

ACADEMIC & INDUSTRY PERSPECTIVES IN MANAGEMENT EDUCATION IN TECHNICAL INSTITUTE IN THE ERA OF PARADIGM SHIFT

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Abstract:

Introduction

Today, when the world is experiencing tremendous technological changes, it is imperative to discuss what our managers should be taught to handle the upcoming challenges. The constant factor is that the technology will keep on changing but not the people who work with the technology, so it becomes the responsibility of our technical institutions to produce people with strong technical knowhow at the graduate level and commendable managerial skills at the post graduate level. (When we talk about technology, we talk about knowledge and when we talk about management we talk about skills). Our close observation at the technical and management course curriculum suggests that technology is all about knowledge and expertise whereas management is all about skills and attitude. For example, a technical graduate is always taught how to operate a machine, but he is not taught how to operate if the machine fails. For later, he has to exercise his managerial skills and aptitude. Management Education is designed for developing the people with out of the box thinking to run and manage the organisations. The objective of the paper is to identify new knowledge streams/disciplines likely to emerge in the evolving technology and suggesting specialized courses to help meet manpower requirements of the industry as well as to create a network of technical Institutions for sharing of common knowledge.

Purpose The paper describes the changing paradigm in management education and discusses the present and future needs of industry and students to analyse the content items to be taught to the management students. The focus of the study remains on the curriculum of the management education in technical institutes.

Methodology Exploratory research methods have been adopted to study the changes required to be included in the future curriculum of management education in technical institutions. Primary data has been collected through qualitative research tool. Review of literature serves as the secondary data source to study the current scenario and future industry requirements.

Findings The paper provides an analysis of the needs as well as expectations of business world and students to arise in future and recommendations for the substantial changes required to be made in the management education curriculum in technical institutes.

Keywords: Management Education, Technical Institute, Industry needs

1. Introduction

Indian society is going through the age of transition and so is the Management Education. No education is void of its social context and therefore, Management Education is liable to be designed in view of changing needs of our society. The social transition and development have led to the change in the business practices. Today, the big business houses and service sectors are evolving new ways to not only develop rather exist in the market place. The survival of the business houses mostly lies in the hands of the management people which are expected to be equipped and empowered with the best of knowledge, intelligence and ethical values to exhibit professionalism and stand apart from the rest. Not only this, another factor is the revolution caused by the Information and Communication Technology which has brought major change in today's business practices. The future age will, certainly, be marked by the new fields of study and its interdisciplinary functions. Technology will not stand apart rather it will be integrated with the management. Therefore, it becomes compulsory to view the management education in technical institutes from various perspectives in the light of the changes taking place. Technical or engineering graduates, not only in private sector but in government sector as well, are in managerial positions to handle various tasks which require skills those are generally discussed in relation to a management graduate.

Today, when the world is experiencing tremendous technological changes, it is imperative to discuss what our managers should be taught to handle the upcoming challenges. The constant factor is that the technology will keep on changing but not the people who work with the technology, so it becomes the responsibility of our technical institutions to produce people with strong technical knowhow at the graduate level and commendable managerial skills at the post graduate level. When we talk about technology, we talk about knowledge and when we talk about management we talk about skills. A close observation at the technical and management course curriculum suggests that technology is all about knowledge and expertise whereas management is all about skills and attitude. For example, a technical graduate is always taught how to operate a machine, but he is not taught how to operate if the machine fails. For later, he has to exercise his managerial skills and aptitude. Management Education is designed for developing the people with out of the box thinking to run and manage the organisations. The examples from the business world reveal that people with out of the box thinking have brought revolutionary changes in the organisational practices and work culture resulting in great success in terms of productivity and profitability. These managers are not the ordinary people who work for an organisation, rather they are the extraordinary people who are instrumental in bringing change. Presently, the society is experiencing broad paradigm shift which tells us that soon the institutions have to revive their course curriculum if they aim at imparting education for the common good of the society. If the institutions fail to design new curriculum according to the needs of the business world and its major stakeholders they will be doomed to their downfall.

