

Critical Review of Self Financing Engineering Education - Crisis as Opportunity



Management

KEYWORDS : Stock of technical education, critical examination, crisis analysis, reviving self financing technical education

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ABSTRACT

Once a cash cow institutes, self financing technical education colleges have struggled to overcome criticism of their worth. They have become Achilles heel in the public debate about value of technical education. The problem and criticism leveled against technical education are numerous. While taking stock of Technical Education, all eyes are focused on vacant seats. The current situation is outcome of past and the future depends upon present efforts in the circumstances the need is to prepare for challenges or anticipate failures. Of all the educational fields, it is one that has been studied the least. In the eyes of academics and governments, it is of less importance than, say, the school system, teacher training and higher education. As viable technical education programs are critical to prepare well educated and skilled workforce, the present paper critically examines the current crisis and suggest reviving the paralyzed system with a fresh approach.

1.0 Introduction

After the dawn of industrialization, technical education brought a new distinction and condition to the unprivileged class. Simultaneously technical education established the importance of physical work parallel to mental work. Technical education develops the skills so that the realities of life are easily dealt with.^[18]What separates the developed from the developing is the level of technology that is used directly or indirectly in the everyday life of our people. Our colleges are a human resource base for translating research into action.^[20] The promotion of technical education in the country was and is of paramount importance. There prevails a general consensus about the following need of any college.^[3]

- High level learning for all students.
- A safe, attractive, and positive environment.
- A student culture of hard work and opportunity.
- A community of learning for the faculty and the larger environment.

Once a cash cow institutes, self financing technical education colleges have struggled to overcome criticism of the quality of its education and the costs. They're the sore spot in the national debate about value of technical education. While taking stock of Technical Education, all eyes are focused on vacant seats. The current situation is outcome of past and the future depends upon present efforts in the circumstances the need is to prepare for challenges or anticipate failures. Today, people can find much deficiency and defects the technical education system in Gujarat. Of all the educational fields, this is one that has been studied the least. In the eyes of academics and governments, it is of less importance than, say, the school system, teacher training and higher education. Perhaps, the biggest problem and the root of the problem is that it does not deal with the world as it is today and that warrants substantial revision in governance and policies. The average vacancy in engineering colleges across all the State at national level was about 28 % in 2013-14 but for the Gujarat it was 17.12 % .The demographic data shows that the population in the age group of 18 to 23 is growing. Hence, aspirations challenges have to be met with where 93 % of technical education in the private sector.^[12]

The federal Government has initiated to draft the new education policy. The general expectation is that the proposed education policy should preserve, nurture and foster excellence.

2.0 Objectives

The debate will continue on whether Engineering education in Gujarat is facing problem of plenty or plenty of problems? While students' interest can't be compromised, there is a need to think of the entrepreneurs who have opened the institutions".^[22] The

prime objective of this investigation is to study the national pattern of seats remaining vacant in technical education sector and States' resemblance to it and what other States are doing to correct the problem. The specific objectives of present research are to

- ☞ Study the approach adopted by other State in similar situation.
- ☞ Summarize the lessons learnt by different groups of self financing technical institutes.
- ☞ Put forward the fresh ways to rise above the current crisis.

3.0 research background

The information collection and presentation made here is based on continuous study of relevant research publication in print as well as online, consideration and deliberations at various Government and non-government platforms, interviews with the policy makers, parents and management representatives of private colleges. The offhand surveys and interaction with students who are interested, studying and passed out from technical colleges have major contribution for the development of insight. A comprehensive review of literature in this vast field is difficult to achieve. Each year at the end of the engineering admission process the number of colleges failing to reach the double digits in student intake is raising serious doubts about their future.^[22] Though engineering seats lying vacant is a national phenomenon, a comprehensive review in terms of techniques of approach adopted state wise becomes quite arduous.

4.0 case study

The first Self financing technical institute became operative in 1994-95, after that the establishment of self financing institution in the Gujarat state was steady. The grand success of first Vibrant Gujarat Global Investors summit in 2003 converted the zest for private technical institutions in euphoria. Simultaneously increase in number of pass outs from the school and their aspiration for technical education resulted in arbitrary establishment of new private technical colleges. The growth in total number of pass outs from school in the State of Gujarat is summarized in table 1.

