Quality Issues in Education

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Abstract

Although education received much attention in India ever since independence, it is only during last decades, education has expanded remarkably as indicated by rapidly increasing number of professional institutions, massive increase in the students admissions, increase in number of disciplines. Within this technological context, professionals play an ever more significant role. They develop new manufacturing processes and products; create and manage energy, transportation and communication systems; prevent new and redress old environmental problems; create pioneering health care devices. One of the strengths of professional education is the broad spectrum of colleges whose development has been constrained by a single-prescribed mission. While professional education has served the nation well, there is broad need of a big change to meet new challenges. Today colleges must not only provide their graduates with intellectual development and superb technical capabilities but following industry lead, colleges must educate their students to work as part of teams, communicate well and understand the economic, social, environmental and international context of their professional activities. Quality in the professional education is the development of intellectual skills and knowledge that will equip graduates to contribute to society through productive and satisfying careers as innovators, decision makers and leaders in the global economy of this century. A high quality professional can obviously be created only through high quality professional education.

Introduction: Access to quality education is a major goal for international development. On an individual level, education can improve a person's ability to think critically, solve problems, and make informed decisions for themselves and their communities. Education also has the power to lift people out of poverty, promote gender equality in society, improve knowledge about health and nutrition, promote sustainable development, and improve global cooperation-making it an important foundation for global advancement in many areas.

Since the early eighties, due to rapid industrialization and economic growth, engineering and technical education in India have been developing faster than anywhere else in the world, and India now has the second largest number of students in the world. Recent Indian scientific, industrial and technological development, particularly in space, nuclear and missile technology, computer engineering and information science has achieved a lot. Since technical education determines the development and socioeconomic condition of a nation, there is a greater need for high quality technical education to produce technically skilled manpower in India. The basic components of a technical institute are the students, the infrastructure, the teachers, the curriculum, the teaching and learning aids, the linkage mechanism with industry-institute and other user system, the management system, the support services system, the guidance and counseling, the internal and external evaluation system, the feedback system, etc. There are other important components which are called the process components. They are, way of teaching, the way the students learning, students activities beyond the regular time table, the motivation of both faculty and students, attitude of the management, the overall academic climate, the

opportunities and encouragement for innovations and creativity, research and development, the openness of communications, the leadership qualities of head of institutions and of departments, the sense of involvement in providing quality services, the organization structure, the quality of team work, the reward and recognition system, the faculty development programme, the appraisal system, the clarity in the vision and objectives of the organization.

Today colleges must not only provide their graduates with the intellectual development and superb technical capabilities but following industry's lead, colleges must educate their students to work as part of teams, communicate well, and understand the economic, social, environmental and international context of their professional activities. These changes are vital to the nation's industrial strength and to the ability of professionals to serve as technology and policy decision makers.

Defining Quality in Education: Quality in education is a complex concept with varying conceptualizations but at the same time quality in education has been defined with the following parameters:-
- Excellence in education
- Value addition in education
- Fitness for purpose
- Fitness of educational outcome and experience for use
- Conformance of education output to planned goals, specifications and requirements

Quality education from a TQM perspective is "total quality management in education is multi-faceted – it believes in the foundation of an educational institution on a system approach, implying a management system, a technical system and a social system. It includes within its ambit the quality of inputs in the form of the learning and teaching activity; and the quality of outputs in the form of enlightened students that move out of the system".

The US National Science Foundation (NSF) Task Force on TQM has come up with the following definition of Quality Education:
"Quality Education is the development of intellectual skills and knowledge that will equip graduates to contribute to society through productive and satisfying careers as innovators, decision makers and leaders in the global economy of the twenty first century." Quality Education demands a process of continuous improvement of and dramatic innovation in student, employer and societal satisfaction by systematically and collectively evaluating and refining the system, practices and culture of education institutions.

Indicators of Quality: The main indicator of the quality of education can be visualized in terms of its product – the learners' achievement both in scholastic and co-scholastic areas i.e. the performance in various subjects of study and habits, attitudes, values and life skills necessary for becoming a good citizen. The factors associated with success in these areas, which relate to conditions of learning and learning environment, are also sometimes considered as indicators of quality of elementary education. Thus ensuring quality in the inputs and processes becomes necessary if quality achievement is aimed at.

