B.E. TO M.B.A. : BRIDGING THE GAP SAFELY

* Dr. S.V. Narayanan ** Mr. S. SAHA

Abstract

In view of the large number of Engineers opting for MBA courses, this paper has attempted to reduce the incompatibility in their expectations and their performances.)

The number of degree holders in Engineering entering Master of Business Administration (MBA) progams has increased tremendously. About 1/4 to 1/3 of the students of an MBA program are likely to be such engineers. As the number of 2-year full time postgraduate Management programmes conducted in India is in excess of 95, with intakes ranging between 15 and 120 students per batch in each institute of higher learning , one could safely presume that about 1500-odd such engineering students are pursuing their MBA program after their Bacheler's degree in Engineering.

When engineering by itself is an high- attraction professional course, why does the engineer, who has already spent 4 years at it, study for a further period of 2 years to get another professional degree? How comfortable is he with the MBA programe that has a large Social Sciences orientation? Where does he fumbel? Does his engineering background give him an edge? What suggestions can be offered for such engineering studnets wanting to pursue these management programs?

This paper has attempted to answer these and related questions on the basis of the responses received to a questionnaire filled by engineering degree holders in management programs. Subseqent sections comprise responses, comments , suggestions.

1. EXPECTATIONS FROM MBA

Before joining : As a coruse :- Decision-making techniqus; Management Science; Interaction with industries, and industrialists; Career and Personality development, Makes one scientific rather than "trial and error" experts; Builds experience for later ventures; Challenging stimulating, and educative; Distinct value addition ; Develops intergrative view; would be easy afer 4 years of engineering; High and therefore wary expectations.

As a degree:- Good pay soon after completion; Job that uses talents better; supeior social standing; enables one to be on the move; shown the path to the top and the ways to reach there; very high.

The expectations, thus, is of a strenuous coruse that would enables the student to get a good job, good salary, and good social status.

After joining : As a course :- Mangement Science downplayed (being a mere

* Prof., ** Lecturer, School of Mngt. Pandicherry University - 695 014, India.

fraction of the program); gemeral/imprecise discussions; credit for clever rather than correct talk on issues; few field visits, if at all; negoitating skills not developed; General Knowledge (not even Managment-specific is appreciated; to work as groups not followed up (group assignments continue to be done by individuals); inflexible array of courses; rigid examination system that does not indicate managerial competances; unrealistic ethical assumptions in discussions, overdose of academisation ("Why not 2 kinds of MBA: one for practitioners and another for researchers"?); case method is vague because personal factors and assumptions considered give too many alternative solutions; students are expected to violate Moral Science tenets of humility and simplicity.

As a degree:- Perhaps MBA is unnecessary for several jobs like Systems, Production etc (as they are covered in engineering) coordination with industries to some extent at least; some acquaintance with managers; some job (hopefully not clearical); job with or without matching of talent or capability; not expecting much.

At the end of the first year, expections take a nose dive. The program is seen as one full of theory and wordiness, and one in which only General Knowledge knowing studnets could score well. But this view is held by engineering studnets studying engineering too. Nevertheless, the benefits expected from the course also perceptually whittle.

2. PROBLEMS FACED

Admission-related: None; in fact, an edge over nonengineers of the mathematics paper in entrance examinations; too many engineers

Papers-related: Not quantitive enough; all theory; bookish; thinking-type (as agaisnt formula-searching types of engineering); Accountancy hurts.

Evaluation -related: Too many marks with the class techers; objective-type required; Long and descriptive answere are difficult; embllishments seem to be rated high ; final examinations deemphasised; problems of continuous evaluation system; academic knowledge, not managerial potential/ talent are evaluated.

The engineering student has no problem at the admissionstage; the highcomponent of quantitative questions take craze of the possible limitations of the oral in the selection process. Major problems are in the descriptive and thebookishpapers. Yet on cross checking against their performance it was found that they score poorly in quantitative papers like Accounting too, and do poorly wherever reflective answere are called for (the latter problem being to all students). Perhaps they do not have the reassurance of formulae to apply automatically; Their orientation towards unitary and short answere rebels, they say . This , too, is incorrect as management students are expected to write short terse, precise answere; do executives have the time to read tonnes? However; as many of the management -teachers do not have a management degree and focus too much on the academic side of education, this problem exists for all students including non-engineering ones. Further, real life cannot assume so many variables to be treated as constants for convenient solutions; on the contray, the number and the variety of the solutions would depend on the number of iterative assumptions taken. MBA students should rea;ise that there is such a thing as, "on the other hand".

