point serves a sticky problem for administrators and HEIs. Most faculties do not agree with the point to define students as customer of education, since it refers to assumption that “customer is always right”.

Michael and Sower believe that quality of education does not mean necessarily to give students whatever they want, In fact, their point of view comes from the point that students are mostly engage with short-term satisfaction and students are just concern about passes the classes and graduates, which is in the contrast of real
learning and long-term purposes of education. In general an annual quality improvement cycle works well at the grass root level of operation. Depending on the size of the institution, a one or two year cycle will normally be used for the institutional quality improvement cycle.

**Beyond the Quality Management Structures**

So far, this document has identified a largely simple structure for quality management operation. However, it is important to recognize that not all quality improvement process will fall nearly into the structure defined above. For example, evaluation of classes by students is a means of quality control; so are annual appraisal interviews with faculty and staff. However, the information resulting from these processes is in most institutions considered confidential. How the information does gathered in ways like these impact the institutional focus on quality improvement?

First, those who do see the information gathered from such evaluations, or are involved in the processes, will have input at some point in the other more open processes. Their knowledge and experience will invertibly impact on their input at those times. For example, a department chair who has seen a pattern of comments on student evaluations of faculty that suggest a general dissatisfaction with the lack of practical application in department courses should feel free to raise this as an identified concern, without reference to specific teachers or classes. These nonspecific comments provide an important informal connection between thee personnel focused evaluations and the wider quality management cycles of the institution.

Second, it is generally recognized that personnel evaluations will not always neatly tie in with the rest of the quality procedures. However, they are important and should be recognized as part of the overall quality management structure in an institution. Important as these processes are, this document will not consider the more directly personnel focused evaluations specifically, but only the more open processes in which the whole institution will be involved.

If a quality management plan is operating effectively in an institution, quality improvement processes will integrate seamlessly into the total institutional operation. The processes will be streamlined, but will permeate every level of the institution,
ensuring continuous focus on improvement in all operational areas. However, an institution will always need to make choices on what procedures and processes will work best within its specific environment. This will be particularly the case for any institution that has not previously given significant focus to quality management issues.

If this is the case, an institution should first consider introducing those processes that will most help introduce the desired “learning culture” in the institution, and produce measurable results in the short-term. These priority choices will vary between institutions, particularly where national expectations prioritize certain quality processes over other. This part of the booklet helps identify what some of those choices might be in the three areas of academic quality improvement, non-academic quality improvement, and what is broadly termed “other” processes. However, how to prioritize these must remain an institutional decision.

Academic Quality Improvement

Faculty: Academic quality improvement starts with the individual faculty member. Most instinctively reflect on their teaching processes and the effectiveness of their classes. However, it is important to ensure that faculty do receive useful feedback on their teaching and general performance and are given opportunity to set goals for the future.

Official student evaluations of courses are one way that this feedback comes to teachers. Such evaluation processes should be as objective as possible to give the most helpful response to teachers. This will ideally mean:

1. That forms are anonymous, and where classes are small that written comments are typed up by a reliable third party, so students will feel they can be honest.

2. That the same class is evaluated over a period of two or three years, so that the teacher can get a pattern of responses.

In some institutions the form given to students is the same for every class. In others the central core of questions are the same and reflect the issues of focus of the institution to all teaching and learning. However, teachers can add additional questions that ask for responses to their specific concerns in a class.
It is also helpful to faculty to have some formal and structured way to reflect on their teaching, along with other aspects of their employment (such as research/professional development and service involvement). A performance by objectives type of annual report is one good way of achieving this. These reports ask faculty to identify and reflect on the areas of greatest satisfaction and concern in the last year in, for example, teaching, research and service; what their goals are in the next year and in what ways they may need help in achieving their goals (see the sample-reflective and consider ways they want to develop themselves. These forms may be best used as the basis for annual appraisal interviews.

Most of the quality processes affecting faculty will not be public, although there will be some open department processes that will provide faculty with helpful feedback, and give them opportunity to openly reflect on their performance and ways of further enhancing it. It is also important to remember that while the major focus in quality management is student satisfaction and success, it is also concerned with faculty and staff satisfaction. These processes should help in those areas, as the concern is not solely with whether an individual is performing adequately. There is also interest in the development of each employee.

**Department/Division/School :**

A variety of possibilities of ensuring quality at the department, division and school level exist. Those that are selected will to some degree depend on the current educational environment in the country, and also the size of the institution. The comments below will be directed specifically at departments, but in some settings, these ideas may be applicable at school or divisions levels.