1.1 PurposeThe purpose of this study is to observe and analyse the present scenario of management education in technical institutes and changes to be

incorporated in their prescribed curriculum keeping in view the future technological changes, industry needs and managers' skill-sets required.

1.2 Scope The present study focusses on the management education and its curriculum being taught in technical institutions, especially IITs, IIITs and NITs where the focus remains prominently on the technical courses.

1.3 Research Methodology Exploratory research method has been adopted to study the changes required to be included in the future curriculum of management education in technical institutions. Qualitative data collected through interviews and brainstorming sessions with academicians, government and corporate personnel formulates the basis of the results. Secondary data has been reviewed through the available literature. The process has helped to gain insights through the industry-academia interaction to analyse, design and develop an updated curriculum for the management courses in technical institutes.

2. Literature Review

21st century has seen drastic changes in the business environment as this is the period which has experienced massive technological changes in almost all the fields. This has led almost every organisation to make infrastructural changes in their set up and train or recruit work force with updated knowledge and skill set. In terms of execution and implementation also organisations have to see a breakthrough. The century has seen major transition from the age of production-oriented set up to quality control, of sales and marketing to customer centred view, of organisational benefits to employee safety and happiness. Now the organisations are not only concerned with employee engagement for running their business but they are also concerned with the well-being of their employees. The future of all organisations will depend upon the approach of its leaders to foresee the future needs not only of their organisation but of their employees too. Not only the future, but the present time also gives an edge over others to the personnel who have hands on knowledge of managerial skills as well as technical skills.

Sinha and Kumar (2012) mentioned variety, flexibility and customisation as the key words for future. He says that a new techno-economic rationale is emerging fast. He has viewed 21st century the era of unprecedented wave of change. Turner and Keegan (1999) and Burnes (2000) describe Organizations as highly formalised, differentiated and efficient structures with specific rational goals.

Over the period of time, many researchers have studied various aspects and dimensions of management education. As the business practices and demands are continuously changing, so is the management education. Prof. Rahul Mishra (2018) in an article stated that the future of Management Education is going to be shaped by technology. He counts technologies like Artificial Intelligence, Machine learning, Augmented Reality, Virtual Reality, faster broadband, mobile internet and Mobile Apps to change the future of management education. The future of management education will depend on the emergence of technologies of Industry 4.0 which

essentially will redefine the management as it is practiced and also the education which helps train managers and leaders.

According to M. Party (2008) Management education is in the state of transition. Now it is being driven by globalization, technology demographics and pressing social imperatives. As stated by Kozminski (2010), in early 20th century when Management Education was in its initial phase, there were ample opportunities for education, training and further research. During this period, Management Education was considered to be the kind of elite education specialised only for business and big corporates. But soon it was observed as a kind of education that promises better future, hence, it became the most sought after course by the aspiring students who looked their future in entrepreneurship and management by evolution of the markets.

Already a number of world class B-schools such as Harvard Business School, INSEAD, Yale School of Management, Indian Institute of Management (IIMs) and many other initiated required changes in the MBA program to make it more flexible to meet the emerging realities of business and society. Most of the Business schools have taken the emerging needs into consideration else they would have lost students (Rao & Raju, 2015). The recent mushrooming B-Schools have been viewed seriously in terms of quality education and their commitments to the society. Now because it is the time of liberalization, privatization and globalization in India, the demand of Management Education has risen. In the light of WTO agreement, India is becoming a technology driven society with global linkage. Today, India is producing nearly one lac management graduates every year which is supposed to be a major contribution to the knowledge world... The objective of Management Education should not be restricted to impart only technical skills and expertise to students, but also to develop right attitude in them (Sanisetty Sai Teja, et.al).