Indicators of Student Quality

- Number of students completing degree
- Time taken to complete the course
- Proportion undertaking practical Training
- Proportion participating in research and development
- Number of students recruited by reputed companies
- Number of students seeking post-graduate studies
- Satisfaction levels of students and Employees
- Perceived reputation of graduates and alumni, nationally and internationally
- Number of students becoming entrepreneurs
- Passing percentage of the students with higher class

Indicators of Faculty Quality

- Number of applications for faculty position, at different levels
- Academic quality, in terms of publications, honors, awards, patents, sponsored projects
- Teaching quality, innovative initiatives
- Publication records
- Sponsored research, consultancy and continuing education activities
- Professional society and public service involvement
- Ability to mobilize resources for department and institution
- Internal and external (national and international) honors and awards
- Quantum of practical experience
- Effectiveness of student counseling
- Faculty career satisfaction levels

Indicators of Institutional Quality

- The utilization of strategic planning Processes
- Interaction with the environment, industry, profession, community
- Mobilization of resources for institutional Development
- Demand from outside agencies for R & D and continuing education
- Adjunct appointments with Industry
- Inter-disciplinary activities
- Self-assessment and accreditation Processes
- Alumni involvement
- Perceived reputation, nationally and internationally
- Use by national agencies as think tanks and for technology development
- Leadership in education and research

Quality Issues and Desired Actions: Quality issues in education will therefore, revolve around the quality of infrastructure and support services, opportunity time, teacher characteristics and teacher motivation, pre-service and in-service education of teachers, curriculum and teaching-learning materials, classroom processes, pupil evaluation, monitoring and supervision etc. Indeed improvement of quality in these parameters and its sustenance is a matter of grave concern for the whole system of education.

The various quality issues must be addressed by all the technical institutions and an action plan is prepared for improvement of the system as whole is given as under:-

- **Relevance of Curriculum:** Identify hard and soft skill requirements for employment; identify generic skills and specific skills; develop standards for each of the objectives for all the subjects of study. Also develop standards for practical skills. Curriculum document must include all details and not merely the course content and evaluation scheme.

- **Leadership & Team Works:** It is essential however, to identify the characteristics of the effective leader. This includes openness and clarity, well informed and fair in judgment, a well developed strategic sense and the capacity to build staff's commitment to institutional goals. It is important to recognize the need and value of lifelong learning. Securing themselves for continuing opportunities to learn, in the period of technological, economic and social change and knowledge expansion. The most productive approach to uncover the developmental opportunities for administrators is team work. Now the scenario is changed, it is the age of multi disciplinary and inters disciplinary age. Activities require assistance from all the area.

- **Management Responsiveness:** Norms and standards have been fixed by AICTE and NBA to create external pressure to bring the institutes to a minimum level of acceptance. These external pressures should be utilized by the management to create internal motivation within the institutions. Otherwise, external pressures will have only temporary effects particularly to the intangible quality control aspects. Interests of the management and those of the faculty, and students have to be seen holistically.

- **Human Values and Ethics:** In the words of Bharat Ratna late Shri C. Subramanian "true education should be able to produce an integrated personality in the individual-an integrated development of hand, head and heart. Today we see pathetic picture of the youths of our country adopting all sorts of subterfuges to get through examination and get certificate just like a sick man getting health certificate without getting rid of his sickness". Knowledge without ethics is like to have a weapon without humanity. So the students must be given a foundation course in human values and ethics.

- **Motivating the Faculty:** Recruitment of good faculty and their induction, development, appraisal and reward for retention is a challenge to all the Technical Institutions. If the faculty is motivated, lot of enthusiasm will see in the campus for innovation, development, good teaching- learning practices and that of research.

- **Improving Institutional Academic Climate:** Good Teaching-learning practices, transparent teacher evaluation and reward system, encouragement for innovations and development work, sponsored research work, and institutional and individual consultancy work would change the total academic climate of an institute for betterment. Conduct of continuing education programs for working professionals is another area which would add to this aspect of improvement. Computation facilities, laboratory and workshop facilities, library facilities need to be extended beyond the academic routine hours. Research work will get a boost if research scholars working for higher degrees are made available in the campus. A clear cut policy enabling consultancy work is framed by the institution.