**Cross-marking:** In some academic environments cross-making (or double marking) is an expected part of quality management in higher education. Cross-making means that for a selected number of major assignments and examinations, at least two faculty grade the work or examination. This assists in ensuring fairness of grading and equitable standards as well as assisting in quality management. In some countries an external marker or examiner will also grade a certain number of papers and examinations, in addition to two internal markers. The external process encourages
equitable standards, not just within the institution, but also between institutions in a country.

**Department Approval of Syllabi and Examinations:** some departments choose to discuss together all course syllabi before a course is taught, and all examination papers students are expected to take. Ideally such discussions ensure that courses are taught a similar level and that there is good understanding within a department of what is happening in other classes. This helps teachers integrate content and skills between courses. It also helps departments check that their overall learning outcomes are likely to be met and that assessment loads are fairly distributed.

**Department Approval and Discussion of all Final Student Grades:** Such discussions help a department evaluate the average level of performance of its students, where individual classes appear to be too difficult or too easy for students, and where individual students are performing badly. In this way departments and individual faculty can respond quickly to perceived areas of concern.

**Agreeing on Department Aims and Outcomes:** All departments should develop their own learning aims and outcomes. These will usually be based on institutional objectives and outcomes, but will be more focused to the particular discipline and program. Where there is more than one program in a department, aims and outcomes should be agreed for each. The department should also agree how to measure their success in helping students achieve the learning outcomes. Certain outcomes may be evaluated through individual course examinations; some through core testing (such as in the area of technology use); some by student questionnaires that ask for feedback on key areas of the program and others by practicum experiences.

**Developing standards for Levels of a Program:** Some departments and programs may want to not just delineate desired outcomes for total programs, but desired outcomes for different levels of the program. This will be especially valuable in countries where the progression of a degree program is largely fixed. Some institutions will also expect application by students to move from one level of a program to another. This will provide points throughout a degree for formal consultation and refocusing between faculty and students.
**Profiling Grade Expectations:** In some environments, profiling grades very simply means identifying “A” as excellent, “B” as good, etc. However, others develop a more sophisticated analysis, such as “A”, a high level of conceptual understanding; excellent knowledge of facts; strong written and oral skills in communicating information, etc. Such a profile (which may very far different levels of a program) assists students in knowing department expectations, and faculty in knowing how to grade, especially with longer, non-objective forms of assignment. These grades and descriptions are often also tied to fixed percentage points.

**Exit Interviews:** It is usually when a student finishes a program that an institution will get the most useful and honest feedback. This is often best achieved through a department interview or questionnaire. Interviews should explore general a student satisfaction, but focus particularly on the desired outcomes of the department.

**Alumni Surveys:** It is often after students have left an institution for a couple of years that they have the most complete picture what their education has done for them. Focused surveys of graduates at selected intervals are therefore a very useful way for a department to identify the strengths and weaknesses of their program in the marketplace beyond the institution.

The ideas above are in no way exhaustive. However, the questions that do need to be asked by each department are: “How can we be sure that the quality of what we are giving students is the best we can do? What processes can we implement to ensure that we are managing the quality and receiving enough accurate feedback to evaluate how we can improve”. The responses can then be contextualized. Whatever processes are in place, there should always be a formal procedure when each department reviews its desired outcomes, its processes and its effectiveness in reaching in outcomes. Based on the review, plans for improvement and change can be made, from changes in the core content of a program to the way student comments will be collected. Other recommendations will be more far reaching and impact on funding of the department, for example. These will need to be passed on to the administrative group who can deal with that particular issue.

One important area remains: the responsibility of the department in considering faculty quality and satisfaction. As identified in the section on faculty above, much of
the question of quality improvement when it comes to faculty will operate within a different structure. However, there remain some areas that departments should consider. For example, what if the feedback in a particular year suggests that the department is lacking in skills to deliver the curriculum using technology? Or that teaching skills are weak in some areas? Or that although teaching is strong, some faculty does not seem to be up to date in their area of teaching/research? Then the department has the responsibility to discuss how these areas of need can best be met. It may mean sending recommendations to another campus committee, it may mean agreeing to prioritize department funds to develop faculty in particular ways.

Overall, a quality improvement approach in higher education operates against the traditional view of a teacher having sole control of what happens in his or her classroom. This is a difficult transition for some faculty to make in their thinking. However the concept that the department as a whole has responsibility for ensuring the delivery of a quality program is an important principle in higher education that is becoming a universal international position. This does not mean that the individual teacher must always be balance against the expectations of student and institutions that all faculty will work in united way to deliver education of quality.

