

Design Thinking for Management Education

K V Sandhyavi, N Lalitha



Abstract: *The changing environment of management education and the skill needs of the industry have been compelling management pedagogy to go through rapid changes. Even after a paradigm shift in the approach to imparting management education in view of its professional nature, it has been observed that the huge competition in this field has been leading to disruptions demanding innovative approaches by institutions to ensure sustenance. The need for innovations is felt as it is observed in various teaching pedagogical strategies. Institutions are banking upon creative and unique approaches to both developing the content or curriculum as well as the methods of teaching. This article tries to highlight the design thinking approach for management education in India to enable parity with international standards. The divergent and the convergent techniques adopted in the changed management education system have brought in innovations with the use of technology. The primary objective of this article is to study and understand the concept of design thinking approach as well as to verify the application of design thinking to management education in India. The contexts and constraints of the disruptive design thinking approach are also discussed in the article. The scope of the paper extends from discussing the evolution of management education, the disruptions and the need to search for a solution for the disruptions – applying design thinking approach by focussing on innovations in courses, curricula, pedagogy and the orientation of management education as a whole due to these changes. A small study was taken up trying to understand the perception of students and faculty on the scope of design thinking in different categories of business education institutions.*

Key Words: *Challenges, Design thinking, Innovations, Management education*

I. INTRODUCTION

Economic innovations of 1990s, have brought in a sea change in the nature of businesses as well as evolution of new business sectors. Management education sector is one such sector. To meet the demands of the growing businesses, a huge opportunity for management education business was seen and due to mushrooming of these institutions, there was great competition amongst them. Sustenance in the management business education sector is the primary objective of most of these organisations. Unfortunately, their commercial approach led to compromising with the quality of education delivered. And the needs of the business organisations are not met due to low standards of students.

A managerial skill mismatch is distinctly seen as the new graduates lacked the knowledge, skill and attitude to take up challenges of the business organisations. The gap is increasing year on year and it is leading to a crisis which needs to be addressed. The premium management education institutions have been evolving with new dimensions in terms of designing the curricula, introducing innovative pedagogical tools, creating an industry interface and developing academic research models. But due to work culture system differences the western business education models which were yielding positive results there, did not work out in India.

II. EVOLUTION OF MANAGEMENT EDUCATION IN INDIA

Education is considered as an investment on developing human capital by equipping the individual with right knowledge, skill, and attitude which would pay him the returns on the capital invested. Hence, it is considered as one of the most critical factors of economic development. (Schultz, T.W. 1963). MBA degree is considered as a permit to managerial jobs. Management education in India can be traced back to the 19th century, when the focus of business schools was to cater to the needs of the British government. The milestones in the evolution of management education in India are:

Year	Event
1886	First Indian B-School – Commercial School of Pachappa Charties in Chennai with focus on commercial activities of business
1903	Introduction of commerce at secondary level of education by the British government- Presidency College in Calcutta with a focus on developing skills like business communication, short hand, typewriting, secretarial practice etc.
1913	First college level business school- Sydenham college in Mumbai
1948	India's first management programme- Indian Institute of Social Sciences introduced the programme with an objective of meeting the manpower and skill requirements of Industries in India.
1949	Xavier Labour Relations Institute (XLRI) set up at Jamshedpur
1953	Indian Institute of Social Welfare & Business Management (IISWBM) at Calcutta steered the business education into a focussed management education stream.

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- 1961 First Indian Institute of Management (IIM) – Professionalization of Indian management education by launching IIM at Calcutta with grants from Ford Foundation.
- 1962 Second Indian Institute of Management launched at Ahmadabad.

The entry of large number of MNCs into India during 1990s created a competitive environment for the existing domestic companies. A huge skill gap in the commerce stream graduates was found and the demands of executive positions in corporations were not being met by these graduates. Except for in accounting area, skill gaps were identified in marketing, behavioural, finance and operations. Critical thinking and critical reading skills were missing in them. On identifying the demand from the industrial enterprises, universities started management education as an academic discipline or department and began offering MBA programs.

