17. NECESSITY OF BRINGING CORPORATE CULTURE IN ENGINEERING EDUCATION

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Abstract

Globalization, Liberalization and Privatization demand paradigm shift in the way we run our higher technical institutes. Signing of GATS by Indian Government means Higher Engineering Educational Institutes will have to face competition from foreign educational institutes. Though cost benefit will help us in the short run, we might loose on Quality aspect in the long run. Survival of the fittest is the only mantra in globalized competition. Many papers are published on bringing TQM concepts, used in Industrial Sector, into educational sector to face such global competition. But TQM will be successful only if we change the present working culture in educational institutes and bring it in par with that of Industry.

Introduction

After Dr. Manmohan Singh as a Finance Minister in 1991, unleashed reforms bringing license/permit raj to end, Indian Industry went through a painful phase of upgrading itself to bring in quality at par with international standard. It not only upgraded quality of its product but changed the process of running the business itself. The family owned businesses also brought in professional CEOs from outside to run their business. All nepotism /favoritism in appointment were brought to end and professional HR managers were hired to recruit the right quality people. Supply Chain Management was brought in to get best quality sub-product/raw material at cheapest price from anywhere in the world and not restricted to India. Manufacturing process was made cellular to cut production time and Quality Inspectors were replaced by making every person in the chain responsible for quality of the work done in a cell. Zero defect raw materials was brought in

workshop by certifying processes of supplier of raw material instead of wasting time and money in checking every item at input level. Process re-engineering was carried out to drastically reduce overall delivery time. Belts were tightened at every stage to reduce cost of the product and performance based variable salary instead of fixed salary, was doled out to employees. Thus the war was fought on all fronts to face global competition. Today, the Indian Industry has not only stood the ground in global competition but has started acquiring foreign companies to become truly global conglomerates.

Indian Higher Engineering Education is currently on similar crossroad that Indian Industry was in 1991.

Current Culture in Academic Institutes

Though many so called private engineering colleges are functioning in many Indian states along with a few old government colleges, the working and organizing culture in these so called

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private colleges is similar to or worse than government colleges. On academic quality rating they are ranked at lowest rung between IIT-NIT-State Govt.-Private College chains. If this is the ranking within India, then less said the better when foreign universities step in India.

Whereas working hours for teachers are 40 Hrs a week most teachers conveniently follow 12/14/16 Hrs working (depending on Prof/AP/ Lecturer) time table schedule and pretend that balance hours are spent in library/research. With no accountability for performance, getting prescribed fixed pay scales and no method to count output, there is less incentive on the part of teaching faculty to perform qualitatively. Matters are made worse by reservation systems followed in recruitment/promotion so that even a performing lecturer may not get promotion as Asst Professor due to lack of open merit post.

Though AICTE prescribes Ph.D as qualification for the post of AP as well as Professor, there is acute shortage of Ph.D degree holders and recognized Ph.D guides. After liberalization, buying of technology by industry from foreign firms have become more difficult since foreign firm themselves would like to setup 100% owned subsidiary in India. Hence there is now strong demand in Indian Industry for Ph.D holders for R&D jobs in India. As a general rule, Industry pays much higher salary compared to Educational Institutes and hence it is difficult to attract talent to educational institutes for teaching.

Higher salary to attract talent is further constrained by fixation of tuition fees by government committees. Lesser fee revenue not only restricts bringing talent but also means restricting expenses on quality laboratory equipments.

The number of student intake and therefore total revenue is also restricted by licensing system.

The quality of student intake (raw material) can not be decided by colleges since government conducts common entrance examination for admission.

To compound the matter, there is Inspector Raj and inspectors from Central Govt. (AICTE), State Govt. (DTE) and University (LIC Committee) regularly visit institutes asking to confirm regulation which at times are repetitive and at worst contrasting.

Thus the education sector is totally shackled by license /permit and inspector raj which existed prior to 1991 for Indian industry.

The organizational structure in educational institute is not accountable since it is headed by trust. Most of the educational trusts are run by politicians who have no regard for quality of either teacher or student, but look at the college as a source of income.

Needles to say lot many things need to be changed if India really wants to compete with foreign educational institutes. At policy level Govt. needs to end license/permit and inspector raj. National Knowledge Commission (NKC) headed by Sam Pitroda has indeed suggested such reforms to Prime Minister recently.

To attract best talent to teaching and to have state of art laboratories, library, workshop educational institutes should have freedom at entry level (starting a college) as well as capacity level (student intake). Further it should be allowed to decide tuition fees. Quality and cost of education will decide who will last in the market. An independant regulatory body (and not a controlling body) similar to TRAI in mobile communication is needed to regulate the higher education sector. NKC has suggested establishing an Independent Regulatory Authority for Higher Education (IRAHE). Further, NKC suggests role of UGC would be redefined to focus on the disbursement of grants to, and maintenance of, public institutions in higher education. The entry regulatory functions of the AICTE, the MCI and the BCI would be performed by the IRAHE, so that their role would be limited

to that of professional associations. IRAHE will also have authority for licensing accreditation agencies. IRAHE would apply exactly same norms to public and private institutions, just as it would apply the same norms to domestic as well as international institutions.

What is Professionalism?

Though engineering college is meant to produce engineering professionals, it is lacking in its own working as well as in student syllabi.

Professionalism means the actions are decided by facts, figures and objective logic and not subjective personal emotions and passions. Organizational development is the sole motto for all actions which are done with complete integrity, commitment and pride in your job.

