# MARKETING OF INDIAN TECHNOCRATS IN THE GLOBALISED ECONOMY

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## 1. IMPACT OF GLOBALISATION ON INDIAN ECONOMY :

The impact of changes on the Indian industry is not only because of the new Industrial Policy, but also because of the associated economic and trade policies aimed at globalisation of Indian Economy. Indian industry as a whole was made totally uncompetitive even within the country, let alone internationally.

## 2. PRESENT STATUS OF TECHNOCRATS :

Success in today's international climate - a far cry from only a decade ago - demands highly specialised yet closely linked groups of global business managers, country or regional managers and worldwide functional managers. The greatest constraint in creating such transational organisation is a severe shortage of technocrat executives with the skills, knowledge and sophistication to operate in a more tightly linked and less classically hierarchical network.

There is a mismatch between the skills needed by industry and skills supplied by colleges. What is wanted in industry is not taught and all that is taught is not worked. So also what is needed is not researched and what is researched remains unused. As a result, while on one hand many engineers are unemployed, on the other hand engineers of required quality and competancy are not available. Because of extremely high rate of immigration among Indian technocrats, the US investment produces an augmented supply of high-tech engineers and technocrats for the US itself and enables its scientific and technological leadership to be maintained. Thus, US has become a nation of immigrants where aliens feel more at home than elsewhere.

## 3. IMMEDIATE TASKS AHEAD DUE TO PROGRESS OF TECHNOLOGY :

Global competition can be met only with a depth of specialised knowledge and skills in a specific industry. The technocrat has to know the consumer, the market, the competiters, the products, the science and technology involved, the suppliers, the distribution system, the terms and conditions of trade, the financial need and so on which will not be possible if interests of the firms are spread in different

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areas. Thus, the Indian engineers have to take cognizance of the full impact of New Industrial Policy, the economic liberalisation, the impact of GATT Agreement and the consequent rapid progress. This stimulating the Indian Engineer to meet the challenges squarely and emerge as a leader. What is important to recognise is that 'knowledge' is the key to success in this game - but knowledge not only in terms of technology, but also in terms of management, marketing, finance and just about anything which really matters in business and industry globally. This knowledge is rapidly advancing and changing and therefore, there is a need to be continuously updated.

### CHARACTERISTICS THAT PREVENT TECHNOCRATS FROM BEING EFFECTIVE :

- lack of tact and poor interpersonal relations,
- poor communication skills,
- introverted,
- lack of modern technical knowledge and specialisation,
- not fully adoptable,
- emotional - short termpered,
- low drive - not assertive or aggressive,
- lack of tenacity,
- unorganised - not methodical,
- please - all behaviour,
- brutally frank and straightforward,
- autocratic attitude,
- procrastination,
- avoidance of challenges.

## 4. QUALITY TARGETS :

The main complaint of the industries is that the training and education is not keeping pace with the technological advancements in the related fields. At present our technical education system faces two major challenges :

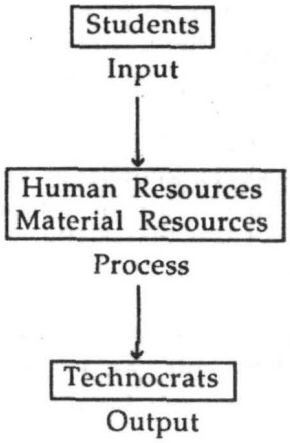
(i) Quality assurance,
(ii) Pacing with the advancements.

For developing any strategies for quality assurance, the targets can be used as standards of measuring the performance of the institutions for achieving excellence. The targets can be expressed as :

(a) Analytical ability,
(b) Professional skills,
(c) Innovativeness,
(d) Leadership,
(e) Coordination skills,
(f) Time management.

Thus, the quality of product of an industry depends upon the quality of raw material, machinery and manpower. Similarly, the quality of technocrats coming out of the institutions depends upon :

- Entering behaviour of the student,
- Human resources of the institution,
- Material resources of the institution.



