CRITICAL SUCCESS FACTORS IMPACTING B-SCHOOL
LEARNING OUTCOMES AND STUDENT EMPLOYABILITY IN
MUMBAI AND NAVI MUMBAI

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In
Business Management

Submitted by
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October 2014
CRITICAL SUCCESS FACTORS IMPACTING B-SCHOOL LEARNING OUTCOMES AND STUDENT EMPLOYABILITY IN MUMBAI AND NAVI MUMBAI
DECLARATION

I hereby declare that the thesis entitled “Critical Success Factors impacting B-School Learning Outcomes and Student Employability in Navi Mumbai and Mumbai B-Schools” submitted for the Award of Master of Philosophy (M, Phil) in Business Management at D.Y. Patil University, School of Management is my original work and the Dissertation has not formed the basis for the award of any degree, associate ship, fellowship or any other similar titles.

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Also it is certified that the thesis represents an independent work on the part of the candidate.

Place: Navi Mumbai

Date:

Signature of

Head of the Department

Signature of Guide
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LIST OF ABBREVIATIONS

1. AICTE - All India Council for Technical Education
2. CfE - Centre for Employability
3. DIIC - Directorate of Industry-Institute Co-ordination
4. MOU - Memorandum of Understanding
5. SWOT – Strength Weakness Opportunity Threat analysis
6. TEC - Technical Education system
7. TQM - Total Quality Management
8. UGC - University Grants Commission
EXECUTIVE SUMMARY

Introduction

In India, Business schools have grown at an astounding pace. As per the All India Council for Technical Education (AICTE), India’s statutory body and the national level council for technical education, in 2006-07 there were 1,132 business schools and in 2012-2013 there were 2,450 – a CAGR of 13.7% resulting in more than doubling of B-schools in 6 years.

The growth has opened up an opportunity area for students to undergo training in management courses, but more importantly sprung up the question about contribution of B-schools to development of student and making them ready for the industry. This research study highlights the need for action to streamline B-school education by focusing on the 2 key outputs of B-school education, viz.

- Learning outcomes of the B-school education
- Student employability after the management course

This study seeks to unearth the critical success factors that impact B-school learning outcomes and student employability. Both these aspects are of immense interest of several stakeholders’ e.g. prospective students, their parents, industry recruiters, B-school administrators, teachers, society at large who benefit from capable & industrious B-school graduates.
This study is aimed at primarily capturing the “Voice of Customer” i.e. the student community who are part of the B-school educational process and also the input material for industry at large. It brings out interesting insights into what matters and what is a nice to have.

**Objective of the study**

The following objectives were formulated to accomplish the purpose of this study

1. Identify critical success factors influencing the learning outcomes and student employability in Mumbai and Navi Mumbai B-schools

2. Identify the level of importance of the above identified factors and the level of correlation to the mentioned two critical outputs of B-school education viz. Learning Outcomes and Student Employability

3. Describe the relationship between the identify factors and build an understanding of key focus areas for management education

4. Provide recommendations for action by management institutes on the key focus areas

**Benefits of the study**

This research will provide the management institutes in India and current or prospective management students, with information on the elements to focus on during the educational program to drive pertinent learning approaches and
enable creation of day-one ready managers, who can be more successful over the longer term.

Based on the recommendations of this study, faculty of management institutions would be able to make informed decisions regarding further improvements in the curriculum, with complete knowledge of why these improvements are essential.

The findings of the study could be used to design student activities and internships that may lead to development of soft skills, technical skills and employability skills.

This research also will be interpreted within a theoretical framework that may be useful to other professional colleges as they refine their curricula in the pursuit of student success.

**Limitations of the study**

The study was focused on management institutes of Mumbai and Navi Mumbai and the research subjects were students who were currently part of, or in the past had been a part of, the 4 institutions selected for the study. A convenient sample of 434 students of these institutions was utilized in the data collection. This demographic profile may not represent the average student in a management education program.

Even if the students included in this study represent the average students in the management education program, the programs and curricula vary from one institution to another. Since the study was only based on data collected...
from four institutions, the findings of this research can be selectively
generalized beyond this group of students at these institutions.

