Total Quality Management (TQM) in Higher Education in India

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ABSTRACT

Education is an important and effective tool of social change and a means of improving the welfare of an individual. Higher education contributes to national development through dissemination of specialised knowledge and skills. Higher education institutions are a major source for providing the human capital required for knowledge production. In an environment of global competitiveness, it is important that the quality and standard of Indian higher education institutions is enhanced and sustained at a high level through innovation, creativity and regular monitoring. Here lies the importance of introducing Total Quality Management (TQM) in higher education. In this backdrop, an attempt has been made in this paper to discuss the concept of TQM and to examine the ways in which the quality of higher education institutions in India can be improved using the TQM mechanism.

Keywords: Total Quality Management, Human Capital, Knowledge Production, Sustained Growth.

1.0 Introduction

Education is an imperative for the sustained growth of the nation. It is an effective instrument of social change and a way of improving the welfare of an individual. Higher education contributes to national development through dissemination of specialised knowledge and skills. It plays a pivotal role in producing quality teachers for the country’s education. The era of liberalisation, privatisation and globalisation has strengthened the significance of a knowledge-based society; and knowledge has become the key resource for global competitiveness. Higher education is the main source of that knowledge – its production, dissemination and its absorption by any society. Higher education institutions are a major source for providing the human capital required for knowledge production.

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In an environment of global competitiveness, the quality and standards of Indian higher education institutions need to be enhanced and sustained at a high level through innovation, creativity and regular monitoring. Here lies the importance of introducing Total Quality Management (TQM) in higher education. If the principles of TQM are strictly followed and implemented, then the higher education scenario will automatically change.

The objectives of the study are:
- to discuss the concept of ‘Total Quality Management’;
- to examine how the quality of higher education institutions can be improved using the TQM mechanism.

The study is based on secondary sources of data. The information has been collected from different books, government reports, journals, and relevant websites. The gathered information has been analysed and interpreted to arrive at meaningful implications.

2.0 Total Quality Management (TQM): The Concept

The word ‘quality’ comes from the Latin word ‘qualis’ meaning ‘what kind of’. It means “the standard of something as measured against other things of a similar kind; the degree of excellence of something”. It may be defined as “an improvement in product quality” or “a distinctive attribute or characteristic possessed by someone or something”. Joseph M. Juran defines “quality” as “fitness for use of purpose”. The British Standard Institution (BSI) defines quality as “the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs” (BSI, 1991).

The term ‘Quality Management’ refers to the policies, systems and processes designed to ensure the maintenance and enhancement of quality within an institution. Quality management, in higher education context, covers the quality terminology: Control, Assurance and Improvement. The hierarchy of quality management is: (a) Total Quality Management, (b) Quality Assurance, (c) Quality Control, and (d) Inspection.

Total Quality Management (TQM) is a broad-based and systematic approach that helps achieve high levels of quality. The concept of TQM was pioneered by Edward Deming. It gained increasing acceptance in the United States in the mid-1980s. TQM first gained its popularity in manufacturing organisations, but it has also been adopted in service settings. TQM means a continuous process of improvement in all aspects of an organisation with the involvement of everybody. It is basically a philosophy or concept or approach that aims to satisfy customer/user need on a continuous basis (quality first time, every time, all the time) by involving each and every (total) in the system and a
lower cost (management). TQM is an area which requires maximum attention of top management. The processes of TQM are divided into 4 sequential categories: plan, do, check and act, that is, the PDCA cycle (Acquinas, 2006). The plan-do-check-act principle is an essential tool for implementing TQM programme and is based on the principle of continuous improvement. TQM is people based management and requires teamwork. The objective of TQM is to delight the customer. It involves study and understanding of changing customer needs and taking steps to satisfy these needs in a better way.

The common principles underlying most approaches to TQM are:

- Customer-first orientation
- Focus on continuous improvement
- Respect for employees and their knowledge
- Provision of on-going education and training to employees
- Emphasis on prevention rather than detection
- Performance measures that are consistent with the goals of the organisation
- Awareness of the needs of internal customers
- Substantial cultural change
- Top management leadership of the quality improvement process (Acquinas, 2006)

Human resource managers can facilitate introduction, maintenance, renew and reinforcement of TQM in an organisation in the following ways:

1. Develop collaboration between management and trade unions for implementing TQM.
2. Train people in the principles and techniques of TQM.
3. Identify the requirements for successful use of TQM techniques.
4. Guide work team in quality improvement.
5. Design and develop communication system for the launch of TQM.
6. Institutionalise management ethics.
7. Adopt selection process for conceptual, technical and human skills that support a TQM movement.
8. Upgrade quality awareness within the orientation courses.
9. Identify the most appropriate mechanism for recognising and rewarding achievements in TQM.
10. Redesign appraisal systems to fit with TQM philosophy.
11. Assist in the preparation of annual TQM report.
12. Assess the effectiveness of TQM infrastructure and systems.
13. Prepare and administer employee attitude and organisational climate surveys.
15. Facilitate the operation of internal reviews using criteria such as ISO-9000, Deming Prize, or the Malcolm Baldrige National Quality Award.
16. Identify the impediments to continuous quality improvement.
17. Conduct quality and ethics audits. (Gupta, 2003)

3.0 TQM in Higher Education

According to UNESCO, quality in higher education is a multi-dimensional, multi-level, and dynamic concept that relates to the contextual settings of an educational model, to the institutional mission and objectives, as well as to specific standards within a given system, institution, programme or discipline. A system of learning that produces well-educated individuals who can handle matters of concern within their area of study efficiently and proficiently is called “quality education”.

As discussed above, TQM is a comprehensive approach to quality management that lays stress on factors such as continuous improvement, customer focus, strategic management, need for explicit systems to assure quality and a view of leadership and supervision that stresses employee empowerment and delegation. TQM approach in education involves not only achieving high quality but also influencing all segments of the educational process: organisation, management, inter-personnel relations, material and human resources. “TQM in higher education means improving the quality of courses, input instructional process, resource management processes and structures as well as student support service output and linkages with world of work and other organisations” (Tulsi, 2001). The quality dimensions in higher education have been laid out in Table 1.

3.1 Higher education: The Indian mirror

The Indian higher education system is one of the largest in the world in terms of the numbers of colleges and universities. Universities and its constituent colleges are the main institutes of higher education in India. Over the past few years, India’s higher education sector has witnessed tremendous growth. There has been an impressive growth in the area of higher education with an increase in student enrolment. Plan expenditure on education has increased rapidly. Education being an important component of economic development and a driving force for economic growth, governments in India and across the world are subsidizing higher education.
Table 1: Quality Dimensions in Higher Education

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Characteristics</th>
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| Tangibles       | ▪ Sufficient equipment/facilities  
▪ Modern equipment/facilities  
▪ Ease of access  
▪ Visually appealing environment  
▪ Support services (accommodation, sports etc.) |
| Competence      | ▪ Sufficient (academic ) staff  
▪ Theoretical knowledge, qualifications  
▪ Practical knowledge  
▪ Up to date  
▪ Teaching expertise, communication |
| Attitude        | ▪ Understanding students’ needs  
▪ Willingness to help  
▪ Availability for guidance and advice  
▪ Giving personal attention  
▪ Emotional, courtesy |
| Content         | ▪ Relevance of curriculum to the future jobs of students  
▪ Effectiveness  
▪ Containing primary knowledge /skills  
▪ Completeness, use of computers  
▪ Communication skills and team working  
▪ Flexibility of knowledge, being cross-disciplinary |
| Delivery        | ▪ Effective presentation  
▪ Sequencing, timeliness  
▪ Consistency, fairness of examinations  
▪ Feedback from students  
▪ Encouraging students |
| Reliability     | ▪ Trustworthiness  
▪ Giving valid award  
▪ Keeping promises, match to the goals  
▪ Handling complaints, solving problems |

Source: (Owlia & Aspinwall, 1997)

Education is a critical input for investment in human capital. There are 3 broad goals of higher education in the country. These are: (a) to ensure access or expansion (that aims to increase student enrolment) (b) to impart quality or excellence in education and (c) to provide equality to under-privileged section of the society. Higher education is
of vital importance for the country, as it is a powerful tool for building a knowledge-based 21st century society. Quality higher and technical education increases the employability of the youth and can help reap the benefits of India’s looming demographic dividend. To reap the benefits of this demographic dividend to the full, India has to provide quality education to its population.

At the time of Independence, there were only 20 universities and 500 colleges with 0.1 million students; these have increased to 690 universities and university-level institutions and 35,539 colleges as on 2011-12. Of the 690 universities, 44 are Central universities, 306 State universities, 145 State private universities, 130 Deemed universities, 60 Institutes of National Importance plus other institutes and 5 institutions established under State Legislature Acts (Economic Survey, 2012-13, pp-285-87).