## COMPARISON OF HRM PRACTICES :

HRM usually practised in different countries is compared in a cross-cultural analysis.

| | Criteria | Japan | USA | India |
|---|---|---|---|---|
| 1 | Employment | Lifetime | Shorttime | Longtime |
| 2 | Evaluation | Slow | Rapid | Moderate |
| 3 | Career-path | Non-specified | Specified | Specified |
| 4 | Responsibility | Collective | Individual | Individual |
| 5 | Control Mechanisms | Implicit | Explicit | Explicit |
| 6 | Employee Concern | Holistic | Segmented | Segmented |
| 7 | Decision making | Concensus | Individual | Individual |

## APPLYING TAGUCHI'S QUALITY ENGINEERING TO TECHNOLOGY DEVELOPMENT :

For the last few decades, Japanese quality master Genichi Taguchi has championed the concept of 'robust' engg. design as the pathway to world class quality products. In this process, engineers would more fully investigate the key quality-related aspects of a nascent technology just out of the laboratory research stage and prior to its application to a product. The result, is higher-quality products delivered faster, with truly robust technology sufficiently 'flexible' to help avoid the need for repeated development efforts each time product planners envision a new or modified application of the technology. About half of the engineers practicing in Japan are 'competent' in Taguchi methods and 5 to 10% of the Japanese technical personnel possess 'deep expertise.' Fig 4.1

## 5. DESIRED QUALITIES OF TECHNOCRATS :

The Secretary's Commission on Achieving Necessary Skills (SCANS) of the US was asked to advise the level of skills required to enter employment, to examine the demands of the workplace and whether young people are capable of meeting those demands. This report identifies five competancies and a three part foundation of skills and personal qualities that lie at the heart of job-performance.

### 5.1 FIVE COMPETENCIES :

1. Resources : Identifies, organises, plans and allocates resources.

(a) Time : Selects goal-relevent activities, ranks them, allocates time and follows schedules.

(b) Money : Uses or prepares budgets, makes forecasts, keeps records and makes adjustments to meet objectives.

(c) Material and Facilities : Acquires, stores, allocates and uses materials or space efficiently.

(d) Human Resources : Assesses skills and distributes work accordingly, evaluates performance and provides

feedback.

2. Interpersonal : works with others.

(a) Participates as member of a team : contributes to group efforts.

(b) Teaches others new skills.

(c) Serves clients/customers : works to satisfy customers' expectations.

(d) Exercises leadership : communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies.

(e) Negotiates : works towards agreements involving exchange of resources, resolves divergent interests.

(f) Works with diversity : works will with men and women from diverse backgrounds.

(3) Information : Acquires and uses informations.

(a) Acquires and evaluates information.

(b) Organises and maintains information.

(c) Interprets and communicates information.

(d) Uses computers to process information.

(4) Systems : Understands complex inter-relationships.

(a) Understands systems : Knows how social, organisational and technological systems work and operates efficiently with them.

(b) Monotors and corrects performance : distinguishes trends, predicts impacts on system operations, diagnosis deviations in systems performance and corrects malfunctions.

(c) Improves or designs systems - suggests modifications to existing systems and develops new or alternative systems to improve performance.

(5) Technology : Works with a variety of technologies.

(a) Selects technology - choses procedures, tools or equipments including computers and related technologies.

(b) Applies technology to task : understands overall intent and proper procedures for setup and operation of equipment.

(c) Maintains and troubleshoots equipments : prevents, identifies or solves problems with equipment including computers and other technologies.

### 5.2 THREE-PART FOUNDATION :

(1) Basic Skills : Reads, writes, performs arithmatic and mathematical operations, listens and speaks.

(a) Reading : locates, understand and interprets written information in prose and in decuments such as manuals, graphs and schedules.

(b) Writing : Communicates thoughts, ideas, information and messages in writing and creates documents such as letter, directions, manuals, reports, graphs and flow charts.

(c) Arithmatic/Mathematics : performs basic computations and approaches practical problems by chosing appropriately from a variety of mathematical techniques.

(d) Listening : receives, attends to, interprets and responds to verbal

messages and other cues.

(e) Speaking : organises ideas and communicates orally.

(2) Thinking Skill : Thinks creatively, makes decision, solves problems, visualises, knows how to learn and reason.

(a) Creative thinking : generates new ideas.

(b) Decision making : specifies goals and constraints, generates alternatives, considers risks and evaluates and chooses best alternative.

(c) Problem solving : recognises problems and devises and implements plan of action.

(d) Seeing things in the mind'S eye : organises and processes symbols, pictures, graphs, objects and other information.