**Hypothesis**

The following hypotheses are proposed for the study of the research objectives and would be tested at 5% level of significance:

*H₀₁* There is no significant relationship between Learning Outcomes (LO) and B-school Environment (BE)

*H₁₁* There is a significant relationship between Learning Outcomes (LO) and B-school Environment (BE)

*H₀₂* There is no significant relationship between Learning Outcomes (LO) and Learning Experience (LE)

*H₁₂* There is a significant relationship between Learning Outcomes (LO) and Learning Experience (LE)

*H₀₃* There is no significant relationship between Learning Outcomes (LO) and Student Intrinsic Qualities (SIQ)

*H₁₃* There is a significant relationship between Learning Outcomes (LO) and Student Intrinsic Qualities (SIQ)

*H₀₄* There is no significant relationship between Student Employability (SE) and B-School Environment (BE)

*H₁₄* There is a significant relationship between Student Employability (SE) and B-School Environment (BE)
$H_{05}$ There is no significant relationship between Student Employability (SE) and Learning Experience (LE)

$H_{15}$ There is a significant relationship between Student Employability (SE) and Learning Experience (LE)

$H_{06}$ There is no significant relationship between Student Employability (SE) and Student Intrinsic Qualities (SIQ)

$H_{16}$ There is a significant relationship between Student Employability (SE) and Student Intrinsic Qualities (SIQ)

**Research Design**

This research was designed as a **Descriptive Cross-sectional study**, aimed to provide further insight into the research problem by describing the variables of interest. The intent is to use this for profiling, defining, estimating, predicting and examining associative relationships.

The Cross-sectional study was designed to support providing a snapshot of the interactions of the variables of interest and involves conducting a survey of a sample population at one point in time.

The **dependent variables** in the study were chosen as learning outcomes and student employability. Through a pilot study, the following **independent variables** were identified for detailed study:

1. Student intrinsic qualities

2. B-school environment

3. Learning Experience
Conceptual Framework

The conceptual framework illustrating the interactions of the independent and dependent variables is provided below:

![Conceptual Framework Diagram]

Source: Author's compilation

Figure 1: Conceptual Framework for the study

The framework outlines the variables that are bounded by the B-school stint of students and what precedes and succeeds it. Therefore, the Student Intrinsic Qualities (SIQ) variable has been depicted as a preceding element which is also one of the criteria for admission to a B-school, and has been identified as an area of interest for further understanding. The B-school Environment and
Learning Experience have been considered as variables impacted within the confines of the B-school educational program. And the output at the end of the academic program that is of interest to this study has been identified as the Learning Outcomes and Student Employability.

A mixed methods approach was considered appropriate for the study. The Quantitative approach was adopted to examine the component parts and the relationship between these parts, from a reductionistic perspective. This was undertaken to establish facts, demonstrate relationships and determine effects. The aim was to be able to generalize the findings to more broadly defined populations.

The Qualitative approach was used to gain insights and identify the participants' viewpoint in order to interpret the totality of the phenomenon of B-school learning outcomes and Student Employability.

**Population, Sampling Frame and Sampling Unit**

The focus of the study was on post graduate management programs. In addition to this the aim of the study is to be able to draw a sample that is comprehensive, correct, reliable and appropriate. At the same time, it was crucial to ensure that the sample was a good representative of the population. The concept of B-school Learning Outcomes and Student Employability is universally applicable to all B-schools around the world. This is a large universe for the purpose of an efficient & reliable study hence it was imperative to understand the context of the subject from the overall perspective of management institutes in India, which was selected as the Target Population.
Since the study also intended to generalize the findings to the Target Population, it was important to understand the Target Population. As per the AICTE data in 2013-14, India had 3,364 management institutes with annual enrollment of 3,54,421 students.

It is also important to highlight that B-school Learning Outcomes and Student Employability, the dependent variables of the present study, are impacted by the contextual nature and specificity of the academic and industry landscape of a regional or local geographical unit.

Hence the study focused on identifying the Source List or Sampling Frame for the study which was decided as the Management institutes of India and the state of Maharashtra.

As per the AICTE data in 2013-14, the number of approved management institutes in the state of Maharashtra was 424 institutes with annual enrollment of 59,339 students.