A sizable numbers of Women Colleges have been established in our country. As on 31-03-2012, there are 4,266 colleges exclusively for women. As many as 2,058 women colleges have been established during the 11th Plan as compared to the figure at the end of 10th Plan (2,208), thus resulting in 93% increase in the number of women colleges established. There has been a phenomenal growth in the number of women students enrolled in higher education, since Independence. The women enrolment which was less than 10% of the total enrolment on the eve of Independence has risen to 42.66% in the academic year 2011-12 (Annual Report, UGC, 2011-12, pp-63-64). The pace of growth has been particularly fast in the last two decades. As the data in Table 2 shows, the number of women enrolment per hundred men registered a growth of 5 times in 2011-12 as compared to 1950-51.

Table 2: Women Students per Hundred Men Students

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Women Enrolment (000s)</th>
<th>Women Enrolment Per Hundred Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950-51</td>
<td>40</td>
<td>14</td>
</tr>
<tr>
<td>2011-12</td>
<td>8,672</td>
<td>74</td>
</tr>
</tbody>
</table>

Source: Annual Report, UGC, 2011-12, pp-63-64.

Technical and professional education in the country has played a significant role in economic and technical development by producing quality manpower. Open and distance learning is encouraged for increasing access to and making quality education available at any time, any place. The Open University System is a step towards diversification of courses offered for focusing on the educational needs of women, the rural segment as also for professional training of in-service personnel. Internationalisation and collaborative arrangements and setting up of UNESCO Category
I institute are other initiatives for extending the global reach of education (Economic Survey, 2011-12, p.323). In the present scenario, quality improvement has become the thrust area in the field of higher education against the backdrop of ever-growing demand for dissemination of knowledge. Education being an important component of economic development and a driving force for economic growth, governments in India and across the world are subsidising higher education.

Since 1991, a large number of private colleges on a self-financing basis are being set up and their number has increased rapidly. The private technical system in India is the largest in the world and the growth of higher education in the last 23 years has been mainly in the private sector. The growth of private education has contributed to the increasing undergraduate enrolment in higher education mainly in the application oriented science and professional subjects which are being offered in the colleges of arts and sciences.

To prepare for the challenges of the 21st century, the government has taken a number of initiatives during the 11th Plan period focusing on improvement of access along with equity and excellence, adoption of state-specific strategies, enhancing the relevance of higher education through curriculum reforms, vocation based courses, networking, and use of information technology and distance education along with reforms in governance in higher education (Economic Survey, 2011-12, p.323). The 12th Five Year Plan (2012-2017) recognises the challenges facing India’s higher education system and proposes several initiatives to resolve these, e.g., through increased funding for disadvantaged groups, deployment of cutting-edge technologies, faculty development programmes, improved governance structures, and provision of incentives for research (FICCI Higher Education Summit, 2012).

Several legislative initiatives have been launched by the Ministry of Human Resource Development, Government of India, wherein reforms have been undertaken by means of policy changes/executive order as well as legislative initiatives. Presently following legislative proposals for reform in higher education have been initiated which are at various stage of finalization/consideration:

- Higher Education and Research Bill, 2011
- The Educational Tribunal Bill, 2011
- The Prohibition of Unfair Practice in Technical Education Institute, Medical Educational Institute University Bill, 2010
- The National Accreditation Regulatory Authority for Higher Educational Institutions Bill, 2010
- The National Academic Depository Bill, 2011
India still faces challenges on several fronts including low and inequitable access to higher education, shortage of faculty, deficient infrastructure as well as low quality and inadequate research. Today, a key concern for India is the creation of an employable workforce to harness its demographic dividend to the maximum extent. To achieve this, the country needs an education system that can deliver quality in terms of a skilled and industry-ready workforce, without diluting focus on world-class research and innovation.

3.2 The relevance of TQM in Higher education in India

After Independence, there has been a remarkable growth in the higher education system of India. This coupled with the accelerated economic growth experienced by India in recent times has led to an increased demand for skilled manpower which, in turn, has made higher education a priority sector today. However, the sector is beset with great challenges in terms of quantity and quality of education delivery, funding, inclusivity, research and development, employability of graduates and equitable access to the benefits of international cooperation. In order to compete in a globalised economy, highly trained professionals are required and thus quality higher education is the need of the hour. TQM is a vision, which the educational institution can only achieve through long-term planning, by drawing up and implementing annual quality plans, which then gradually lead the firm towards the fulfilment of the vision. Application of TQM concepts would go a long way in revolutionising the higher education system.