(e) Knowing how to learn : uses efficient learning techniques to acquire and apply new knowledge and skills.

(f) Reasoning : discovers the rule or principle underlying the relationship between two or more objects and applies it when solving a problem.

(3) Personal Qualities : Displays responsibility, self-esteem, sociability, self-management and integrity and honesty.

(a) Responsibility : exerts a high level of efforts and perserveres towards goal attainment.

(b) Self-esteem : believes in own self-worth and maintains a positive view of self.

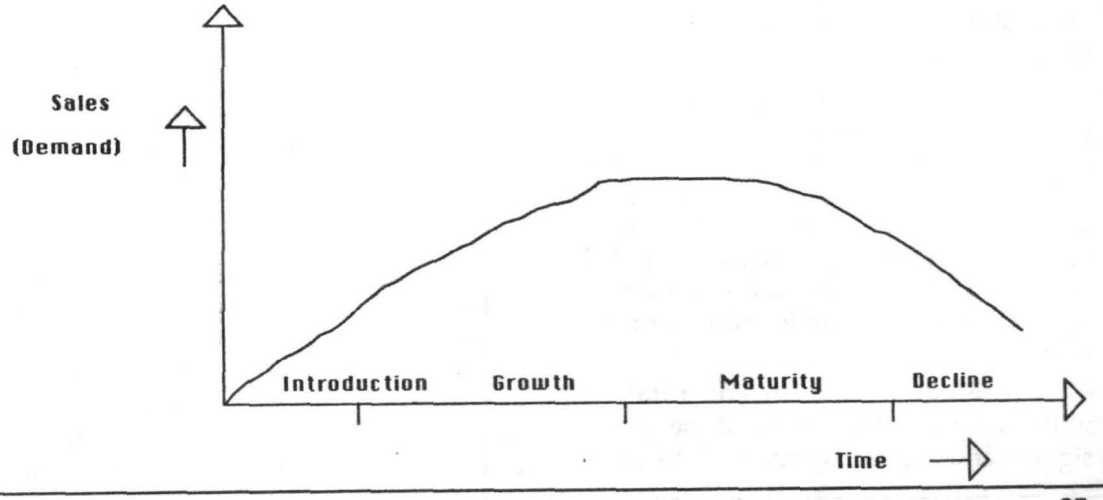
(c) Sociability : demonstrates, understanding friendlyness, adaptability, empathy and pliteness in group settings.

(d) Self-management : assesses self accurately, sets personal goals, monitors progress and exibits self controls.

(e) Integrity/Honesty - chooses ethical courses of action.

## 6. PRODUCT LIFE CYCLE (OF TECHNOCRATS) :

The critique of the product life cycle concept of a technocrat is shown in the table-1.



Characteristics :

| | | | | |
|---|---|---|---|---|
| Sales (Demand) | Low | Rapidly rising | Peak | Declining |
| Costs (Expenditure) | Low | Average | High | High |
| Profits (Contribution) | Negative | Rising | High | Declining |
| Customers (Service) | Innovators | Early Adopters | Middle Majority | Laggards |
| Competitors (Suppliers) | More | Growing No | Stable No. Beginning to Decline | Declining Nos. |

## 7. STRATEGIES TO IMPROVE THE BRAND IMAGE OF TECHNOCRATS :

1. Meaningful projects should form the culmination of an engineering education program. In foreign technical institutes, these are called as 'capstone' projects without which the engineering programs are not complete.

2. 'Case-studies' to be included in the engineering curriculum. These problems should be realistic and should have relevance.

3. Manufacturing engineering has become highly sophisticated and exposure to this subject has become absolutely essential. In today's context, design materials and manufacturing have become closely integrated and a mastery of this can make our engineering industries internationally competitive.

4. The curriculum in consultation with the industries should be redesigned and regularly updated to cater to the needs of industry.

5. The Industry -Institute-Interaction activities must be undertaken exclusively with market orientation, i.e. to satisfy the needs of the customers, (the industries in this case). Technical education must be viewed as a customer-satisfying process and not a goods producing process. The technical education should adopt a policy "Do whatever industries demands and wants you to deliver."