The sampling unit was a convenient sampling unit of Mumbai and Navi Mumbai. As per AICTE data in 2013-14, the number of management institutes in Mumbai and Navi Mumbai (including Thane) was 90 with an annual enrolment of 17,245 students.

**Sample selection**

Since the defined population is 17,245 students of management institutes of Mumbai and Navi Mumbai, at 95% confidence level and 5% confidence interval (margin of error), the sample size was calculated as 376.
However in order to account for the response and non-response bias, it was decided to survey 600 students.

**Research Instrument**

The Research Instrument used in this study was a questionnaire for B-school students and alumni (Appendix A).

The Questionnaire had 6 questions or segments. The following is a brief description of the construct of the questionnaire.

Question 1 included items that solicited information about the personal and academic characteristics of the participants to understand the demographics and background of the survey participants.

Question 2 sought to understand the B-school Environment / Infrastructure with sub-segments seeking information on B-school physical infrastructure, residential facilities and sports facilities. A four point Likert-type scale was used in this part of the instrument.

Question 3 included items that solicited information on the B-school Learning experience. This question had sub-segments seeking information on Student-faculty ratio, learning inputs ratio (theory vs. practical knowledge), curriculum design, faculty feedback mechanism for students, industry interactions, involvement in research / consultancy, soft skills development, exchange programs. A four point Likert-type scale was used for some questions in this part of the instrument, while some questions had 3 choices: 2 = Yes, 1 = No, 0 = don’t know.
Question 4 sought to understand the B-school Learning Outcomes. The question had sub-segments that sought to understand academic knowledge enhancement, industry exposure, soft skill development, business acumen training & development. A ten point Likert-type scale was used 1 = very low and 10 = very high.

Question 5 included items that solicited information on the Student Employability at the B-school. The question had sub-segments that sought to understand placement percentage, salary offered in campus placement, number of recruiters, number of repeat recruiters. A ten point Likert-type scale was used 1 = very low and 10 = very high.

Question 6 was an open field question to capture qualitative inputs or comments and recommendations for improvement of B-school Learning Outcomes and Student Employability.

**Validity and Reliability of the Instrument**

The instrument used for this study was a comprehensive construct that was based on two different types of validity: Face validity and Content validity (Robinson, 2006). The face validity indicates that the questionnaire is pleasing to the eye and applicable for its intended use (Ary et al.).

Content validity indicates that the items in questionnaire represent the objective of the instrument (Gall, Gall, & Borg 2003). Dr. R. Gopal and other experts established the face and content validity of the instrument and a pilot study was used to establish the reliability of the instrument.
The pilot test of the questionnaire was administered to twenty-nine students of first year from two different institutions who were not part of the frame for this study. This group of respondents was instructed to respond to questionnaire items and indicate their concerns regarding any of the items. In addition, data were analyzed to measure the reliability of the instrument. Input from the pilot study indicated that questionnaire was clear and easy to follow. A Cronbach’s alpha of .90 was found from the pilot test, indicating that the instrument was reliable with a high degree of internal consistency.

**Data Collection**

Data collection was undertaken as part of this study very early in the research process and was formalized through a data collection plan. A pre-collection activity was also undertaken, which dealt with defining goals, target data, definitions and methods.

The sample selected for this study was B-school students or Alumni ($N = 600$). The sample selection for this study was a convenient sample of second year students, first year students and alumni who had graduated in the last 2 years. The data collection activity was targeted 4 B-schools. The choice of the 4 B-schools was selected using a convenient sampling approach to ensure that it represents different facets of B-schools in the sample of respondents and had the followings aspects covered viz.

- Mumbai university led institution: 1 B-school
- Private institution: 3 B-schools
- Residential and non-residential institution
All AICTE approved institutions

Institutions with a good placement track record

Out of 600 students approached for this study, 434 usable responses were collected resulting in a usable response rate of 72%. Non-participation or non-response error could constitute a threat to external validity in a generalizable study (Miller & Smith, 1983). However, since this study was based on a convenient sample, and since the calculated sample size was 376, while the study was able to collect 434 usable responses, the non-participants (non-respondents) were ignored (Miller & Smith).