In an article entitled, ‘Three Pillars of Quality Management Education in India in the 21st Century’, Vigna Oza and SwatyParab (2012) said that management education and its quality depends basically on three pillar – i) the educational system as a whole, ii) the educational institutions and iii) the faculties. The upgradation of management education is only possible when all these three pillars remain equally strong. Cyrus Guzdev, CEO, Airflight Express in his article ‘The state of management education in India’ has highlighted the widening gap between the B-Schools and the real world. He says that the pace of change and development in the business world is much faster in comparison to the B-Schools. This factor in itself is threatening the credibility of the management institutions.

As observed by the Working Group on Management Education of National Knowledge Commission (2006-07) – no attempts have been made to reformulate the management practice teachings adopted from western countries to suit to the Indian business traditions based on Indian sociology and history. The committee opined that the Indian management paradigms need to be developed and taught in management classrooms with an interface of management theories with contextual Indian business scenario. The committee also discussed that the study materials being used used in Indian management classrooms was not relevant to the student background or their

real-life experiences in the Indian society. During their course of study, students are taught to focus on their job and career. They prepare for campus interviews rather than understanding either specializations or society where they would be needed to innovate to be influential leaders. The Working Group Report has also discussed that need for change in curriculum, pedagogy and innovation is hardly debated for improvement. It also said that institutions lack vision and mission to address the evolving needs of their prominent stakeholders by revising and upgrading their course curriculum as per the need which keep on changing with the time (N.S. Shetty).

Rao and Raju (2015), in their article entitled, 'Management Education : A Historical Perspective' published in the International Journal of academic research has observed that Management Education in India is still facing various challenges, such as –

- A large number of management graduates are produced in India, perhaps next to US but it lacks scholarly debate on curriculum pedagogy and innovation.
- Most of management institutes in India still depend on the study material developed by world class institutes but does pay attention to develop curricula to address the changing needs of its own industry.

Ramachandani, while suggesting measures for improvement, said that formulation of realistic curriculum is the need of management education in India. Our institutes must keep abreast with the changing needs of industry and develop a realistic industry driven curriculum. A time to time review of the curriculum in light of the fast-changing requirements of the industry and modifying it to make it industry-ready must be ensured. A B-school must have a strong interface with industry and must ensure that its students get real life industry exposure and understand practical aspects of management practices. He condemns bookish theoretical knowledge.

Friga (et.al, 2013) opined that a shift from traditional method of imparting education in a management institute has taken place and now it is evolving as more student centred. According to Kumar and Dash (2011) said that student centred management education will result in positive changes in the pedagogy and content. It will become more industry focussed. The demand of management education is increasing continuously and it will emerge as one of the main streams of higher learning. It is also evident that the survival of management institutes will depend on its focus on research to solve business problems and prepare its students to be leaders to provide business solutions.

According to Mintzberg (1990) a manager must possess following skills -

- peer relationship building skills
- negotiations skills
- motivational skills
- conflicts resolving skills
- networking skills

He said that little attention has been given to the development of these skill among management graduates.

Porter and McKibbin (1998) opined that current management education is churning out experts with “lopsided brains, icy hearts and shrunken souls”.Mintzberg and Gosling (2002) mentioned that 80% of management courses aim at the ‘how’ factor rather than to focus on ‘why and for whom’ aspect of education which will make it more practical. Tranfield and Starkey (1998) said that the current management curriculum failed to develop wisdom, leadership skills and interpersonal skills as it is more focussed on analytics. Podolny (2007) expressed that during past thirty years management education has hardly changed whereas management profession has changed drastically.

Livingstone (1971) discussed the management and its multiple perspectives and said that management education must be redesigned with its focus on communication, teambuilding and interpersonal relationship development. Puneet Bindish and Neera Jain in their conference paper on the Vedic Ways of have suggested to adopt the vedic ways of learning and imparting education in society. They said that the challenges of global management education can only be addressed if vedic principles are applied with integrative use of modern technology. Kumar and Dash (2011) has elaborated that a management curriculum needs to aim at the requirements of the industry and expectations of students. It must be integrated and targeted as per the stakeholders’ requirements. It must be designed so as to remove the gap between industry requirement and institute practices in the process of developing and training managers.