III. STRUCTURE OF INDIAN MANAGEMENT EDUCATION

Management education institutes in India, can be categorised as:

- (i) Premium Institutes at national level – Indian Institute of Management (IIMs)
- (ii) Autonomous Institutes not affiliated to Universities – Symbiosis, MICA etc
- (iii) Departments at Universities – State universities, Deemed to be universities and open universities
- (iv) University affiliated colleges / institutions
- (v) Private and government Colleges approved by ACITE
- (vi) B-schools in collaboration with foreign universities

The different structures have variations in dimensions like the prominence of the institutes, objectives of the institutes, fees structures, admission process, faculty quality, pedagogical tools, research contribution, infrastructural facilities and the quality of outcome. Though the national level institutes set a benchmark for the other institutes in the country, many of the second and third level institutes are taking up the challenge of reaching this benchmark by trying to adopt these practices to a feasible extent. But the challenges due to structural variations are a hurdle for reaching the benchmark. At the same time, the premium institutes also are facing a crisis and are strategising to go global due to the dynamic environment.

A look at the changing scenario of business education sector speaks all about the diminishing quality of the sector. As per Meri Trac employability study (2011-12) and ASSOCHAM report (2015-2016), the number of MBA seats have increased to 3,52,571 from 94,704 in 2006-2007. The number has increased to 5,20,000 in the year 2015-2016. But unfortunately, a down trend in the employability ratio was also reported. While the employability ratio fell to 21 percent in 2011-2012 from 25 percent in 2006-2007, the

ratio came down to a meagre 7 percent in the year 2015-2016. A number of other reports are also pointing declining employability skills in MBA graduates. Though opportunities for management graduates were increasing, due to the proliferation of institutes and the decreasing quality of education employability ratios were falling.

IV. DISRUPTION IN THE MANAGEMENT EDUCATION SECTOR IN INDIA: THE CHALLENGES

Growing business activities and changing economies have spread an evergreen platform for the business education sector. Globalisation and the competitive environment for business have created a never ending demand for professionalism in managing businesses the world over. Opportunities are wide for this sector of education wherein India's policies towards developing entrepreneurship and start-ups are bright and encouraging. But, unfortunately, the large number of B-schools pumping management graduates into the market, without skills to meet the industry requirement, shortage of expert and experienced faculty, poor regulatory mechanism and governance and accountability are all the issues facing the management education in India. The drawbacks of the business education sector which need immediate attention as they are causing disruption in the sector are:

- (i) Due to proliferation, the objectives of most of the management institutes have not been the same as in the beginning and have deviated to commercial purposes. Hence, though the need for management graduates is ever increasing due to growing economic and industrial activities, the industry needs are still unmet. The gaps in the skill sets for business entities are not addressed.
- (ii) The fast changing business environment, competition in the market for innovation, the focus of Indian government on entrepreneurship are all demanding for business leaders and not just management graduates that are produced today by most of the management education institutes.
- (iii) As compared to the speed of business dynamics the management education sector is not flexible and fast enough to catch up to the needs of the industry. The time lapse in understanding the changes in the industry and designing curriculum to meet their demands is in fact adding to the gap. Proactive behaviour in predicting industry requirements and redesigning the curricula on a continuous basis is the need of the hour.
- (iv) The regular teaching-learning-evaluation system of higher education does not fit into the structure of management education for fulfilling the objectives of creating business leaders today. The quality of managers which the industry is looking forward for is not being produced by the management education sector.
- (v) Huge gap in the quality of teachers imparting management education is a critical challenge. While there is a need for the faculty to understand the business environment and impart knowledge and develop the required skills in the students, most of them are not trained for the job of building leaders. Required attitude for this task is missing.

The faculty teaching management subjects need to have an orientation towards organisations and their behaviour. Management subjects need to be taught in an integrated fashion not just as independent subject. Application of concepts in changing business environment is very essential.