Table:1 No of Pass outs from School

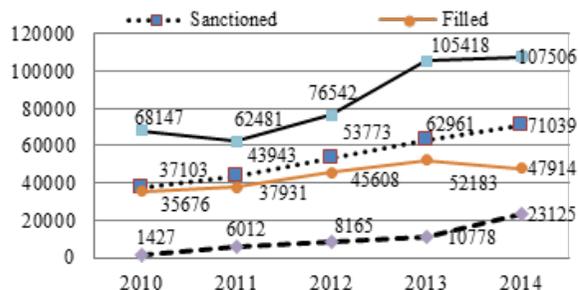
Sr	Year	Total Pass Out in Standard 10	Total Pass Out in Standard 12 (Science Stream)
1	2010	526309	68147
2	2011	665492	62481
3	2012	629083	76542
4	2013	629140	105418
5	2014	618066	107506

Source: Gujarat Secondary and Higher Secondary Education

Board's compilation of result

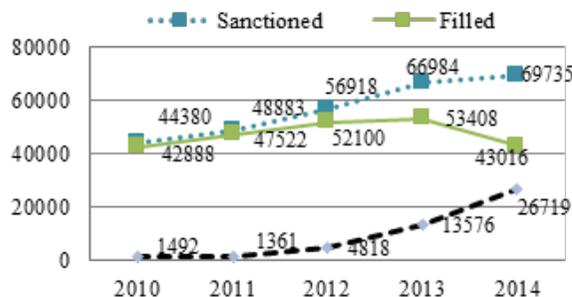
Though the student number was increased notably, the consequent imbalance of demand supply for technical education facilities is exasperating. The quantitative expansion during this period is now in dangerous zone, which is evident from following four graphs showing the details of sanctioned, filled and vacant seats per course for the period during 2010 to 2014 on yearly basis.

Graph 1 Seats Utilization Trend of Degree Engineering



Source: GS&HSE Board and Admission Committee for Professional Courses (Technical), Ahmedabad

Graph 2 Seats Utilization Trend of Diploma Engineering



Source: Admission Committee for Professional Diploma Courses, Ahmedabad

The above graphs are self explanatory in terms of percentage rise of vacant seats in different technical course. Even the trends of vacant seats were alarming in year 2010, the investor continued to ignore it to the extent that 47 and 64 new private colleges were established for Degree and Diploma Engineering respectively during year 2010 to 2014. Though the number of school standard 10 and 12 pass outs increased in the last five year, the various strategies to win the confidence of the parents and eventually of students for study in professional stream could not bear expected fruit. Within one decade it is now the rush for closure of institutions. The MBA and MCA course have lost relevance in such a manner that only 40 % and 11% of the admission were confirmed respectively for the academic year 2014-15 whereas for Degree and Diploma engineering courses the occupancy was 68 % and 62 % respectively. The continued trend of increase in number of vacant seats when discussed with the investment and opportunity cost justifies the rush for closure of the institute at first instance. The table 2.0 shows the total number of institutes for separate level of course and the estimated total outlay in terms of fixed investment or capital cost on the basis of RUSA estimates^[11].

Table: 2 List of Total Institutes, 2015-16

Sr	Institute	Total SFI	Min outlay Rs. Cr / each SFI	Estimated Investment Total Rs.Cr
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1	Degree Engg.	114	26.00	2964.00
2	Diploma Engg.	93	14.00	1302.00
3	M.B.A.	100	1.50	150.00
4	M.C.A.	73	3.00	219.00
5	Total	380	-	4635.00

*Source: Office of the Commissioner, Technical Education, Gujarat State

The above theoretical calculations estimates Rs.4650 Crore fixed investment at minimum investment in private sector. Apart from capital investment and their running cost at about 20 % per year the private partners have contributed sizable investment in the technical education sector. In the light of trends of vacant seats the major question arises is which decision is prudent the earlier one (to establish) or the latest one (to shut down) of SFI? Though there are many convincing reasons for either side, the major crisis points are discussed here.