Gautam G.Saha (2012) discussed we are living in the age of major transition in management education. This is the age of globalisation, cross cultural communication, strategic collaborations and mergers. K. Sridhare emphasised that an MBA degree aspirant must possess at least three years work experience in any managerial/supervisory position. Candidates with managerial experience would better understand their aim and objective of pursuing the course and would relate its concepts to the real-life business scenario. Most of the foreign management institutions follow this practice of admitting candidates with work experience. He insisted that industry-academia interface is must to develop a programme which would prepare candidates for the future industry needs. It would be beneficial not only for the candidate but for the organisations as well.

In a report by the Associated Chamber of Commerce and Industry of India, it is stated in spite of the fact that the demand for MBA is growing, 90% graduates are unemployable. Graduates from IIMs are in better position in terms of placements but graduates from other institutions have seen decline in placements upto 40% during 2009-2012. It also states that many management institutes have shut down due to reasons listed below.

- poor student intake
- poor quality infrastructure
- lack of Management training

The 2016 National Education Policy, which has been formulated nearly after three decades since the last education policy was designed, clearly mentions that education is a tool for transforming social, political and economic scenario of any country. It also describes the role of education to develop value system, skill and competency development of people who in turn contribute to the nation's development. Education strengthens democracy and empowers citizens. Education also functions as a force to integrate society by nurturing social unity and national individuality. Education serves as an important component for enhancing socio-economic flexibility in promoting an unbiased and impartial society. It, further, emphasises that education which is designed with the concept of equality and quality is capable of promoting success in the emerging knowledge economy. Any knowledge society and its citizens rely on their country's education system. Education creates balance between globalization and localization, and thus, enables our children and youth to become world citizens. This is the process which prepares our students for a global society while their roots are bound to their own culture and traditions.

The management education is an important aspect of today's business world which is changing fast. The advent of globalisation and technology has created high norms of competition and survival, therefore, the importance of the management education has increased abundantly.

National policy for education (NPE, 2016) mentions that our earlier education policy, though strong in conception and orientation, has failed to deliver the desired outcome. It has not been able to meet the aims and objectives of education. Earlier education policies have

Ritika et al (2016) mention following challenges in present day management education -

- ineffective regulatory bodies
- poor accreditation system
- ineffective leaders
- mushrooming of institutes
- poor curriculum
- lack of industry academia interface.

Further, she considers lack of infrastructure, financial resources, research culture and shortage of faculty as the major drawbacks of Indian management education. According to her, certain more factors must be considered while discussing reforms in the present-day management education. These are –

- Reinventing modern day teaching pedagogy
- Placements policy of the institute
- Career clarity among students

3. Observations and Recommendations



Interviews with the experts from academia, corporate and government officials conducted to gain inputs on the new technological developments and needs analysis have largely helped for framing the guidelines to revise the curriculum in management education. Interviews have been conducted face to face and telephonically. Senior academicians shared their experiences from the past to the present day. Their inputs have been very useful as they are stalwarts involved not only in active teaching but in industry training too till date. Their awareness and vision have been widespread. Industry and corporate people discussed mostly about the future industry changes and challenges. Government officers mostly discussed about that the future will be of those who are technologically sound with knowledge of managerial principles. 35 experts have been interviewed who shared their vision of management education thoroughly.

3.1 Experts' insights

The insights, gained from the interviews with academicians, government officials and corporate people are summed up as follows -

For Institutions

- The global business environment is changing fast. Hence, the utmost need of the hour is the concern for quality in business education.
- No institution or organisation can deny the social welfare factor. Hence, the curriculum and the business practices must cater to the social welfare needs.
- More hours to be given to Industry-academia interface.
- Participatory learning programs must be encouraged.

For upcoming technocrats-cum-managers

- A management graduate with technical skills must be put to real life projects to gain hands on experience.
- *Learn first earn later* should be the motto of all new professionals. Students, during their course of study, must learn practicing good habits and develop positive attitude while they gain knowledge and skills.
- An attitude for innovation and creativity is a must.
- Look around yourself to make the common life comfortable, you will find ideas for innovation in technology as well as in management.
- Devise technology and skills which can reduce the stress and complexity of village life and help village occupation to grow and earn profits.