6. Co-operative programs can be operated with cooperation of industries and the students academic terms at institutes are integrated with work terms at industry. The work terms in industry are so structured that the students gets chance to practice, whatever is learnt during academic terms. Since the industry is a place where scientific principles invented by scientists, developed into useful usage by technologiests and are practiced by technocrats, the in-process technocrats learn all the tricks of trade during the course of study and

thus develop certain behavioural traits needed to be a successful technocrat.

7. In-plant/Apprenticeship training should be made mandatory before awarding the final certificate. Just as a medico undergoes internship in a teaching hospital before graduation. Similarly the practice-school system of education requires student of engineering courses to practice their respective profession during education years. In concrete terms, the practice school establishes Practice School Stations - analogues to university classroom-cum laboratories in the professional worlds.

## 8. CONCLUSIONS :

India has a fantastic future, if only the potential of the low-cost high skilled manpower is harnessed with a focus on skill-based and knowledge based high-tech industries. The 'key worker' program, quality circles, suggestion schemes, multi skilling, proactive approach, mastering change, developing a global vision to fight global competition, becoming tomorrow's manager today, winning strageties, the complete manager, developing a global mind set, managing complexity, MBO, flex-time, 'technically the best and commercially the least' approach are some of the techniques to be adopted to improve the technocrats participation towards plant excellence. For this, we have to develop skills like the 'know-how and know-why' concept, ability to take 'helicopter-view', predicting future trends in technology and in new products and bring them into being, effective interface both within function/deptt. as well as with other deptts. into the technocrats.

Recognising that quality service to customers can best be provided through quality work force, the technical education system should imbibe the feeling in the hearts of technocrats to :

Maximise your Performance !

Improve Team Productivity !!

Increase Corporate Profits !!!

## 9. ACKNOWLEDGEMENTS :

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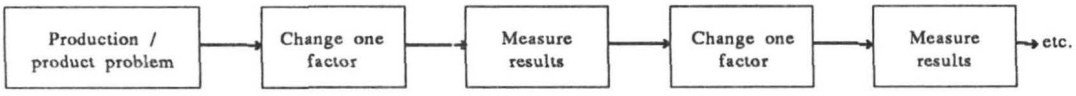


Traditional engineering problem-solving method

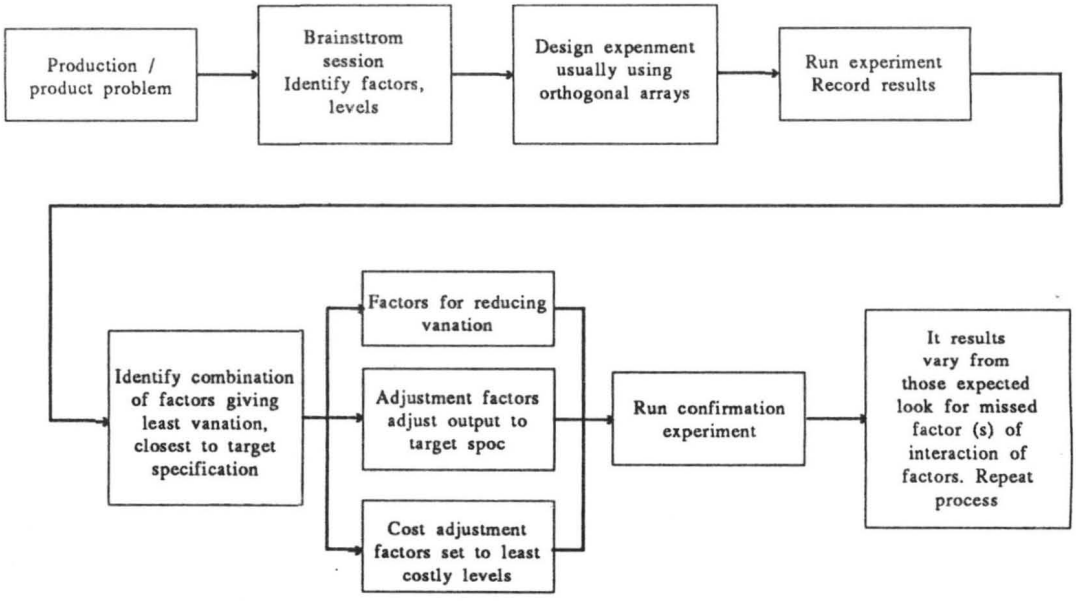


**Fig 4.1 Problem solving using Taguchl's method**