Data Analysis – Descriptive Statistics, Pearson’s Correlation Coefficient & One-way ANOVA

Collected data was processed by means of quantitative research methods. Prior to data analysis, pre-analysis data screening was performed to ensure the accuracy of the data and to deal with missing and incomplete data. Data was analyzed using Statistical Package for Social Sciences (SPSS) version 22.0 for Windows, a product of SPSS, Inc. Pearson correlation coefficient was used to describe the relationships between the variables. Descriptive statistics was used to analyze the demographic profiles of B-school students.

Correlation coefficients were used to determine the relationships between variables and sub-variables. Interpretations of the correlation coefficients were based on Davis’ (1983) conventions for interpreting correlation associations. Those conventions are as follows:

0.70 or higher = Very strong association,
0.50-.69 = Substantial association,
0.30-.49 = Moderate association,
0.10-.29 = Low association and
0.01-.09 = Negligible association.

One way Analysis of Variance or ANOVA was used to determine if there was any significant difference between the means of different independent (unrelated) groups. For example, the analysis was done for Learning Outcomes (under past educational area 5 independent groups were chosen viz. Arts, Science, Commerce, Engineering, Other graduation), and for Student Employability (under duration of work experience, 3 groups were formed viz. less than 1 year, 1 to 2 years and above 2 years). The aim was to identify impact of Student Intrinsic Qualities, which is an input into the B-school system, and the relationship with the output in the form of Learning Outcomes and Student Employability.

**Demographics**

Descriptive statistics were used to analyse the selected demographic characteristics. Gender and past educational area/field were both analysed as a nominal data. Therefore, they were reported using frequency and percentage. Age, duration of past work experience and number of organizations the students had worked prior to joining the B-school were all analysed as an interval data. Therefore, they were reported using mean and standard deviation.
The following tables present the demographic data of the respondents.

Gender and past educational area/field (n=434)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender Distribution</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>203</td>
<td>46.77%</td>
</tr>
<tr>
<td>Female</td>
<td>231</td>
<td>53.23%</td>
</tr>
<tr>
<td><strong>Past educational area/field</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate in Arts</td>
<td>54</td>
<td>12%</td>
</tr>
<tr>
<td>Graduate in Science</td>
<td>34</td>
<td>8%</td>
</tr>
<tr>
<td>Graduate in Commerce</td>
<td>142</td>
<td>33%</td>
</tr>
<tr>
<td>Graduate in Engineering</td>
<td>164</td>
<td>38%</td>
</tr>
<tr>
<td>Graduate Others</td>
<td>32</td>
<td>7%</td>
</tr>
<tr>
<td>Post Graduate</td>
<td>8</td>
<td>2%</td>
</tr>
</tbody>
</table>

Table 1: Demographic data of participants

The below table summarizes additional demographic information about the respondents. The mean age of the respondents was 23.13 years with a standard deviation of 0.76. The mean duration of past work experience (in months) was 16.65 months with a standard deviation of 12.51.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>434</td>
<td>23.13</td>
<td>0.76</td>
</tr>
<tr>
<td>Number of organizations worked in prior to joining B-school</td>
<td>227</td>
<td>1.18</td>
<td>1.13</td>
</tr>
<tr>
<td>Duration of past work experience (in months)</td>
<td>227</td>
<td>16.65</td>
<td>12.51</td>
</tr>
</tbody>
</table>

Table 2: Additional demographic data of participants

Findings

The Quantitative findings were obtained from the correlation analysis output with the Pearson Coefficient of the dependent variables and dependent sub-variables with regard to the independent variables.
The below table outlines the correlation association of the Independent variables or sub-variables with Learning Outcomes where Pearson Coefficient or r is greater than 0.6:

<table>
<thead>
<tr>
<th>Independent Variable / Sub-variable</th>
<th>Correlation Association with Learning Outcomes</th>
<th>Pearson Coefficient of Correlation: r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft Skills Development (LE7)</td>
<td></td>
<td>0.886</td>
</tr>
<tr>
<td>Industry Interactions (LE5)</td>
<td></td>
<td>0.827</td>
</tr>
<tr>
<td>Curriculum Design (LE3)</td>
<td></td>
<td>0.799</td>
</tr>
<tr>
<td>Learning Experience (LE)</td>
<td></td>
<td>0.791</td>
</tr>
<tr>
<td>Learning Inputs Ratio (LE2)</td>
<td></td>
<td>0.784</td>
</tr>
<tr>
<td>Past Work Experience (SIQ2)</td>
<td></td>
<td>0.766</td>
</tr>
<tr>
<td>Exchange Programs (LE8)</td>
<td></td>
<td>0.644</td>
</tr>
</tbody>
</table>