Just being in a profession does not make one a professional. Though difficult to define, a very general, raw idea of professionalism is a bundle of the following concepts(source:http://www.thehindu.com/thehindu/mp/2003/01/22/stories/2003012200050300.htm):-

A focused approach, pride in what one is doing, confidant, competent, motivation towards a particular goal, accountability, respect for people irrespective of rank, status and gender, responsibility while on path to a particular goal, commitment to word and deed, control of emotions and like. Basically it all boils down to where you leave out emotional upheavals and stay focused on the issue no matter what the issue is or how stressful and trying a situation turns out to be.

There should be role clarity for all employees and working rules should be clearly defined.

There must be employee performance evaluation at the end of academic year and pay rise should be linked to performance. All further promotion and recruitment at AP and Professor level must be by merit and performance as lecturer.

The engineering degree syllabi should include topics from management courses such as human behavior sciences, team building, quality group discussions, presentation and communication skills, negotiation skills etc. Students should have ample choice in deciding engineering subjects of his choice and not forced by basic branch course (Some minimum core subjects in four year course may be made compulsory to decide basic branch). This should essentially enable interdisciplinary studies at postgraduate research level. A grading system (replacing mark system) should be adopted for examination system with due weightage to college class tests/tutorials for continuous evaluation.

Most importantly college Principal should be treated as CEO and held responsible to board of directors appointed by the trust.

Organizational Changes Required:

At present the organizing structure is simple line organization so that all HODs of various disciplines report to Principal. The disciplinewise structure though suitable for teaching respective branch courses is not conducive to inter-disciplinary research and for Institute-Industry Interaction.

Today's research frontiers are interdisciplinary and hence it is proposed that there should be a post of Dean R&D. Similarly most R&D activities should be in collaboration with Industry for which a post of Dean-Industry-Institute-Interaction is proposed. To ensure quality delivery of education it is proposed that there should be a post of Dean-Academics.

Further, it is proposed that all HODs should identify teachers in their department who are suitable for all above said three functions and such identified teachers should be asked to report to respective deans for corresponding activities.(Cross-matrix Organization)

Functions of Deans:

1. Functions of Dean- Academic

- Ensure Quality Education with high percentage of pass-outs with First Class.
- Co-ordination with AICTE, DTE & University
- Accreditation
- Human Resource Development – Staff & Students
- Academic Calendar
- 100% Syllabus Delivery

2. Functions of Dean-R&D

- Establish Research & Development Centre
- Establish First Class Research Facilities
- Generate Research Funding
- Execute Research Projects
- Consultancy
- Patents

3. Functions of Dean-Industry Institute Interaction

- Develop long term relationship with Industry
- Bring industry sponsored projects for research & development/consultancy.
- Generate Industry drafted certificate courses with instructors from industry as well and provide inputs for changes in regular syllabus
- Train staff & students in Industry.
- Student personality development & their placements in industry.

Author has implemented above organizational structure in his college giving good result.

Striving for Excellence

Having basic infrastructure, required teaching and non-teaching staff, well equipped laboratories and proper organization structure will keep the boat moving. However, to bring a sense of direction, CEO with vision is required.

It is absolutely necessary to formulate a vision/mission statement for the institute. However, the vision statement in many education institutes seems to be only for making a decorative frame for visitors to read. Vision without action plan will only remain a dream. Hence vision/mission statement should be backed up by proper strategic-plan, mile-stone definition and detailed time bound action plan. The action plan should have "3-W"s well defined, i.e. What, Who and When.

The vision statement should be arrived at after thorough brain storming including lowest level of employees. At other end, top management must be fully committed to vision.

Vision should be such that it is not easily achievable. But at the same time it should be realistic. For vision realization, it is necessary to bench-mark some real working organizations working in similar field as yours. Visit of employees should be arranged to such benchmarked institutes. It helps in motivating as well as giving a physical shape to your distant vision for easy understanding by the employees.

Within the area of your business, you should also find out what your core competencies are. Based on your core competencies, decide your Centers of Excellence. All resources should be made available for these centers of excellence. Your institute will then get global recognition in niche area you have chosen for centers of excellence.

Continuous Improvement

Having achieved excellence, it is necessary not to allow complacency to set in. For this continuous self evaluation is necessary. A 360 degree feedback needs to be sought from internal as well as external stake holders. Getting feedback is not enough. Action taken on feedback report is important. The circle of feedback-action-feedback-action results in continuous improvement to achieve quality of highest degree. This ensures that your

competitors are always behind you and you are the leader.

Conclusion:

In this era of globalization, liberalization and privatization, quality has become all pervasive phenomena. Survival of the fittest is the only mantra in globalized competition. Indian Higher Engineering Education Sector needs to be unshackled from license/permit and inspector raj. It should be forthwith declared as Service Sector as per GAAT agreement. The Prime Minister, who released the National Knowledge Commission report to the nation on 12th Jan,07 opined that the report has many useful idea that merit serious discussion. One can make out the keenness and sincerity of our P.M. on the issue of freeing higher education from the octopus grip of controls and regulations of government. It is common knowledge that octopus grip of the regulatory bodies has accentuated corruption and red tapism and created artificial scarcity.

Hence the quiet crisis in the field of higher education. The creation of open, transparent and independent regulatory bodies free from direct and indirect controls of government and with a mechanism in place for all clearances under one roof can help attain desired goals in higher education.

At institute level organization structure should encourage inter-disciplinary research and collaboration with industries. Principal should be treated as CEO and held responsible to board of directors appointed by Trust. CEO should have Vision backed up by action plan. Educational institute should strive for excellence in their core competencies. Thus a complete corporate culture should be ushered in engineering educational institutes to enable them to face global challenges. Though educational institutes may not be treated as profit making business, the institute itself needs to be run business like.

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