CHAPTER 4: RESEARCH METHODOLOGY

4.1 Objective & Scope the Study

As already indicated in the Chapter 1, there is a growing need for managerial talent in India as businesses start expanding due to favourable economic environment. Such massive business expansion must be supported by a qualitative growth in managerial talent and the role of B-schools in providing this talent through its MBA programme becomes very critical. B-schools and businesses have to operate in unison to ensure that business expectations are delivered by B-schools. The regulatory framework that controls the functioning of B-schools also needs to be supportive of the emerging scenario and hence must be forward looking in the policy making initiatives.

The objective of the study is to primarily understand the needs of business and their expectations from an MBA graduate. The perspectives of recruiters and their satisfaction levels on various parameters provide crucial inputs in understanding their needs. MBA programmes designed based on the needs of the industry will make them relevant and of improved quality. The study also aims at capturing the concerns of B-schools in meeting industry expectations and highlights the gap between B-schools and business in various domains. The role of policy makers and the effects of their decision making is also studied to provide an overall perspective. The need for relevant curriculum and pedagogy is also discussed with inputs from both B-school faculty & corporate recruiters.

The results of the study provide an overall framework including all stakeholders – Industry, B-schools, Students, Government in addressing issues related to Knowledge, Skills, MBA curriculum, Pedagogy, Policy decisions and other key factors.

The study is limited to the extent that it tries to understand the gap between business expectations and B-school delivery and possible solutions in filling these gaps. This study does not endeavour to provide a new dimension to management as a profession.

4.2 Purpose of the Study
Thirteen research questions have been framed based on the literature review and the researcher’s introduction chapter. The answers to the 13 questions will address the purpose of the study providing key inputs on the following issues:

- Purpose, relevance and quality of Indian MBA education
- Gap between industry and B-schools in understanding various issues related to MBA education
- Role of Industry & Collaboration between Industry & B-schools
- Role of Policy makers
- Need for curriculum review and appropriate pedagogy

4.3 Research Design

A mixed method of both quantitative and qualitative techniques is adopted. The purpose of choosing this mixed method is to draw benefits of both the methods. The acceptance of mixed-method design to educational research has grown in the past 15 years. Many researchers have rejected the incompatibility thesis between positivism in quantitative research and constructivism in qualitative research.

Teddlie (2005) recognizes the need for different types of data – quantitative and qualitative to answer research questions. To understand a problem fully a mixed method design is very useful (Creswell, 2003). The researcher adopted a mixed-method design and wherever possible findings were mutually endorsed before making a generalization. This develops a detailed view of a phenomenon (Creswell).

4.4 Population & Sample

The All India Council for Technical Education is the country’s regulator for MBA programmes and all programmes are to be approved by AICTE for formal recognition. B-schools which have graduated a minimum of 5 MBA batches form the population for the study. By the end of the year 2002 there were around 800 B-schools offering MBA programmes approved by AICTE. This formed the B-school population for the study. A stratified random sampling technique is used for data collection. First, the B-school
population in India is divided into non-overlapping groups (strata) by regions. From stratified groups in the four regions – North, South, East & West, the sample of 100 from north, 150 from south, 50 from east and 150 from west regions were randomly selected and a well designed questionnaire was sent to all of the randomly selected sample population by postal mail. The size of the stratified sample is in proportion to the geographic distribution of MBA institutes in the country.

For corporates, the relevant population was 240 companies that recruit B-schools for on/off campus MBA graduate recruitment. This population was arrived after collecting data from various primary resources with regard to companies visiting premier B-schools for campus recruitment in the last 5 years. All the companies were included in the sample size.

4.5 Quantitative method

The quantitative instrument used was a self-administered questionnaire designed by the researcher. The survey instrument is different from conventional quantitative survey questionnaires. Questions were left open-ended without influencing the respondent. There is no restriction on the respondent’s inputs and no Likert Scale that might force respondents to settle for the mid-point when not certain nor tend to take sides. The questionnaire also captured demographic, academic and work-experience profiles of the respondents.