Table 3: Correlation association of critical Independent variables & sub-variables with Learning Outcomes

And the below table outlines the correlation association of the Independent variables or sub-variables with Student Employability where Pearson Coefficient or r is greater than 0.6:

<table>
<thead>
<tr>
<th>Independent Variable / Sub-variable</th>
<th>Correlation Association with Student Employability</th>
<th>Pearson Coefficient of Correlation: r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum Design (LE3)</td>
<td></td>
<td>0.884</td>
</tr>
<tr>
<td>Industry Interactions (LE5)</td>
<td></td>
<td>0.871</td>
</tr>
<tr>
<td>Learning Inputs Ratio (LE2)</td>
<td></td>
<td>0.833</td>
</tr>
<tr>
<td>Soft Skills Development (LE7)</td>
<td></td>
<td>0.819</td>
</tr>
<tr>
<td>Learning Experience (LE)</td>
<td></td>
<td>0.766</td>
</tr>
<tr>
<td>Past Work Experience (SIQ2)</td>
<td></td>
<td>0.718</td>
</tr>
<tr>
<td>Past Educational area / field (SIQ1)</td>
<td></td>
<td>0.634</td>
</tr>
<tr>
<td>Exchange Programs (LE8)</td>
<td></td>
<td>0.631</td>
</tr>
</tbody>
</table>

Table 4: Correlation association of critical Independent variables & sub-variables with Student Employability
The quantitative analysis and results clearly established the Critical Success Factors of B-school Learning Outcomes and Student Employability.

These six Critical Success Factors identified in the study are enlisted below:

1. Soft Skill Development
2. Industry Interactions
3. Curriculum Design
4. Learning Experience overall
5. Learning Inputs ratio
6. Past work experience

The research instrument also provided opportunities to capture the qualitative aspects of B-school Learning Outcomes and Student Employability. The researcher had the opportunity to interview 64 respondents to understand the qualitative inputs provided by them in the questionnaire.

The qualitative inputs related to B-school admission, education and placement events. 206 respondents had mentioned in the questionnaire that the output quality of B-schools depends largely on the input quality of the students. This was corroborated with focussed interviews on this topic with 32 of these respondents. 43 focused interview respondents highlighted several cornerstones of higher Learning Outcomes and better Student Employability.

Soft skill development was mentioned as an important area of student development that was also emphasised as a key need for recruiters.
197 respondents mentioned that B-school education was a stepping stone for better career prospects and hence the Learning Outcomes should focus on focussed industry requirements. The research also corroborated these inputs provided in the questionnaire through focussed interviews with 42 interviews with the respondents.

The general perception was that B-schools provide direction to the career through a generic management education and soft skill development. The focus on communication skills development through periodic presentation preparation, delivery and involvement of audience, helps to a large extent future work requirements as entry level manager or upper level manager. Plus the group work during the academic sessions help to foster team skills, leadership skills and inter-personal skills. All of these are very important aspects which are not usually provided in any other educational program.

**Recommendations**

The recommendations of the study are aligned in the direction of the six Critical Success Factors and draws inputs from the Qualitative findings of the research process.

The recommendations outline the contours of the soft skills requirement. It also emphasises on the development of verbal and written communication skills, interpersonal skills and team skills.

In addition to this, development of personal attributes of dependability, work ethics, dedication, adaptability, flexibility, desire to learn, self-supervising and organized have also been emphasised.
Industry interaction approaches have also been elaborated in the recommendations.