Immediate profits and long-term disaster

- Both the Yashpal Committee and the Knowledge Commission have recommended that we should expand our higher education and double the enrolment from the present 9-10 per cent to 20 per cent of the cohort.^[5]
- That recommendation has been warmly endorsed by the politicians, by the bureaucracy, by speculators and presumably by parents of aspiring children.
- Quantitative expansion is publicly popular but functionally disastrous.

Orientation

- Most of the engineering colleges are teaching oriented and have very little research.^[9]
- At the same time Industries in India, (SMEs) do not do research. They mostly make profit by improving marketing and management and saving taxes and importing technology. Innovation in technology by and large is not seen as means of necessary profit.^[9]

Anarchy in rise

- Motivation for growth, for development is attributed to materialism and /or consumerism.
- The basis for materialism in engineering colleges is that many families see in it prospects of a safe career. They are willing to invest lakhs of rupees in such an education.

Faculty

- Edward Crowe has summarized in his research that teaching quality is a key influence on student learning.^[11]
- Faculties are the largest item in college budgets as the teaching workforce is large and their compensation is about 60% of recurring spending.^[4]
- Roles and responsibilities of faculties are changing and any efforts to improve colleges will fail if there are serious short-falls in faculty supply and quality.^[7]

Quality

- The government has schemes of accreditation for all colleges.
- In engineering alone, there are colleges with around 10 departments each. Even if they are assessed once in five years, system does not have that many reputed persons to do so.^[5]

Employability

- The lack of employable engineering graduates points to the crisis in technical education.^[13]
- More students are graduating than needed by the industry.
- Less than one out of four engineering graduates is employable, a survey has found. The third edition of the National Employability Report, Engineering Graduates - 2014, re-

leased by a private employability solutions company, revealed that though 18.33% of the engineers are employable, 18.09% actually get a job.^[21]

Strategy Adopted by Leading State

It is always advantageous to learn from others without agreeing with them in total. Such learning makes people capable to make wise decision and enrich their experiences. The following is the glimpses of diverse attempts made by leading States with respect to vacant seats.

Rajasthan^[17] 2009

Carried out comparative Study on effectiveness of type of institutes and detailed survey on criteria for admission with the help of NITTTR, Chandigarh.

Karnataka^[2] 2011

Placements are made student-centric instead of college-centric through Common Placement at single place arranged through association of colleges.

Maharashtra^[8] 2012

State had analyzed the pattern of vacancies based on region, course, and type of institute and submitted report to AICTE.

Association of MBA Colleges^[15] 2014

Introspection done and findings are

-  Rush to launch new course
-  MBA in... Everything
-  Greed to Increase the Seats
-  Lack of commitment by Admission team
-  Blurred Fee refund policy
-  Life beyond IIMs and Top 30

Sales Management Perspective

Some see the empty seats as an example of a market correction—and economic reality. Popular branches will get filled up even in bad colleges, whereas it is often difficult to fill up less popular branches even in good colleges, this is reflective of the mass psyche of the middle class.^[24] If you are not taking care of your customer, your competitor will, is the driving force for sales management.^[6]

Despite many sales people's attempts to reach the pinnacle of the sales mountain, no one has come closer to truly understanding the psychology of selling described by Zig Ziglar. In a blog *How To Overcome 5 Basic Sales Obstacles* that first appeared on January 17, 2014 by Susan Payton , focused on "Every sale has five basic obstacles: no need, no money, no hurry, no desire, no trust." This can be altered with reference to vacant seats in college as commodity.^{[10][19]}

5.0 Opportunity for stimulating the technical education in self financing institutes

Every educational system like any other system needs regular upkeep, maintenance, up-gradation and improvements. No system can be same forever. It has to adjust with times, with development, with new discoveries in technologies. What we need is an Indian approach to Indian problems. The philosopher and educational reformer John Dewey argued in 1933 that "failure is not mere failure. It is instructive."^[16] Education ultimately is the development of the human being and that cannot be restricted only to the classroom. It is much wider term. The subsequent points are suggested to bring back the students to the technical institutes.