V. INNOVATIVE PEDAGOGY

There are instances of institutes which focus on the pedagogical tools with different teaching-learning-evaluation patterns and are different from the traditional education system. Take the example of the premium business schools in India which are residential institutions and the entire system is student centric and definitely different from the regular management education institutes. The difference comes right from the admission process. The very studious students only have the entry there. The student understands his purpose of being there and is much focussed. So is the teaching fraternity who adopt different teaching tools to impart the skills needed by the industry. Emphasis on self learning tools ensures he is in the desired direction. There are a couple of business schools down south in India, where they have the case study methods again focussing on the managerial skill development with customised teaching- learning -evaluation pattern. Again the process of admission is all India entrance exam basis and the best of the students are there with a focus on why they are there. The Integrated learning system adopted by Symbiosis is another method where the management subjects are taught as an integrated system and not as separate silos of subjects. Lot of student based activities are designed to ensure they are groomed as future business leaders. The teaching tools are again unique and important inputs here. Business simulation based learning is another method some institutes adopt where technology is very important. There are a few institutes which set up entrepreneurial cells and encourage innovation and start-ups. Unfortunately, it is observed that most of the institutes are running the management education programs without any differentiation from the other non-professional courses. The admission process is very simple and focuses on filling seats. The teaching methodology is the regular class room teaching with rigid curriculum. The management attitude towards the course is nothing different from the other programs. The extracurricular activities are to develop their skills in general and not specific to the industry requirement. Lack of professionalism is clearly visible in the quality of students as well as the teachers. Most of them are faculty centric. What the faculty can deliver is their syllabus. How they can teach is the methodology that is adopted. There is no „need“ felt to understand the purpose of these courses and the industry needs. They are just like any other educational institute producing graduates. On analysing the business education sector we understand there are gaps in various pockets of the system. Starting from the attitude of management towards business education, the process of admissions which decides the quality of student intake, the recruitment process and selection criteria for faculty, the development of curriculum, the methodology adopted to deliver the curriculum, evaluating the student performance are all areas where we find are problems to be addressed.

VI. DESIGN THINKING APPROACH

The design thinking approach is all about innovative way of solving problems. Business competitiveness is critical about designing products and services. A review of literature in this area provides evidences of several authors drawing parallels between the domain of design and management (Dunne & Martin, 2013; Nussbarum, 2005b; Boland & Collopy, 2004; Simon,1996). They have been trying to address managerial problems through the process of design thinking where a problem is identified and empathised to understand what actually is desired by the end user. The problem has to be defined and redefined to generate as many solutions as possible with the data available. We need to go beyond the rational way of generating ideas and think laterally and search for a broader solution. The idea generated should be converted into a prototype which should be tested before applying to the problem. This is the process of design thinking. This is how business challenges are met using design thinking. Design thinking approach creates new solutions to meet the ever changing needs of the business. In an interview on the subject of “design thinking” Roger Martin, the dean of the Rotman School of Management, University of Toronto, talks about changing the traditional work patterns to „design shops“ which are well defined projects. He emphasised on changing the five dimensions of „flow of work life“ from the traditional ongoing tasks to the well defined projects; „style of work“ from defined roles and waiting for opportunities to collaborating and generating opportunities; „mode of thinking“ from inducing and deducing logic to abducting logic (logic of what might be – looking at what does not exist but how would it be if existed); sources of status from managing big budgets and large staff to solving difficult problems (what he calls as „wicked problems“); and the dominant attitude of considering constraints as enemies or threats to considering them as challenges and working on converting them as opportunities. The Design shop concept stresses on creating alternatives that do not exist whereas the traditional work focuses on selecting the best predetermined alternative. A design mind is always thinking creatively – out of the box. Organisations are looking for creative minds today. Budding managers need to be developing the lateral thinking attitude to match the organisational requirements. (Dunne & Martin (2006).

VII. APPLICATION OF DESIGN THINKING APPROACH TO MANAGEMENT EDUCATION

Can we apply design thinking approach to management education? Identifying the problem-Industry needs to design products and services to meet the ever dynamic needs of their clients or consumers. At the most, the best management institutions are producing business leaders or many of the others may produce managers. This is where the gap exists. Industry needs designers and not just leaders or managers. How do we meet this demand of the industry? The „best practices“ approach or the „contingency approach“ of running business education institutes is not really fulfilling the need of their clients or stakeholders, i.e., the business fraternity.