Curriculum design related recommendations have also been put forth for cross industry-academia-alumni curriculum review panel.
Chapter 1

INTRODUCTION

1.1 Overview of Management Education

1.2 Evolution of Management Theory

1.3 University Grant Commission

1.4 Professional Council

1.5 All India Council of Technical Education

1.6 Directorate of Technical Education, Maharashtra
INTRODUCTION

In India, Business schools have grown at an astounding pace. As per the All India Council for Technical Education (AICTE), India’s statutory body and the national level council for technical education, in 2006-07 there were 1,132 business schools and in 2012-2013 there were 2,450 – a CAGR of 13.7% resulting in more than doubling of B-schools in 6 years. As per AICTE, the number of seats in these institutions grew from 94,704 to 385,008 seats in the same period – a CAGR of 26.3% resulting in 3 times more seats in 6 years.

The growth has opened up an opportunity area for students to undergo training in management courses, but more importantly sprung up the question about quality of education. This research study highlights the need for action to streamline B-school education by focusing on the 2 key outputs of B-school education, viz.

- Learning outcomes of the B-school education
- Student employability after the management course

This study seeks to unearth the critical success factors that impact B-school learning outcomes and student employability. Both these aspects are of immense interest of several stakeholders’ e.g. prospective students, their parents, industry recruiters, B-school administrators, teachers, society at large who benefit from capable & industrious B-school graduates.
This study is aimed at primarily capturing the “Voice of Customer” i.e. the student community who are part of the B-school educational process and also the input material for industry at large. It brings out interesting insights into what matters and what is a nice to have.

This chapter is structured into six sections, as mentioned below:

1.1 Overview of Management Education, to give the contextual background of the current landscape of B-schools in India

1.2 Evolution of Management theory, to set the background of how management thought has evolved historically which serve as the cornerstones for management education

1.3 University Grants Commission, to provide inputs on how institutions of higher education are regulated and how standards are maintained

1.4 Professional Council, is an overview of bodies responsible for recognition of educational courses

1.5 All India Council of Technical Education, to give a background of how standards of management education are regulated

1.6 Directorate of Technical Education, Maharashtra is to provide the background of education in Maharashtra

1.1 Overview of Management Education

Management education has become a fad in a virtually connected universe. Post 2000, the acclaimed MBA programme has witnessed...
unprecedented heights in the form of pluralism across academics, industries and think tanks in India. Pluralism in this context talks about the outreach of this programme among a larger section of society. In other way, it is an attempt for inclusion of MBA aspirants in the programme from a larger heterogeneous mass. Necessity of this kind of education has been primarily relied upon derived demand from industries. Eventually, recruitment does address the potential of this programme by considering a pool of supply of the MBA or PGDBA or PGDM or MBM degree-holders. It is believed that a post-graduate degree in basic sciences or in engineering or in medical sciences or even in social sciences does not seem to yield as much in terms of 'package' and 'fast track promotion' as an MBA degree does. However, it is an opportune time to explore the flip side of management education in India. This article seeks to investigate whether the management education is serving a value-based programme in India. Quality is a desired outcome through an MBA programme.

Motivation to this enquiry is unequivocal. While, in India, management institutions have been mushrooming in a fast pace, however, quality imparted by these institutes has become the focus of investigation/critique in academia-industry parlance. Is management education too important to be left to management/B-schools? Is it time for rethinking the MBA programme? Is a less ambitious reform agenda a more reasonable immediate goal for management education in India? Is the regulators’ approval being used as a mere official fig-leaf by fly-by-night educational bigwigs making a fast buck? Critical assessment
of ‘quality management education’ by addressing these questions raised would definitely provide some checks and balances on the part of management institutes/universities to upgrade the standard of the programme. In turn, this kind of arrangement would help MBA aspirants to gauge the impact of B-schools and the programme in serving their quality of life. There may be a number of means to achieve this. However, benchmarking the level of an MBA programme through internationally acclaimed institutes/organisations has already been received attention for assessing these designated institutes in a legitimate manner. The role of the regulator to preserve or to enhance quality cannot be wished away. The regulator must be fully aware about the approach of a programme. For instance, All-India India Council for Technical Education (AICTE), one of the regulators of management programmes in India must evaluate the programme run by odd 4,000 B-schools (under the banner of institutes, universities and colleges) with respect to well-accepted yardsticks such as number of courses/credits offered by the programme, quality of teaching through adopted pedagogy, aptitude of learning by participants, quality of interaction between facilitators and participants, nature of jobs opted by participants, diversity of industry-in-campus-participation during the placement season to name a few.