- **Quantity and Quality:** With increase of quantity there should be monitor for quality also. The development of higher education in last six decades presents a picture of light and shade. In the grab of quantitative success there is qualitative failure. Massive

production of engineers and their lack of employability, which in turn probably reveals a low standard of education or an education that, lack relevance.

- **Effective Curriculum Implementation Strategies:** Institutions need to design and develop curriculum implementation strategies such that responsibility and initiative in learning is gradually shifted to students with teachers playing the role of managing effective and efficient learning and creating opportunities for self learning and self pacing in learning. For bench marking best practices teachers need to examine how curriculum is implemented in other professions like in medical profession, specialized institutions like NIFT, Hotel Management Institution, Management Institutions, etc. Where examples for bench marking are not available, institutions need to develop their own model and standards. For this, teachers would require exposure to modern industry and good training institutes. They also need to be taken for study tours to see for themselves best practices.

- **Attitudinal Change for Achieving Excellence:** Day by day it is realized that the most important aspect of a successful career is that of maintaining positive attitude. That is why, now we refer to acquisition of Attitude, Knowledge and Skill (ASK) by students. While the curriculum document states about knowledge and skill component, it is mostly silent about attitudinal component except that it is inherently embedded in the system. Both teachers and students community needs to realize the need for positive thinking, and positive attitude. Group work, involvement in planning and decision making, appreciation for good work, transparency in the system, creating conducive environment for everyone to contribute and grow, are some of the important factors that would lead to attitudinal development. The management and teachers need to play role models for the students to get inspired.

- **Industry and Other Institutions Interaction:** Marketing of product and services of the institute to the society has to be planned and implemented systematically. The responsibility of student's placement in industry has to be jointly taken up by the Head of the institute, training and placement officer, the heads of departments and the students. For an established institution, the old students, well places in industry, must be located and their involvement be planned. Networking with organizations and institutions is done for mutual benefits. Investment on efforts made in placement of students will pay high dividends to the institutions in the long run.

- **Self Learning & Self Paced Learning:** Learning-to-learn ability is going to be the most essential requirement for Employment and to remain in employment at the work place. By proper design of the teaching learning system, the students must be motivated to learn by making their own efforts. Exploratory type teaching learning built around open-ended problem solving activities need to practices.

- **Students Taking Initiative in Learning:** Orientation program at departmental level explaining the structure of the programme and positions of the subject in the whole curriculum has to be explained to the students. The relevance of study of the subjects and their components have to the explained by teacher and by using experts from industry. Visit to application industries be planned as early as possible. Students have to be provided with details of the curriculum and are requirements. The skill set required for gainful employment have to be clearly explained to students preferably by involving experts from industry. Guidance and counseling services to students have to be extended. Teaching -learning should be planned to include class-room interactions, emphasis on

practical work, independent study, group projects, assignment, library study, feedback, etc.

- **Effective Evaluation System:** Student evaluation system must be valid, reliable, and should be objectively designed. Emphasis should be on assessing the higher order cognitive skills like ability to think and apply, ability to analyze and synthesize, and of solving problems. Evaluation of students other personality trials like ability to work in group and contribute, ability to self learning and communicating, etc. need also be taken care of in making assessment of students. Multiple evaluation tools like objective and short-answer type tests, quiz, seminars, group discussion, project report preparation and presentation, etc. may be included in student evaluation. At the university or board of examination level, there is need for developing model question papers, question banks, and table of specifications for setting question papers in various subjects. On the basis of these analytical points, action plan can be prepared for each of the activities at management level, teacher's level and at the level of students. A monitoring mechanism must be included to evaluate progress and providing feedback.
- **Contribution to Multi Lingual and Multi Cultural:** With the diversified background of the students and the region they belong to, there is a need to contribution for multi lingual and multicultural requirements**.**

Conclusion: Quality improvement initiatives are a must in Technical Education system in India to prepare both students and technical teachers not only for local employment but also for employment in the global market. Therefore, the aim must be to achieve international standers in all respect. A holistic approach instead of piecemeal approach is a must for achieving that high level. Application of principles of Total Quality Management in technical education must be made to covert the threat of getting marginalized to an opportunity to achieve excellence.

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