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To solve the problem identified, we need to teach students the art of designing; designing solutions to solve the ill defined problems of the industry. It means business education has to be „design education“. Designing solutions to solve the ill defined problems we need abductive reasoning skills, collaborative skills and interpersonal skills where understanding the minds of others has lot of importance. It could be his colleagues, clients, customers or consumers. To think laterally, one needs to think like somebody else and not himself. So understanding the other people’s logic helps thinking differently. ((Dunne & Martin (2006).

Design thinking embraces three aspects which Martin discussed in the paper “Design thinking and how it will change management education: An Interview and Discussion”. Cognitive, Affective and interpersonal aspects are involved in making designers for the industry. The cognitive aspect includes the abductive reasoning or searching for alternatives that do not exist – thereby generating new ideas. The affective aspect of design thinking is about the attitude towards constraints. A „decision attitude“ chooses to opt from the available options. But the „designer attitude“ tries to invent options. So a designer looks for and embraces constraints and does not consider constraints as challenges. Constraints are very important for design thinking. The interpersonal aspects deal with empathising. Empathy with the end users’ perspectives and empathy with the people whom you work with (collaborating with peers) expands our perspectives.

To create these designers of the industry should be the focus of all management education institutes. This is an extended form of the earlier problem identified. How to create these designers for the industry? What should the management education institutes do? Can design thinking approach be applied to management education institutes?

A SWOT analysis of the present business education system identifies a number of drawbacks as discussed earlier. Drawbacks are about the curriculum, the methodologies and the people to whom it is taught. Empathising with the stakeholders of business education (i.e., the business organisations, the students and the society at large) is the

first and foremost step towards applying design thinking approach to management education. We need to come up with „industry centric“ curriculum and not either student centric or “methodology centric” curriculum. We need to design the future “designers of businesses” (the students) through our curriculum and methodology. Students need to be taught how to design solutions rather than teaching what is right or wrong. Secondly, we need to focus on developing out of the box thinking abilities, collaborative and listening skills and interpersonal skills for creating the future designers of businesses. The four Cs- Communication, Collaboration, Creative thinking and Confidence to design business are the most essential competencies to be developed in management students.

The design thinking approach to management education is influenced by the students, faculty, and the institute characteristics to a great extent (Figure 1). But do all types of institutes have similar scope to apply design thinking for imparting management education is the research question in this article. So, to understand the scope of design thinking approach to management education in different types of management education institutes, a study with a sample size of 260 including 243 undergraduate and postgraduate management students and around 27 faculty members teaching in three different management institutions in Visakhapatnam city of Andhra Pradesh, India, was taken up in the month of January, 2018. One autonomous institute, one college affiliated to a state university and a B School in a deemed university were picked up for the study. All three institutions were offering management courses at UG and PG levels. The policies and functioning of these three institutes differ basing on their objective of existence, method of student enrolment, method of recruiting faculty as well as the criteria for recruiting faculty, teaching methodologies adopted, frequency in designing the curriculum, autonomy to teachers in designing their curriculum, advantages for students in joining these institutes (fees structure, placement record, take-away in terms of learning and experiences etc).

An attempt was made to find out if there existed

Table-I: The demographic profile of respondents of the study

GENDER	LEVEL OF EDUCATION	COLLEGE (N=260)			Total
		B-School in deemed to be university	Autonomous college	Affiliated to state university	
MALE	UG	21	24	31	76
	PG	14	22	14	50
	FACULTY	5	5	3	13
	Total	40	51	48	139
FEMALE	UG	19	30	26	75
	PG	14	14	4	32

	FACULTY	5	5	4	14
	Total	38	49	34	121
Total	UG	40	54	57	151
	PG	28	36	18	82
	FACULTY	10	10	7	27
	Total	78	100	82	260

any relationship between the structure of the institute and the autonomy to design curriculum, autonomy to introduce new teaching techniques, and introducing new courses to meet industry demands. The following Hypotheses were formulated and Chi-Square test was done. Since the data matrix is 3x4, the Cramer's V was used to measure the correlation between the two variables.