In Rethinking the MBA: Business Education at a Crossroads by Srikant Datar, David A Garvin and Patrick G Cullen (2010), it attempts to generate some interest to two types of audiences. MBA aspirants would be able make an informed choice prior to jumping into the
gizmos and gimmicks of management. Academics in business schools can learn why and how they need to renew their course-curricula periodically or regular intervals, pedagogy and research programmes. Some of the best practices through branding and pricing of the B-schools in India are listed here.

**Branding – A tool to establish the B-school education**

Brand value of any B-school depends on positioning its product, that is, ‘rigour’ and ‘relevance’ of the imparting programme. Astoundingly, these two words are not very profound in the existing B-school course curricula. In the given context, product is simply the MBA degree or the PGDM diploma based on affiliation of B-schools with institutes/universities. University confers the degree whereas AICTE-regulated institute offers the diploma. However, commonality between diploma and degree is well understood subject to two years’ full-time residential programme. Therefore, a diploma equivalent to a degree is mentioned as an underlying disclosure by the designated institutes. Any text book of marketing talks about a product which can be goods or services/ideas or a bundle of goods and services. MBA degree or diploma embracing the service of imparting education to the enrolled-participants qualifies as a product for the B-school. In addition, quality as sufficiency criterion justifies the existence of any product. It also applies to an MBA programme. B-schools should clearly spell out in their admission/placement brochure(s) about features, advantages and benefits that the programme has delivered. A comparative analysis among existing B-schools with respect to this criteria can adequately
be analysed by intended participants. Participants are considered as customers. Value-stream between B-schools and participants consists of cash flows (course fee), product flows (quality of programme), and information flow (feedback). This exemplifies a typical supply chain. The course fee decided by any B-school needs to support the pricing decision. Quality of product in terms of course(s) pedagogy, updation of course wares, evaluation pattern like grading, number of components in grading, application of concepts taught, and feedback about the course(s) by participants should not be taken for granted. Feedback is very important for an institute to take the next step for improving teaching and learning ambience, course pedagogy and faculty development programme. Barring a few B-schools, others are emphasising to maximise their revenues through additional increases in the enrolment programmes year after year. The regulator should keep a vigil like a ‘watch dog’ on the programme and essentially produce some notes after the SWOT analysis of the programme and the B-school.

Brand-building is an important aspect for sustaining any product. Product life cycle comes to the forefront. In a typical B-school, branding is done by organising conclaves/annual fest, sports etc and some formal communication with print media periodically. To put it simply, advertising takes care of B-schools’ promotion to a great extent. Behind the paraphernalia of branding, a B-school should mention the list of faculties and some literature on their experiences in the admission brochure. In any product, core (brand kernel) is very important. It
shows the consistency and the uniformity of a brand. For example, good infrastructure, computer facility, scenic beauty in and around the campus — does not enhance the excellence of the programme. Rather it is the faculty strength and contribution of staff from all departments.

Thus, the desire to take an admission in an MBA programme can be derived from students. The demand from aspirants will create its own supply (expansion of courses/programmes/B-schools). Acid test about the viability and feasibility of the programme needs to be extensively carried by the designated B-schools prior to the launch of any fancy course for that matter. In marketing, it is the pull strategy implying that participants being customers need to choose and select their desired institutes as marketers. Since MBA programmes are operating in buyers or customers’ markets, demand-mapping is very important in spite of selling a programme being a product below its original worth or market value. Over and above, an MBA programme needs to carry its brand through reflection of the programme (rendezvous), relations with macro environment, personality of the B-school, self-projection, culture through artefacts such as logo or emblem etc. As a result, brand recognition of the programme would contribute to brand equity in terms of frequency of an aspirant’s recall and sales of admission brochure or any intellectual (copyright) materials like Harvard Business Publishing house.
Pricing to justify the product