3. PAPERS THAT SUIT ENGINEERS

Finance and portfolio management ; Marketing management; Indusrtial marketing ;Systems and reelated papers; Opera-

tions management ;Computer-related papers;New Product development;project management, R & D management; Export-related papers; Logistions; Production management and related areas.

But could not the careers be pursued for some of these with their basic engineering degree itself? Yes, but the respondents were listing the papers that they consider most suitable, which means ;relatively easy to pass, and not necessarily those to be pursued as careers. (It is common to most students that they choose a few electives careerwise and the rest on the basic of teacher, burden, companions etc). It was generally conceded that engineering student has studied some management - related courses earlier- unlike the pure Arts or Science students.

4. HOW THE PROGRAM HAS HELPED

Attitude Change: More positive ; confidence; humen aspects of management reunderstood;Not warrented; none; perhaps; numbeer to logical (?) perception

Approacvh to issues: Wider; more realistic; practical; logical; systematic; objective; cases and visits reorient from maxima to real; issues are faced in parts with coonfidence and best solution under the circumstances obtained.

Most respondents agreed that the program build in them a more positive attitude that reinforces the importance of the behavioural aspects of mangagement . Realistic and systematic view of issues were seen and confidence to table them got built in .To a large extent this is also due to the personalised attention that is possible on account of the small class-size. On the other hand , the degenration of MBA into a glorified Masters in Commerce (M.COM.) and without field interaction etc- the resulting proliferation of MBA programs --have led to cynical attitudes to develop too.

5. HOW ENGINEERING DEGREE HELPS IN MBA

None , as engineering is different from management can score in quantitative paper easier (and so more time to study other papers); degree in engineering does not make one an engineer; basic degree does not matter in one's career but for the intitial thrust perhaps; sequential, structured thinking; specific as against vague, broad thinking;prior exposure to management at the under graduate level of engineering education; familiarity with mathematics helps to derive, apply, modify formulae; exposure to project work ealier; presentations also done earlier; more complete knowledge (".. unlike Arts where a set of guess-questions can lead to a cremmed degree")

It is true that there would be at least one paper that an MBA student would have stuided earlier; Commerce students many of the papewrs; Engineers quatitative ones (like Science students) and management (basic and some special areas like Production, System etc); Economists Economics, Indian Economy and Finance; Psychologists, Sociologists and Polittical Scientists, and Lawyers, too, have a paper or more that have been studied by them earlier. However the engineer's preference for quatitives is an anticlimax; they do quite badly compared with the others. Why does the hare lose to the tortoise again and again?

6. HOW THE ENGINEERIG BACKGROUND BURDENS

High expectations of parents; contempt of MBA teachers that engineers are not so great after all; lack of nonquantitative orientation; failings against Commerce graduate in Accountancy (and Law); personal ability

and not basic degree that counts;lost their "artistic, creative" view in the enineering progams; only intital drawback to Commerce students; loss of one more year to reach the same place; engineers are second to none.

At the point of entry, the Comm,erce would have had a greater exposure to business courses. Fortunately, the engineers do not let them affect them, It is true that expectations from engineers being high, they are hard-pressed to live up to the excpectations It is also unfortunate their somewhat egotistical view of themseleves makes them complacent and loses them their possible ranks. And the fact that they have studied an extra year (as against the3 of other students at the point of entry) but are unable to get better jobs is as a consequence a wound that they have brought on themselves.

7. HAS NONENGINEERING BACKGROUND HELPED

Perhaps in the area of Finance; No, it is the personal qualitties of the individuals; Commerce background gives an edge and an impetus; more time to study and prepare (While engineering students have had to study harder to get their engineering degrees); descriptive views of things (engineers having to "unlearn" their efforts to quantify); engineers are second to none.

The respondents had been asked to recall the names of a few successful non engineering MBAs and to see whether their nonengineering backgrounds had helped. The responese was that Commerce students had an advantage, that other degree courses gave the students more time and leisure to become more knowledgeable and be able to think beyond stereotypes and convenient equations.But answere like 'they are second to none' are more defiant than courageous or correct.