The TQM is an efficient management technique that requires the full involvement of all employees on all organisational levels, thus representing the organisational culture. All the stakeholders of higher educational institutions are customers (Table 3). However, the internal customers play a crucial role in the policies of the organisation. The external customers have the freedom to choose their customers on the basis of quality. Approaches for TQM in University and Colleges are: Identifying customer needs, specific quality standards, benchmarking, identifying gaps in the existing system, planning for improvement, implementation of improvement plans, monitoring and evaluation and modification of plans.

The UGC played a key role in maintaining quality in higher education in India. It was established in November 1956 as a statutory body of the Government of India through an Act of Parliament for the coordination, determination and maintenance of
standards of university education in India. It aims at promoting and coordinating university education, determining and maintaining standards of teaching, examination and research in universities, framing regulations on minimum standards of education, monitoring developments in the field of collegiate and university education, disbursing grants to the universities and colleges, serving as a vital link between the Union and State Governments and institutions of higher learning and advising the Central and State Governments on the measures necessary for improvement of university education.

Table 3: The stakeholders of higher educational institutions

<table>
<thead>
<tr>
<th>Internal customers</th>
<th>External customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>Community</td>
</tr>
<tr>
<td>Faculty</td>
<td>Employers</td>
</tr>
<tr>
<td>Administrators</td>
<td>Universities</td>
</tr>
<tr>
<td>Administrative staff</td>
<td>Accrediting Agencies</td>
</tr>
<tr>
<td>Board of Directors</td>
<td>Alumni</td>
</tr>
<tr>
<td></td>
<td>Donor</td>
</tr>
</tbody>
</table>

Source: (Kumar, 2003)

The National Assessment and Accreditation Council (NAAC) is an autonomous body established by the University Grants Commission (UGC) of India to assess and accredit institutions of higher education in the country. It is an outcome of the recommendations of the National Policy in Education (1986) which laid special emphasis on upholding the quality of higher education in India. To address the issues of quality, the National Policy on Education (1986) and the Plan of Action (POA-1992) advocated the establishment of an independent national accreditation body. Consequently, the NAAC was established in 1994 with its headquarters at Bangalore.

NAAC is an agency which has tried to add value to education in the country. It has tremendous efforts to improve the quality of higher education institutions. Its advent has really created better work culture, and an instinct of achieving more knowledge and information among the teachers of the colleges and the universities. It has infused the spirit of research and learning among the teachers, scholars, academics and students.

NAAC arranges for periodic assessment and accreditation of institutions of higher education or units thereof, or specific academic environment or projects. It stimulates the academic environment for promotion of quality of teaching-learning and research in higher education institutions and also encourages self-evaluation, accountability, autonomy and innovations in higher education. NAAC undertakes
quality-related research studies, consultancy and training programmes and it also collaborates with other stakeholders of higher education for quality evaluation, promotion and sustenance.

Assessment and Accreditation is broadly used for understanding the “Quality Status” of an institution. In the context of Higher Education, the accreditation status indicates that the particular Higher Educational Institutions – a College, a University, or any other recognized Unit therein, meets the standards of quality as set by the Accreditation Agency. These standards are set in terms of performance related to the educational processes and outcomes, covering curriculum, teaching-learning, evaluation, faculty, research, infrastructure, learning resources, organisation, governance, financial well-being and student services.

The NAAC has identified the following 7 criteria to serve as the basis for assessment of Higher Educational Institutions:

- Curricular Aspects
- Teaching-Learning and Evaluation
- Research, Consultancy and Extension
- Infrastructure and Learning Resources
- Student Support and Progression
- Governance and Leadership
- Innovative Practices

The 7 criteria identified by NAAC are in fact the 7 main processes of developing the capabilities of an institution. Setting up of an Internal Quality Assurance Cell (IQAC) in all colleges and universities in India is another recommendation by NAAC to ensure quality standards. The Internal Quality Assurance Cell (IQAC) is expected to activate the system and raise the institutional capabilities to higher levels so that the institution makes continuous improvement in Quality. Establishing a strategic quality management system would ensure a continuous reform process. One of the major outcomes of the process would be the internalisation and institutionalisation of quality so that the institution strives to excel in serving its student community. The quest for excellence is a quality virtue that Higher Educational Institutions have to imbibe and demonstrate in their overall functioning. The cafeteria based system suggested would also entail introduction of a credit-based system allowing students to pick and choose the subjects they want to take up.