VIII. HYPOTHESES

The following null hypotheses were formulated to meet the objectives of the paper:
H₀₁: Autonomy to design curriculum is independent of the Structure of the institute
H₀₂: Autonomy to introduce new teaching techniques is independent of the Structure of the institute

H₀₃: Scope for introducing new courses to meet the demands of the industry was independent of the structure of the institute.

A. Testing the hypotheses

1. H₀₁: Autonomy to design curriculum is independent of the Structure of the institute.

H_{a1}: Autonomy to design curriculum is dependent on the structure of the institute

Table-II: AUTONOMY FOR DESIGNING CURRICULUM * COLLEGE Crosstab

		STRUCTURE OF COLLEGE			Total
		B-School in a deemed to be university	Autonomous college	Affiliated to state University	
0	Count	0	5	0	5
	Expect Count	1.5	1.9	1.6	5
	% within Structure of college	0.00%	5.00%	0.00%	1.90%
STRONGLY DISAGREE	Count	1	5	8	14
	Expect Count	4.2	5.4	4.4	14
	% within Structure of college	1.30%	5.00%	9.80%	5.40%
DISAGREE	Count	24	20	31	75



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	Expect Count	22.5	28.8	23.7	75
	% within college	30.80%	20.00%	37.80%	28.80%
AGREE	Count	40	56	38	134
	Expect Count	40.2	51.5	42.3	134
	% within college	51.30%	56.00%	46.30%	51.50%
STRONGLY AGREE	Count	13	14	5	32
	Expect Count	9.6	12.3	10.1	32
	% within college	16.70%	14.00%	6.10%	12.30%
Total	Count	78	100	82	260
	Expect Count	78	100	82	260
	% within college	100.00%	100.00%	100.00%	100

Chi-square:

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.293 ^a	8	.003
Likelihood Ratio	25.958	8	.001
Linear-by-Linear Association	6.909	1	.009
N of Valid Cases	260		

5 cells (33.3%) have expected count less than 5. The minimum expected count is 1.50.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.299	.003
	Cramer's V	.212	.003
N of Valid Cases	260		

The chi-square value is higher than the table value and the Asymp. Significance indicates .003 percent chances of autonomy for designing curriculum being independent of the structure of the institute (B-School in a deemed to be university, autonomous college, state affiliated college). Since the test statistic is greater than table value, the H_0 is false and the alternative hypothesis is accepted. Therefore, the study suggests that there is a relationship between the

autonomy in designing the curriculum and the structure of the management education institute.

- 2. H_{02} : Autonomy to introduce new teaching techniques is independent of the Structure of the Institute
- H_{a2} : Autonomy to introduce new teaching techniques is dependent on the Structure of the Institute

Table-III: AUTONOMY FOR INTRODUCING NEW TECHNIQUES * COLLEGE Crosstab

		STRUCTURE OF INSTITUTE			Total	
		B-School in a deemed to be university	Autonomous college	Affiliated to state University		
AUTONOMY FOR INTRODUCING NEW TECHNIQUES	0	Count	0	5	0	5
		Expected Count	1.5	1.9	1.6	5.0
		% within structure of the college	0.0%	5.0%	0.0%	1.9%
	STRONGLY DISAGREE	Count	0	2	1	3
		Expected Count	.9	1.2	.9	3.0
		% within structure of the college	0.0%	2.0%	1.2%	1.2%
	DISAGREE	Count	10	18	29	57
		Expected Count	17.1	21.9	18.0	57.0
		% within structure of the college	12.8%	18.0%	35.4%	21.9%
	AGREE	Count	54	65	46	165
		Expected Count	49.5	63.5	52.0	165.0
		% within structure of the college	69.2%	65.0%	56.1%	63.5%
STRONGLY AGREE	Count	14	10	6	30	
	Expected Count	9.0	11.5	9.5	30.0	
	% within structure of the institute	17.9%	10.0%	7.3%	11.5%	
Total	Count	78	100	82	260	
	Expected Count	78.0	100.0	82.0	260.0	
	% within structure of the institute	100.0%	100.0%	100.0%	100.0%	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	25.329 ^a	8	.001
Likelihood Ratio	26.981	8	.001
Linear-by-Linear Association	9.571	1	.002
N of Valid Cases	260		