**Unifying the Academic Processes**

The primary responsibility of the institutional Academic Quality Committee is to ensure that at all levels of academic operation quality is being effectively managed and that institutional outcomes are being reached. This committee both reports up to the institutional Quality Council and receives reports from other groups. It also recommends to departments and other academic committees on any area that relates to improvement of quality.

**Relationship to departments/schools/divisions:** if department quality management process are working well, the Academic Quality Committee will largely (a) decide what they want in the form of a report from each department (b) receive and debate the reports and (c) feedback comments on the department report. Feedback could include agreement with department conclusions, specific concerns, or further recommendations.

The Academic Quality Committee may also want to suggest some unifying quality improvement mechanisms that it wants all departments to adopt. This could be any one
or more of the processes identified under departments above. If so, these suggestions may need to be channeled for further discussion to a wider forum of faculty. Essentially, the primary job of this committee in relating to academic departments is to help them manage their own quality well.

However, the role identified above is largely a formative one. The Academic Quality Committee may also want, or be expected, to take a more summative role in quality management. This could be, for example, by having a cycle of department/division formal reviews, where the committee, in cooperation with academic administration, initiates a 5-year (for example) evaluation of department operations. A 5-year review may ask for a longer report than the typical annual report, focusing on department effectiveness over a longer period. It may also include more focus on success of graduates than is in the annual report and tack profiles of faculty research, etc. A review team may consist of some academic administration, some faculty from other departments and, ideally, at least one individual in that same discipline who is teaching at another university or college.

The combination of formative and summative evaluation provides a good balance to quality management, allowing plenty of opportunity for department and faculty self-evaluation and development, while recognizing the importance given to quality in all areas of its operation by management. Finally, it is an administrative expectation that quality is achieved.

**Relationship to other academic committees:** one of the biggest challenges in any institution is to develop a committee structure that is streamlined, inclusive and effective. The question must be asked: “Are the issues that need to be dealt with to ensure academic quality being dealt with well?” The feedback the Academic Quality Committee needs from the other committees relates largely to the effectiveness of their operation. No long reporting process is needed, but it is important that the committee processes are reviewed regularly. The Academic Quality Committee is a very good place for this discussion to be initiated and a good committee to initiate recommendations for change.

**Relationship to faculty and academic administration:** While other processes and individuals on campus will be responsible for dealing with individual personnel issues,
the Academic quality Committee will receive information that impacts broadly on personnel issues. For example, a variety of department reports may all suggest that students are complaining lack of good advising, or of the attitudes of faculty and staff. This is a quality issue and the information, with recommendations where appropriate, should be passed on to a group that can deal with the concern more specifically. Issues related to faculty training and development needs may also come through to this committee. Once again, recommendations can be made that relate to total faculty campus issues.

**Relationship to academic service areas:** This might include computer services, the library, academic resource areas, consoling and testing. Whatever areas/ departments fall administratively under academic administration should report to this committee. In areas where administrative authority falls elsewhere on the campus, then information and recommendations a be passed on. Similar to academic departments, service areas can also develop objectives, measure their success, evaluate the results and set goals. There should be no difference in the basic management cycle.

**Relationship to institution:** The Academic Quality Committee will focus on the academic side of campus life. In that it will report to the institutional Quality Council, there will be a natural flow of information and recommendations between the academic quality committee and the rest of the campus. Generally, then, that central Council will receive recommendations that relate to other areas of campus and pass these along. However, the institution needs to decide the most practical way of channeling and managing information. The question here is “Is there a good flow of communication on quality improvement and management issues, and is there accountability?” This means that when recommendations flow up or down or across lines of communication, a response should be expected within a reasonable time frame. If not, the process is needed.

**Non-Academic Quality Improvement**

Since the upsurge in interest in quality management issues in higher education in the last few decades, a number of studies have explored relating to the most important quality issues to students on campuses. In general terms, while academic programs have ranked as important, the issues of relationships with students and faculty staff and the physical campus have typically rated higher. In addition, within the
Seventh-day Adventist education system, the quality of students life in general, and the spiritual environment in particular, remain important quality issues.

The Physical Campus: First impressions are often hard once to change. Before students even set foot in a classroom, they will walk on the campus, experience the residence halls and walk through campus buildings. Although there is no immediate connection at all, student perception of institutional quality will often be initially based on these experiences.