It is equally true and the quality cannot be imposed from outside but it is to be grown within. As such UGC has approved a scheme for establishment of Quality Assessment Cells in the HEIs for regular internal self-assessment and self-monitoring of
quality and excellence. In order to improve quality, it has established national research facilities, and Academic Staff Colleges to re-orient teachers and provide refresher courses in subject areas. The UGC also conducts the National Eligibility Test (NET) for setting high standards of teaching. Various committees and commissions on education over the years have emphasized directly or indirectly the need for improvement and recognition of quality in Indian higher education system.

Like NAAC, there are other statutory bodies in India to assure quality in professional education. Some of these are:

- All India Council for Technical Education (AICTE)
- National Council for Teacher Education (NCTE)
- Medical Council of India (MCI)
- Bar Council of India (BCI)
- Distance Education Council (DEC)
- Indian Council for Agricultural Research (ICAR)
- Indian Nursing Council (INC)

The major determinants of quality are: the number of teachers, the student-teacher ratio, availability of permanent full time teachers, number of books and journals, number of computers and certain level of physical facilities available with the colleges and universities. The quality of higher education is a function of infrastructure, availability and recruitment of good teachers, motivation of students, employability of the programme and freedom for innovations. The teachers should undergo orientations as well as the content improvement through training from time to time. There is explosion of information in the modern times. It is very important to convert this information into knowledge and here the teachers in the universities and colleges have to play a very crucial role. Good quality institutions lead to emergence of excellence in terms of creativity and innovativeness. Without quality, the excellence will not emerge and grow.

The formation of Quality Circles is a prime step in TQM. The heart of quality management is improvement in teaching-learning process. Voluntary effort of all staff and faculty from ‘top to down’ and from ‘bottom to top’ levels are needed for TQM. TQM in higher education can be effective if there are some processes in operation like performance of teachers to be appraised by students, departmental meetings, GB meetings, time table (teaching hours, seminars, examination etc.), student faculty forums (Quality Circle), Faculty Administrative Reforms, Class-room feedback services, viz., examination, quizzes, seminars, etc., Alumni, student support services, etc.
4.0 Concluding Remarks, Suggestions and Recommendations

Education is the backbone of a nation and plays a vital role in its development. It is the key instrument to national human resource development. Therefore, there is a premium on both quantity (increased access) and quality (relevance and excellence of academic programmes offered) of higher education. It is very important to uplift the higher education sector in our country. There is a rapidly growing demand for a higher education in the world today. Higher education imparts in-depth knowledge and understanding so as to advance the students to new frontiers of knowledge in different walks of life. Quality is the heart of education. Quality of human resources may be maintained through higher education. The UGC has been continuously developing mechanisms to monitor quality in colleges and universities directly or indirectly. Adoption of TQM will help institutions of higher education maintain their competitiveness, eliminate inefficiencies in the organisation, help focus on the market needs, achieve high performance in all areas and satisfy the needs of all stakeholders (viz., student, community, government, company, university and colleges). TQM boosts up employee morale, creates better team work among departments, bridges faculty-staff functions, increase quality from customer viewpoint and strives for continuous development of everyone who is part of higher educational institutions. In order to make the TQM in Higher Educational Institutions a success, the attitudes and activities of the management, monitoring of the educational process and inter-personnel relations need to be changed. So TQM needs to be implemented in all colleges and universities for producing quality human resources, imparting quality education, creating a reservoir of efficient and effective administrative personnel and generating a congenial academic atmosphere.

TQM was first implemented in USA higher education in the year 1985 and it rapidly extended in the 1990s and now more than 200 higher educational institutions are involved in TQM throughout USA. In the UK, TQM was to be effective in narrowing the gap between current situation and the proposed goals in higher education. Similar inspiring results of using TQM in higher education have been experience by different countries. India can also gain from international experience and derive positive benefits from TQM by using it in the higher educational institutions. However, it needs to be cautioned that one single model of TQM may not fit all. Therefore, it is advisable that every higher educational institution should prepare their own model depending upon their circumstances. The educational administrators of India can effectively use the TQM philosophy to management and teaching, and satisfy the needs of the stakeholders while increasing their own potential.
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