a. 6 cells (40.0%) have expected count less than 5. The minimum expected count is .90.

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Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.312	.001
	Cramer's V	.221	.001
N of Valid Cases		260	

The chi-square value is higher than the table value and the Asymp. Significance indicates .001 percent chances of autonomy for introducing new teaching techniques being independent of the structure of the institute (B-School in a deemed to be university, autonomous college, and state affiliated college). Since the test statistic is greater than table value, the H_0 is false and the alternative hypothesis is accepted. Therefore, the study suggests that there is a relationship between the autonomy in introducing new teaching techniques and the structure of the management education institute.

3. H_{03} : Scope for introducing new courses to meet the demands of the industry was independent of the structure of the institute.

H_{a3} : Scope for introducing new courses to meet the demands of the industry was dependent of the structure of the institute.

Table-IV: COURSES ARE INTRODUCED TO MEET INDUSTRY DEMAND * COLLEGE
Crosstab

		STRUCTURE OF COLLEGE			Total	
		B-School in a deemed to be university	Autonomous college	Affiliated to state University		
COURSES ARE INTRODUCED TO MEET INDUSTRY DEMAND	0	Count	1	5	0	6
		Expect Count	1.8	2.3	1.9	6.0
		% within Structure of college	1.3%	5.0%	0.0%	2.3%
	STRONGLY DISAGREE	Count	1	2	5	8
		Expect Count	2.4	3.1	2.5	8.0
		% within Structure of college	1.3%	2.0%	6.1%	3.1%
	DISAGREE	Count	13	29	34	76
		Expect Count	22.8	29.2	24.0	76.0
		% within Structure of college	16.7%	29.0%	41.5%	29.2%
AGREE	Count	49	53	37	139	
	Expect Count	41.7	53.5	43.8	139.0	
	% within Structure of college	62.8%	53.0%	45.1%	53.5%	
STRONGLY AGREE	Count	14	11	6	31	
	Expect Count	9.3	11.9	9.8	31.0	
	% within Structure of college	17.9%	11.0%	7.3%	11.9%	
Total	Count	78	100	82	260	
	Expect Count	78.0	100.0	82.0	260.0	
	% within Structure of college	100.0%	100.0%	100.0%	100.0%	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.680 ^a	8	0.003
Likelihood Ratio	24.789	8	0.002
Linear-by-Linear Association	10.299	1	0.001
N of Valid Cases	260		

a. 6 cells (40.0%) have expected count less than 5. The minimum expected count is 1.80.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.312	.001
	Cramer's V	.221	.001
N of Valid Cases		260	

The chi-square value is higher than the table value and the Asymp. Significance indicates .003 percent chances of new courses being introduced to meet the demands of the industry being independent of the structure of the institute (B-School in a deemed to be university, autonomous college, and state affiliated college). Since the test statistic is greater than table value, the H_0 is false and the alternative hypothesis is accepted. Therefore, the study suggests that there is a relationship between new courses being introduced

to meet the demands of the industry and the structure of the management education institute.

Factors impacting design thinking approach to Management education are depicted in the figure 1. There is a need for management education institutes to introduce innovative practices in all the factors that influence design thinking approach and keep them flexible and can be changed easily with the changing dynamics of the industry.