For most institutions maintaining the physical campus is a constant challenge. However, these needs should remain at the top of the priority list. In addition institutions should balance the need to deal with the “hidden” maintenance needs that may are critical to the institutional operation with the aesthetic desires of the campus community. While the first is essential, the second will often have more influence on satisfaction levels and perceptions of quality. A clean campus where public areas are kept attractive and freshly decorated will do much to improve the image of a campus.

How should quality management of the physical campus take place? It could happen in a number of forums, but it is important that input is broad and that a maintenance schedule is agreed that involves administrative input. It is also important that satisfaction surveys of all campus groups include questions that invite reactions to the physical campus environment.

Stakeholders of Higher Education Institutions

A higher education institution, being an organizational system, receives impacts from and creates impacts on objects, i.e., stakeholders, in its external environment. The crisis that affected the higher education sector in the USA in the 1980s illustrates the significance of the stakeholders and their impact. According to Lozier and Teeter (1996), the sector faced problems of a decline of quality in graduates; declining state support; rapidly changing technology; costs that were outstripping inflation; growing mandates for accountability by accreditation associations, legislatures, other funding agencies and the public in general; and even growing international competition for students, faculty and research report. Renville has identified 10 stakeholders or stakeholder groups of higher education institutions; the student; the employer; the
family and dependants of the student; universities and their employees; the suppliers of goods and services to the universities; the secondary education sector; other universities; commercial and industry; the nation, as represented by the government; and tax payers, national and local, Reavill adds that it is important for an institution to determine the extent of stakeholders’ contributions and benefits they received.

The need to focus on the interests of stakeholders is the quality undertakings of higher education institutions is emphasized in the new framework for higher education introduced by the QAA in 1998. The assurance is required; by students, by employers, by higher education providers themselves, and by the tax payer.

**Attitude of Staff**: The positive attitude of staff is vital to the real and perceived quality of an institution. Positive attitudes include professionalism and friendliness towards students, good team spirit among colleagues, and loyalty to the institution and administration. When there are problems amongst the faculty and staff the influence on students is often just as negative as if the problems are in the direct relationships with students.

Feedback from any constituent groups that suggest there are ongoing problems in these areas should always be taken seriously. While staff and faculty receiving comments should be self-aware and responsive to genuine concerns, problems in staff attitudes will normally be an administrative concern.

**Bureaucratic Processes**: The day to day operation of an institution also reflects on perceptions of quality. If an administrative office has a pattern of making errors, this erodes confidence not just in this area of the campus, but often in the whole campus. In general, the problems in these areas tend to be:

1. **Processes are too complex**: it is an administrative responsibility to try and make bureaucratic processes for students, faculty and staff as simple as possible.
2. **Inefficiency and errors**: if this is an ongoing problem, there needs to be either additional training or redeployment of staff.
3. **Communication is poor**: Most individuals in a campus community see bureaucratic process as unfortunate hurdles blocking what they really want to do-study, teach, etc. therefore, remembering to follow through on quality
improvement process will be a problem for a significant number of individuals. The only solution is to communicate and keep communicating, in as many different ways as possible.

4. Evaluation of bureaucratic process: It will normally take place alongside other evaluative processes. Such evaluations could be initiated by specific offices or departments, especially those constantly offering services to students; registry, student finance, computer services, for example. They could also be initiated by a central office and be part of campus wide satisfaction surveys.

Student Life

Student life in this document will refer to all areas of daily living that impact on a total learning experience for a student. This includes campus security, parking, campus facilities for socializing and sports activities, the cafeteria and campus organized activities and clubs. It also includes student government processes, including their grievance procedures and the channels of communication between students and administration.

It may be that all of these areas of campus living are the responsibility of the same administrative personnel. If so, that will make the job of quality management easier. If not, it will still probably be advantageous for the institution to consider a holistic way of evaluating these areas, whether or not they are linked to the other areas identified under non-academic quality assurance.

Inevitably these areas will bring student complaints, however, the importance of the quality assurance process will be identify what are the real issues of concern that can be improved and what reactions are very individual. An annual end of year survey may be a good way to get broad ranging responses to all student life issues. This will mean that the individuals who are responsible for these areas will have the end of year break to (a) consider how they will respond to both the survey and other evaluative feedback and (b) decide their goals for the following year.

The Spiritual Environment

For a Seventh-day Adventist institution the spiritual environment is one of the extras of student experience that should impact on the total satisfaction of life at a
college or university. However, it is also the area where there are often most wide-ranging expectations by the campus community (students, employees, Board of Trustees). Quality assurance in this area will be best tied to the spiritual master plan of the institution, which in turn should be clearly connected to the institutional mission and objectives.