Quality Assessment by an Industry

Corporations have a role beyond just providing money. Late Dr. Indiresen, Former Director IIT, Madras in 2009 concluded that quality is hard to enforce, as the accreditation system is open to

manipulation. Industry must show the way in assessing institutions by departing from the present approach of NBA /NAAC. He suggested that to begin with, industry may confine itself to the colleges which want campus recruitment. An analysis, confined to a select few of faculty and students in the middle of the group, is likely to provide a better picture of the education institution than a typically exhaustive government survey. It would cost less in money and in time. In addition, it may not need great talent to make the assessment. Assessment will induce the colleges to improve their functioning on the whole.^[5]

Administrative Mechanism

Sincere effort should be made to remove bureaucratic delay and tolerance of irrelevance and mediocrity from the college management. A new work-ethic, a new work-culture must be evolved to make management result bound and not procedure-bound so in the long run the administrative system become goal-oriented.^[20] Reward and punishment must be related to performance. A strong concern for efficiency must be reflected across the institute.

Soft Opportunity

Effective exploitation of on line instructions will change the nature of teaching on campus, making it more engaging and efficient. Students will listen to lectures and review other explanatory material alone on their computers, and then they'll gather in classrooms to explore the subject matter more deeply—through discussions with professors, say, or through lab exercises. These will enrich the experience of both professor and student.

Training

Training and learning go on throughout life. It is only those who learn from experience; learn from the mistakes of other; learn from the work of others who are able to progress and go ahead. Merely promoting a faculty to a higher position does not automatically upgrade his skill. A large number of people are promoted but nothing is done to train for their callings. People occupying positions far above their competence level are creating numerous problems of performance. Training is essential; skill is essential.^[20] Training for skill up gradation is of the greatest importance. Adequate resource provision must be made to cater the need for skill enhancement and capacity building across the institute.

Innovation

Innovation is a driver of growth and well-being. To reap the gains of innovation, policy makers need to understand how the way we innovate is changing and what this implies for education and training policies. Innovation is critical to the continuous improvement of education and the delivery of increased learning outcomes, equity, and cost-efficiency and student satisfaction.

Co-operate, Complement rather Compete

All colleges whether large or small, have the same basic challenges when it comes to hiring, retaining and developing the talents that will help their institution succeed. Every college wants to find the best people. Further the perceived faculty turnover in the self financing technical institutes in Gujarat is experiencing a Revolving Door mechanism. The recruitment process not only affects the financial cost but also adversely affects the study.^[1] Faculty retention and recruitment pattern in a particular college per year suggest that only 45 % is steady while leaving faculty 35 % against 20% incoming faculty.

A networking of SFIs should be encouraged even for resource sharing too. They can create a pool of faculty that can be employed on demand. The mechanism should be emerged which can transfer the faculty / staff with mutual consent and within the knowledge of University. These will ease the repetitive re-

cruitment saving the cost and time in the best academic interest of students. The sub group of SFIs in local vicinity can complement few students to another so that at least one college is operational with full capacity. In rotational pattern they can decide zero admission policy for particular branch in admission process.

Each group can concentrate on developing one of its institutes to competitive standards as thought by the West Bengal that allowing one group to open only one institute would help in standardization.^[23]

6.0 Conclusion

Education systems need to do a much better job in providing more equitable educational opportunities.^[14] The efforts must lead to increase efficiency, reduce cost and improve quality. Actions will be needed on several fronts. Attempt should be initiated to reduce unnecessary and multiple levels in decision making and provide greater flexibility and scope for initiatives to private players including teaching fraternity. A managerial solution would not do. What is needed is a systematic solution. Joint efforts by Government Departments, Statutory bodies along with NGO / Entrepreneur is the need of the day to once again popularize the technical education, bring its alignment with industries and society. Such common minimum program is on track. The concentrated effort in frontier areas of science and technology will put us abreast of advanced nations.

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