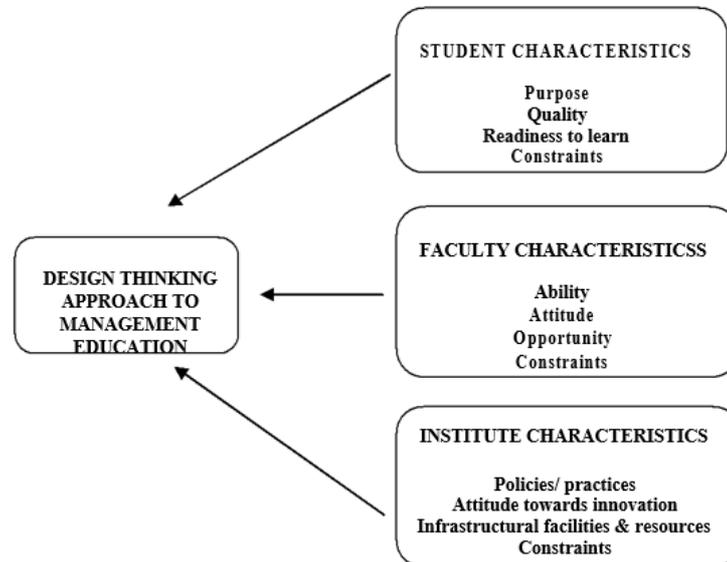


Figure-I: Research Model For Design Thinking Approach To Management Education
Institute Characteristics

The study also revealed that the admission process in all the three types of institutes under study was very flexible and follows no rigid standards to enrol students. Though there was a specified process for admissions, the selection criteria were flexible. The affiliated college and the autonomous college enrol students through a common entrance exam whereas the deemed university affiliated B-school has its own entrance examination and the group discussion and

personal interview process. Standard process of identifying the required criteria for developing managerial skills among the applicant students has to be designed and maintained for enrolment of eligible students. This process needs to be flexible to meet the needs of the industry.

Most of the respondents (74.2 percent) from all the three types of institutes opined that they were comfortable with the traditional teaching methods. Another 66.1 percent of them felt that the students had difficulty in coping with advanced teaching pedagogy like case study methods etc. There was no significant variance among the three types of institutes under study. Around 41.5 percent of them felt that the students choose an institute to study basing upon their placement record. About 51.9 percent of them opined that the faculty were interested to adopt new teaching techniques and felt they had the autonomy to do it; whereas, another 25.9 percent were interested but opined that the students were not receptive.

VIII. CONCLUSION

As a result of the economic changes in countries across the world, capacity building and talent management are becoming the objectives of many business schools. Building leaders who can design solutions for the problems of the business units should be the prime objective for them. The explosive growth in business school sector has compelled reinvention of management education in India too.

The changing needs of industry due to the ever growing competition, the aspirations of public for innovative products/services, the creativity of companies to meet these demands have all caused disruptions in management education. India being a young nation is today looking at skill development to build a rich intellectual capital. There is a need for the institutes to break apart from the traditional academic silos and build an integrative learning system. Application of design thinking approach and bringing in the expertise from all the relevant disciplines while imparting education for management students is the need of the hour. To meet the challenging needs of the industries, management education institutes need to be more autonomous in their functioning. Creating innovative and flexible curricula to fulfil the needs of the industry, introducing innovative teaching and evaluation techniques which foster developing industry required skills among students is very essential. There is a need to rethink if the institutes need to be industry requirement centric rather than student or methodology centric.

Management education institutions need to develop Industry-Institute Interaction models which are to be directed towards meeting the needs of both the industry as well as the institute by focussing on developing the core competencies in their future manpower. Focussing on the curricula, methodologies and the institute infrastructure which contribute to developing design thinking among students is essential. Especially, faculty need to upgrade themselves to understand the industry needs and come up with strategic methods of developing skills like collaborative skills, abductive reasoning and interpersonal skills among the budding managers. The design thinking approach to the disruptions caused in the management education should be meeting the needs of the industry. Training for teachers to design the designers of the world is the immediate initiative recommended. Partnerships with industry enable the developing of designs for enhancing organisational performance. Institutes need to adopt design thinking approach in their functioning and also develop the ability of design thinking in management students.

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