Can spiritual success be measured objectively? This debate will continue, but for the purposes of quality improvement, specific questions should be asked by the institution of itself. These will include:

1. Does the community as a whole consider the spiritual environment on campus one that encourages personal commitment and spiritual growth?

2. Is there evidence of spiritual growth throughout the experience of a student on campus?

3. Is there evidence of spiritual maturity and commitment to a church amongst graduates that last beyond their college years?

4. What are the areas on campus that impact spirituality most successfully?

5. Where can there be continued development and growth?

The institution should act on the assumption that the development and nurturing of a spiritual environment is the responsibility of every area of campus, even though one, or a group of individuals, may be named as those “in charge” of spiritual life. Quality management should be concerned with structured worship experiences, but also with the integration of faith and practice in classes, the informal structures of relationships amongst students and between students and employees, and the general institutional culture.

Feedback on student spiritual experience can be included in general surveys or be more specifically targeted. On most campuses it is advisable to have a group solely responsible for facilitating the total spiritual experience of students. Whatever the means of evaluating the area of campus life, this committee/group should be the one to evaluate the feedback and make recommendations for change and growth.
Unifying the Non-Academic Processes

This document has been much less specific in recommending structures and process for the quality management of the non-academic areas of campus life than for the academic. This is because, as noted above, the range of services is very broad and management structures relating to these areas vary considerably from campus to campus. The principles to remember, however, are:

- All areas need to be included in a holistic quality management plan.
- Co-ordination of efforts is vital so that students and employees are not over-structured with requests for feedback.
- The central Quality Council should ensure that quality procedures are clear, that regular feedback and reporting is taking place and that all staff is committed to the quality improvement process.

In some countries student questionnaires are available for higher education campuses that cover all the areas identified under non-academic processes above. The returned questionnaires are externally assessed and quantitative responses made available to the institution, often with comparative figures to other similar institutions. Individual campuses are also often able to add their own institution specific questions. This is an excellent aid to quality improvement, as it provides comparatively objective feedback and useful benchmarking information. Where such processes are not available, an annual questionnaire, developed internally, that looks at the broad-ranging campus life issues identified above is a good substitute. Such a form could be developed by the central committee, or a name administrator who has major responsibility in the non-academic area of campus life. After central collation of the material, the relevant departments can then receive the responses related to their operation and be asked to use the material, along with other means of evaluation and self-evaluation, to plan for the following year.

As annual centralized survey does not prevent individual areas of campus from developing other processes of evaluation. These could include student focus groups, student government forums, and focused surveys to provide quick evaluative response to specific issues. However, it remains important that the institution looks at the total
quality management procedure in a holistic manner and that there is good coordination of all processes. Everyone in the campus community should know that the campus considers quality important, the valid concerns on quality will be taken seriously, and that every employee on campus is vital to delivering a quality student experience.

**Other Quality Improvement Processes**

While the major concern of quality improvement is the internal operation of the institution, quality processes should expect that other committees and groups key to the operation of the institution be involved in quality assurance. In the case of the Board of Trustees and the Alumni Association this will include providing them with the opportunity to feed into the wider quality improvement process as well as evaluate their own operations. In the case of constituencies impacted by the institution (the wider church community, the local community) involvement will be in the form of providing information on satisfaction.

**Board of Trustees** : For example, a minimum of once a year the Board of Trustees should go through its own self-evaluation process. This could involve inviting key groups on campus to give feedback on how effective the board is in areas such as communication, efficiency and showing active interest in the campus. It should also involve the board asking questions of it, related to its operation, its understanding of important issues, its use of time in meetings, and its overall commitment to the institution and its administration.

The Board of Trustees also needs to be involved in feeding back information to the campus on perceived quality, especially in key areas, such as administrative effectiveness. It will, for example, be the responsibility of the board to arrange for the appraisal of the institutional President on a regular basis. This should follow the pattern of the processes in operation throughout the campus and should give the President the opportunity to reflect on his or her own performance and identity goals for the future. A sub-committee of the Board would normally provide the right environment for this type of evaluation. Similar to faculty and staff appraisal processes, this process should confidential, but will indirectly impact on the total quality management decisions that the Board will make.
Alumni Association: Alumni associations are active to varying degrees in institutions worldwide. Some are very structured and play an important role in supporting the institution and maintaining contact with institutional alumni. Where this is the case, inviting this group to evaluate its own effectiveness will be appropriate. In other cases it is the institutional administration that is responsible for all alumni contact. In this situation, the effectiveness of the contact will be considered as part of the evaluation of the general administrative operation of the campus. What is important is that the alumni are not forgotten. The good will of this group impacts both recruitment and donations. The alumni also bring personal and professional expertise that can be very helpful to institutional leadership. The question of how well the campus is maintaining positive contact with this group is therefore an important one.