For business organisations

- Organisations must collaborate with the institutions to intimate them with the future technology changes and their needs.
- Organisations must, on a regular basis, share with the academic institutions various cases which can become the study material for students.

For government agencies

- A more reliable accreditation system be developed.



- Technical institutions must be so fostered to develop them as BRAND in imparting management education.

3.2 Outcome of the Brainstorming session

While exploring the various dimensions of the current management education in technical institutions, the outcome of the brainstorming session can be summed up as follows.

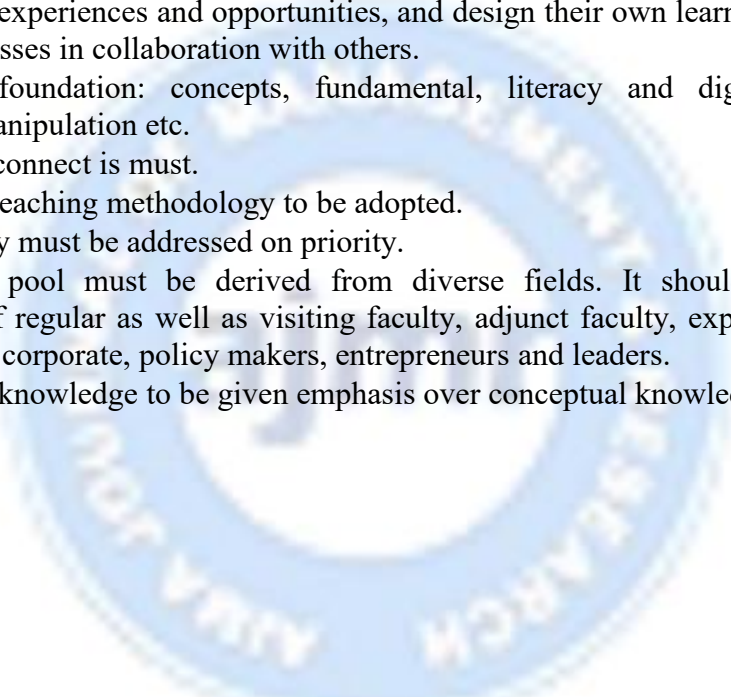
- While persons from academics deliberated on the selection process and curriculum needs of students, industry people have given an insight on the expectations of the industry from the institutes and MBA graduates. Emphasis has been given to reduce the academic-institute gap. It was proposed that the course curriculum must be designed to enhance academic and industry interaction.
- On the basis of the World Economic Forum **Growing Skill sets** for future have been identified as follows.
 - Critical and Analytical thinking,
 - Problem solving
 - Active and Strategic learning
 - Ideation and innovation
 - Creativity, originality and initiative
 - Technology design and programming
 - Leadership and interpersonal skills
- Big data analysis, robotics, artificial intelligence are certain areas entering the arena of management education, so must be taken into consideration while upgrading the curriculum.
- Another aspect which is very specific for Professional Education is the **branding** of management education under technical education.
- to enrich management education and its curriculum, the department must look forward to –
 - the world class accreditation/ranking of institution
 - collaboration with industry
 - faculty with industry experience
 - internship opportunities
 - students' engagement in enhancing the required skills sets
- Practical orientation is to be enhanced alongwith theoretical knowledge. **Pedagogical changes** are must. Therefore, classroom teaching must be shifted to case studies, training and internships.
- Empower the Director/Head of the department to act like CEO
- Collaboration among all technical institutions and their management department is must.