Quantitative data collection yielded different response rates from B-schools and corporates. Of the 450 questionnaires sent to B-schools, a total 135 responses were received out of which 117 (none from any of the IIMs) were found to be useable. This resulted in a 26% response rate. Of the total 240 corporates, responses could be gathered from 63, leading to a response rate of 26%. Responses also included inputs from the qualitative interview process adopted as part of the study.

4.6 Qualitative method

“Qualitative research is a descriptive and analytical presentation of data that has been laboriously and systematically collected and interpreted.” (Bodan & Taylor, 1975, p.141). Qualitative research also makes understanding of the dynamics surrounding the study’s individuals and events (Patton, 1987) and allows the audience to understand the meaning of the events based on the participant’s views and definitions (Bodgan & Taylor, 1975).
Primary qualitative data collection method in the form of one to one interviews with B-school Deans/Directors and with senior business executives recruiting MBA graduates was adopted. A total of 68 persons from 60 organisations were interviewed with 32 of them being senior executives from the industry who recruit MBA graduates and the remaining from B-schools. The industry responses were also used for the quantitative study. The industry represented was diverse – Banking & Financial Services, Automobile, FMCG, IT, Consulting, Infrastructure & Realty, etc. The B-schools represented were also diverse – Public University, Deemed University, Autonomous B-schools and others.

4.7 Data analysis

The use of mixed methods design procedure is appropriate for this study as it captured more dimensions and offered greater insights on the problem being studied. This is particularly important given the limited extent to which research has been conducted in this area of study in India. As indicated before, there is complemented strength and mitigated weakness by using mixed method. Quantitative data analysis provides logic and reliable and replicable findings but lacks the flexibility to pursue an unanticipated line of enquiry. Qualitative research offers greater opportunities to understand the problem holistically but cannot test predetermined hypotheses (Patton, 1987).

The responses to the quantitative research were analyzed in depth. Based on the responses, 16 skills and 8 attitudes were identified for the purpose of statistical calculations. Besides these, other results were categorized for detailed analysis to make conclusive findings. Data was entered into Excel Spreadsheet and later converted to be used in statistical software packages.

The sample size for t-test is based on the difference between group means and standard deviation. T-test is the test used for comparing between group means when data of sample groups are normally distributed. Only normality assumption is required for t-test. Not the sample size. In this case the t-test is used to test for the significance of difference between two proportions of the two groups – industry & B-schools.
**FORMULA for t-test (difference in proportions)**

Formula for calculating t-value for the difference in proportions between two groups is hereunder.

\[ |t| = \sqrt{\frac{n_1 n_2}{n_1 + n_2}} X \frac{|p_1 - p_2|}{\sqrt{pq}} \]

Where

- \( n_1 \) = size of group 1
- \( n_2 \) = size of group 2
- \( p_1 \) = proportion 1
- \( p_2 \) = proportion 2

\[ p = \frac{(p_1 * n_1) + (p_2 * n_2)}{n_1 + n_2} \]

\[ Q = 1 - p \]

- confidence interval:

\[ c.i. = (P_2 - P_1) \pm t \sqrt{\frac{P_1(1-P_1)}{n_1} + \frac{P_2(1-P_2)}{n_2}} \]

The Kruskal Wallis test, sometimes called an **H test**, is an alternative procedure to a one-way ANOVA. The Kruskal-Wallis test assumes that the population variances are equal. And, unlike an ANOVA test, the Kruskal-Wallis nonparametric alternative can be used with ordinal or ranked data. The Kruskal Wallis test calculates ‘H’ value as test statistics. In order to calculate, H value using Kruskal Wallis test, first place the combined observations, \( y_{ij} \), into order of magnitude and replace with their ranks, \( R_{ij} \). Then calculate the sum of the ranks for the responses to each treatment, \( R_i \) and then calculate H using the following formula:

\[ H = \frac{1}{S^2} \left[ \sum_{i=1}^{a} \frac{R_{i.}^2}{n_i} - \frac{N(N+1)^2}{4} \right] \]

where \( S^2 = \frac{1}{N-1} \left[ \sum_{i=1}^{a} \sum_{j=1}^{n_i} R_{ij}^2 - \frac{N(N+1)^2}{4} \right] \)
N = Number of total observations.