However, the alumni are also important in another way. They provide a very good resource for an institution wishing to evaluate its successes and its areas for growth. Surveying alumni a few years after they have left campus will often provide a good understanding of the quality of the institutional programs. Have they been successful in both getting employment and in succeeding in employment? Did their education provide them with the right skills and nurture the right values and attitudes? How well have they achieved in higher education? What is their spiritual commitment now? Are they actively involved in church life? In retrospect, how highly would they be satisfied with their total academic experience at...? The answers to questions such as these provide excellent information for campus self-evaluation and growth.

The final groups to be considered are those farthest removed from the immediate operation of the institution. However, the impact of the institution on them is nevertheless very important. These groups will vary from institution to institution, but will be communities that in one form or another are impacted by the total institutional quality. This could be the regional, national or international Seventh-day Adventist Church, it could be the local community, and it could be the employers of graduates. Each institution needs to decide which are the groups most impacted by total institutional operation.

These are the groups that can often best tell the institution if their desire outcomes have become reality. How pleased are they with the graduates they hire?
How are they (and the institution as a whole? Perceived in the community Getting helpful feedback from these groups is often the most difficult. However, it is also important for two reasons. First, it is often very important to these groups that their opinion is asked, it encourages a wider ownership and understanding of the institution. Second, these individuals and groups often have feedback that cannot be received from elsewhere.

However, this form of feedback does need to be focused and ideally, the same processes need to be repeated over a period of years, so patterns of responses can be seen. The Quality Council will need to decide on who should be contacted and the process for receiving and disseminating the feedback. The information will have no value unless it feeds into the overall quality improvement processes.

**Barriers to TQM Implementation**

The literature survey has revealed cultural and attitudinal barriers to the application of TQM in higher education in the US which have also been identified in the manufacturing and healthcare industries. A major obstacle is the negative attitude of some employees towards the application of TQM within universities. Cyert (1993) argues that Universities have long resisted any effort to increase their productivity in their functions because most faculty members and other sin the organization believe that universities are as efficient as they should be”.

While part of the attitudinal problem may stem from academics skepticism for management fads, Harvey & Langley (1995) go one step further suggesting that `the autonomy of some of the world’s most empowered workers seems in some ways to be threatened by an approach that purports to be founded on employee empowerment. Thus, the TQM philosophy that emphasizes employee’s empowerment might be seen as threatening to some academics due to the difficult reconciliation of empowerment and control as a means to pursuing organizational objectives.

Cultural factors have also bee, cited as potential barriers by Ruben (1995), who suggests that the cultures of universities generally `nurture, recognize, and reward individual accomplishments far more successfully than they do group, organizational and community achievements”. Vazzana et al (2000) believe that potential barriers to
TQM programmes in academia include organizational culture, academic freedom, time constraints, research responsibilities, and irregular teaching schedules.

The literature survey also revealed barriers to TQM implementation in Indian higher education institutions. Negativity towards TQM from the academic community in India was also identified as a predominant barrier. There has also been considerable skepticism about the portability of TQM from the manufacturing industry. Scarce believes that many of the key ideas were just as relevant to universities as they were to manufacturing companies, but `their acceptance by departments is much more likely if they can be woven into the existing traditions of the education system.

Conclusion:

Thus, Quality concerns have spread from manufacturing and service businesses to the public sector including public and private educational systems. An increasing number of higher educational institutions are adopting a total quality management (TQM) approach to enhance the institution’s ability to attract and retain students by implementing processes to continually improve quality. Even though TQM `usage’ can be interpreted as anything from implementing quality practices in administration; to offering TQM courses in various disciplines, the results reflect an expanding awareness of the desire, if not necessity, to improve the quality of the educational process. It is important to recognize that there is a difference between the institutions that claim to be for quality and those that do quality.

References


38. Schmidt, K 1998 Applying the four principles of Total Quality Management to the classroom. Tech Directors. Vol.58, No.1.s


Unit for Research into Higher Education. CLF Printers. Bloemfontein, South Africa.


72. MiZikaci, F., 2006, Higher Education in Turkey (Bucharest, UNESCO European Center for Higher Education).