- Attention must be given to capacity building of trainee-managers to face economic crisis and look beyond that to foresee the business scenario for sustainability.
- To augment India's dream as aspiring nation for high economic growth.
- Vision for DoMs should take a new urgency i.e. to create the types of business leaders with a broad vision who understand the intricacies of inter-connectedness of the world forums.
- Challenges faced by the Technical Institutes offering Management Education must be addressed without fail, such as -
 - Placements
 - Research and Publications
 - Gap between Industry requirements and
 - Students' skills sets
 - Subject curriculum not being updated periodically.
- MBA students' training must include subjects which include–
 - Advance finance - financial modelling on investment instruments. Monetary policy, global capital markets including currency management. Derivatives, financial engineering, distress asset investing and liquidation, asset and wealth management.
 - Management science - business analytics, supply chain in e-economy, product prototyping, micro market operations (India is large), pricing strategies and models in new business. Error free product and service, Design thinking (AI trainer mis-match design think), Research models (a big gap), Customer pattern insights and analytics, domain specialization.
 - Soft skills - Decision making, problem solving, conflict management, career management, purpose alignment, Interpersonal skills, empathy, compassion, teaming and cultural sensitivity.

4. Recommendations

- Equip learners with a sense of purpose, the competencies they need, to shape their own lives and contribute to the lives of others.
- It must create personalized learning environment that supports and motivates each student to nurture his or her passions, make connections between different learning experiences and opportunities, and design their own learning projects and processes in collaboration with others.
- build a strong foundation: concepts, fundamental, literacy and digital numeracy, data manipulation etc.
- industry-institute connect is must.
- Student-centered teaching methodology to be adopted.
- Shortage of faculty must be addressed on priority.
- Faculty resource pool must be derived from diverse fields. It should a conglomeration of regular as well as visiting faculty, adjunct faculty, experts from industry and corporate, policy makers, entrepreneurs and leaders.
- Practical oriented knowledge to be given emphasis over conceptual knowledge.



- Real-life case studies to be included in the curriculum.
- A technical institute is bound to offer MBA curriculum which is different from the curriculum offered by a B-school. B-schools deal with the core concepts of management. While a technical institute has an edge over that due to its large resources of technical and engineering department where students get exposed to variety of set ups.
- The large resource pool of a technical institute must be utilized for specialised training of students. This will assist these institutes develop their brand value.
- Branding of technical institutes for management education is to be given importance so as to create awareness in society. It can be done by offering variety of courses, which demand technical expertise of the future industry.
- Management Departments of technical institutes need to spell out their vision and mission apart from the vision and mission of their parent institute which has been prepared with a broad perspective.
- Management Departments of technical institutes function just like other department of any institute whereas these must work as the center of excellence where students from engineering and other background join to develop their knowledge, attitude, skills and habits.

5. Conclusion

The current research helped the researcher to study, observe, enquire and find out the need of the hour to design the new curriculum for the management courses being taught in the technical institutes. The emerging market and businesses demand new set of skills to be obtained by the upcoming managers. The results of this paper will surely help institutions and academicians to design a need-based curriculum in technical institutions which would be an edge over the current programme of study being followed there. Institutions need to prepare managers with an individual vision and capability to accept challenges not just the people who learn to follow orders to meet the targets. Managers with technical skills and qualification must be able to foresee the upcoming technology and its impact on business and society and they must be equipped to devise techniques to bring revolutionary changes in their respective fields. Their approach need not to be of an agent to earn profit for their organisation but to create further jobs. Sustainability is the key aspect of any business organisation. A candidate with technical as well as management **knowledge, attitude, skill and habits (KASH)** can win over the challenges and threats in his business and would be able to help his organisation not only to reap profits but to expand the business, not only to earn his salary but to develop professionally, not only to lead his employees but to provide them reason to dedicate themselves for the organisation, not only to gain standing in his society but to make society a better place to live. Growth is an unbound parameter and it cannot always be measured in terms of monetary benefits. It can only be done by imparting values with the content. A manager who can look beyond today will not only survive but grow only if he/she knows how to put the good habits to work.



6. Future Scope of the study This study is further focussed on factors and content items to be incorporated in the MBA curriculum in technical institutes on the basis of the KASH Model as an integrative approach for curriculum development.

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