8. HAS THE ENGINEERING BACKGROUND HELPED

Unfortunately engineering MBAs have often taken up jobs in areas unrelated to engineering; engineers are doing MBA to escape engineering, Mechanical/Industrial/computer engineers in some papers;logical, analytical ability grow faster in office,especially in smaller unita;no help at all; personal qualities alone helped.

The answere show that few engineering students opt for engineering related areas after their MBA, that benefit accrues in few papers, that their known MBAs have made it good offers positive views.Perhaps the fact they could get into engineering courses by itself impresses small units that cannot afford many engineers.

9. WHY THEY DO NOT OPT FOR ENGINEERING -RELATED JOBS

Would not have stuided MBA then, limited glamour or status in such jobs(!)Would be equated with a simple engineering graduate and the aditional degree of MBA would not give any advantage;did not want to study engineering either.

Most of them are not interested in Production,Operations, etc but are keen on Marketing, Finance, Advertising, and the like.Systems seems to be the only one left of their ngineering background that has not lost its prestige. The question given to extract their motivation brings out the suspected fact that not many doing their engineering have an aptitude for it,and that the argument that it builds an analytical ability (a fact not borne by their performance) is but their rationalisation.

The experience and the perceptions of the Engineer-MBAs enumerated and evaluated in the earlier section have several pointers to offer. The more important of these are listed here.

- Every engineering degreeholder is not an engineer, as their preliminary aptitude is not evaluated while admitting them to engineering programs. Does this help explain why they aviod engineering jobs?
- That logical and analytical thinking is developed in engineering is a myth,as such students have not done very well in papers that call for such skills.Teachers of engineering should probe why these students do not score so well in reflective questions, cases, or even in calculational papers like Accounting or Operations Research.
- Equations and formula have become crutches instead of advantages. Students need to be told that the formulae, in fact, are convenient simplifications of reality and that therefore,they need to be modified situationally (and even discarded at times).
- Their 4 years of engineering should not become an occupational brain drain, but should enable them to do their jobs better.
- Which employer would be pleased to know that the potential employee was so seeped in studies that he is thoroughly ignorant of General knowledge, Communication skills, and the like? Engineering cources should take note of this .
- As many engineers are opting for MBA courses, engineering institutions must consider these inssues:

– whether they should also introduce MBA (or related) streams with their attendent ills. Witness, for instance,the Managemnt programs run by I.I.T.s where social science/huamnities/engineering degreeholding teachers run a potpourrie of papers and where an MBA degreeholder cannot become Faculty as there is no deopartment for him;

– Whether they should provide superior grounding in core managment subjects as part of engineering

– Wether they could create an encouraging atmosphere to enable students to take up jobs instead of flocking to MBA programs

– Wether they should strengthen the students's General knowlege and selectional skills like group Discussion etc, as they are useful for jobs too

– Wether nonquantifiables should be noted whenever calculations are made

– Wether their placement and career counselling should give a student a fair idea of what MBA is, what it involves, and what it is not.

- The engineering studnet pursuing MBA should remember these:

– He should not become complacent and lose his rank even in quantitative papers

– He should resist the temptation to smirk at nonquantitative papers

– He should neither be arrogant on account of his engineering degree, nor be an insult to the degree

– He should use his claimed analytical thinking to identify the qualties that a good manager is expected to possess, attributes that a job-recruiter looks for scoring factors in the examination system,etc, match these with his own,and try to fill the gaps.

- There are lessons in this for the MBA program too:

- That there is a great chasm between the halo of MBA and reality.Where would it be when the bubble bursts?

- That many teachers of MBA programs are unable to transcend the orientation of their traditional degrees. MBA calls for systematic, intergrative and comperehensive solutions and views, not subject-specific compartmentalised essays.

- That constant interaction with industry must be sustained and not merely be routine items in attractive prospectuses.

- That the evaluation process must balance the academic and the practical, a need felt by all professional courses : How to overcome the paradox of a student who fails in particular papers despite his excellent managerial talents as against the dullard who gets his degree because of his examination orientation?

Our study, based as it is on the responses of engineering degreeholders pursuing their MBA programs, offers useful suggestions for the students as well as the teachers of both Engineering and Management programs. As the number of students moving to management is high, the sooneer the suggestions are considered sariously for possible implmentation, the better it is likely to be.

* * *