The Kruskal Wallis test is used here to find out whether there is significant difference in the proportion between two groups identified based on the purpose – skill priority, pedagogical awareness & usage and curriculum change.

Since the literature review points out to a great level of dissatisfaction amongst the corporates with regard to quality of MBA graduates, the researcher was careful in understanding the professional perspectives of this problem. The interviews were recorded and duly informed to the respondents also. All of them agreed to be recorded except one B-school director. The responses were then stored in proper format for future study and questions were modified for remaining interviews based on interview responses. A detailed data analysis procedure was followed to capture all the responses and used while discussing the results following the data analysis.

The researcher also was an observer to collect first hand information on 14 MBA graduates. Observation demands firsthand involvement in the chosen field of study and entails systematic noting and recording of events. The researcher participated in an interview process wherein MBA graduates were interviewed for their first job and hence obtained firsthand information on the quality of the graduates.

The researcher also conducted a sample evaluation technique in the form of a drama to collect feedback from students on the learning experience through enactment of a drama. Students were asked to perform a drama on the course undertaken and submit feedback on the learning experience. Responses were analysed for impact assessment.

Secondary qualitative data collection in the form of historical analysis was used to compare the growth of management education in USA and India.

4.8 Validity & Reliability

Validity and reliability of measures are two critical parts of a research design. Validity refers the degree to which evidence supports inferences made from the scores derived from the measures or the degree to which the scale measures what it is designed to
measure. In this research design, since the questionnaire is open ended without the need for any Likert type or any other type of score generating instrument, the need for testing validity does not arise. Since no scales are being used to ascertain any factors, the reliability test also is not required.

4.9 Research Questions

The 13 research questions that provide comprehensive answers to the above areas of concern are:

1. Is there significant difference in understanding the importance of knowledge, skills and attitudes between B-schools and corporate recruiting MBA graduates?
2. Is there a significant difference in the perception of desired skills in MBA graduates between B-schools and Industry recruiting MBA graduates?
3. Is there a significant difference in the desired skill levels and satisfactory skill levels of MBA graduates as viewed by the industry recruiting MBA graduates?
4. Is there a significant difference between how B-schools rate the importance of an MBA graduate’s desired skill set and how the corporate recruiters of MBA graduates are satisfied with the skill set?
5. Is there a significant difference in the understanding of a MBA graduate’s desired attitude between B-schools and Industry recruiting MBA graduates?
6. Is there a significant difference in the desired attitudes and satisfactory attitude levels of MBA graduates as viewed by the industry recruiting MBA graduates?
7. Is there a significant difference between B-schools & Industry recruiting MBA graduates in their understanding of key knowledge elements to be addressed in an MBA programme and B-schools’ understanding on knowledge areas where Industry require more attention?
8. Is there a significant difference between various types of B-schools in the reasons for difficulties making changes in curriculum as per industry feedback?
9. Is there a significant difference between various types of B-schools in understanding and using the appropriate pedagogic tools?
10. Is there a significant difference between the growth of MBA education in USA and the growth of MBA education in India?
11. What should be the emerging role of premier B-schools in improving Indian MBA education?

12. What are the B-school directors’ and corporates recruiting MBA graduates views regarding the government’s policy decision concerning MBA education?

13. What is the view of corporates recruiting MBA graduates on the emerging areas to be addressed by B-schools?

4.10 Limitations of the Study

This study has been carefully done to overcome known limitations. However, the limitations lie in the extent to which it can be transferred or generalized to other settings as the data collected in the quantitative and qualitative approach is context specific. Future researchers must have in mind about such a mixed method design and make suitable assumptions before they undertake further research. The study might also have an inherent limitation in that the author is a management graduate with considerable B-school experience in 3 different countries. The author remained neutral throughout the interview process and during the result analysis without allowing any form of personal bias interfering with the results.