Education is regarded as a service, which is priceless in its figurative meaning. It performs its role best by moulding the individual’s behaviour. However, some costs are always attached to provide this. Cost and price are two different sides of the same coin. Costs in the form of direct and indirect are incurred by the B-school while delivering the programme. On the other hand, at what price these B-schools should sell their programmes as the product augurs for pricing. It could be mark-up or cost plus pricing. Therefore, price as a reward recovers the cost. Margin is extra over cost which is otherwise realised to add into B-schools' balance sheets as retained earnings or surplus. This can either be distributed as performance-linked incentives (dividend or stock option or rights etc.) among employees including faculties and staffs according to the board of directors’ decision. In finance language, there is always a conflict between the representative of a B-school (owner) and its employees that is popularly known as agency problem. To motivate the employees for alignment with B-schools’ performance goal and mission, some costs are to be borne by owners of B-schools (unlike the Indian Institutes of Management or the Indian Institutes of Technology). It is agency cost. For this, salary, incentive scheme, professional development fund, faculty development fund need to be structured and implemented effectively. Quite logically, pricing of the programme has become important to support the organic internal structures of a B-school.
Ensuring the satisfaction of its internal structure, B-school has to sketch pricing formulae for its customers, who are students or participants in the programme. How does one B-school go about pricing of its product? Is it mark-up or cost-plus pricing? Or else, is it predatory pricing? In India, relatively better MBA from reputed institutes requires at least Rs. 8,00,000-9,00,000 course fee for two years. Notwithstanding this, participants have to bear hostel, food charges and other incidentals on their own. Therefore, an average B-school charges Rs 11,00,000-12,00,000 for the course. Many B-schools are cogitating on whether they should increase the number of seats by reducing some fraction of course fee (implicit costs may be more) or open up some additional programmes. It always tinkers a band of B-schools to count on their return-on-investment resulting in producing more ‘teaching shops’ in the country. Immediacy and adequacy of pricing strategy cannot be wished away while striving to make the programme effective. B-schools should work on their revenue models so effectively that their existence will become sustainable. Diversification is a strategy to augment the revenue stream. However, too many programmes definitely destroy the beauty of the flagship programme. It is ultimately the quality that attracts premium prices.

**Preaching for the best practices**

Those 60s are gone when Harvard or MIT Sloan School of Management or Wharton sown the seeds of management in the Indian soil. Now, just one click in the largest search engine, Google, brings the entire universe than meets the eye. Despite the availability of cheap
technology, quality of human resources is still priceless. ‘Knowing, doing and being’ — these must be programme learning outcomes of any management education.

Rethinking the MBA has identified eight imperatives for reforming existing management programmes: gaining a global perspective, honing integration skills, developing leadership skills, recognising organisational realities and implementing effectively, acting creatively and innovatively, thinking critically and communicating clearly, understanding the roles, responsibilities and purpose of businesses; and lastly, understanding limits of models and markets. It is evident from empirical research that the Ivy League schools seem not to have done any genuine introspection either: even after the latest financial turmoil, most of these Ivy League schools have re-affirmed their faith in extra curricula, pedagogy, strategies for admission, job placement and faculty recruitment.

Nothing much seems to have changed. Student engagement in curricular activities comes only second, after hunting for ‘package-jobs’. The grip of those rooting for the status quo, among the faculty, continues to thwart any fundamental redesign of the MBA. A ‘you scratch my back, I will scratch yours’ attitude is a consequence of vindication and dominates the old as well as the revamped curricula. Do whatever, as long as one’s own course or pedagogy can be kept as it is. Another concern is about ‘peer learning’ and ‘outside-the-class learning’ being perceived by students as more significant than classroom learning. Worse, the curriculum changes being introduced
seem to support this view: ‘Exchange programmes’, ‘immersion’ trips to foreign shores and outbound programmes outsourced to others.

Yale University’s School of Management looks like an exception. It is trying to revamp the entire curriculum by focusing on how to serve various stakeholders of a business including shareholders, employees, customers, suppliers and the society. There are no more courses titled ‘marketing’, ‘finance’ etc. These are more vulnerable to criticisms from society today. These are expected to fend for raising resources. Unlike long-established disciplines in physical and social sciences, academics in professional education like management are not yet seen as ‘rock stars’ amongst researchers, and are still fighting for the place under the sun. Some of the management schools such as Chicago Booth and Harvard are harping on economies of scale of large class sizes to fund their activities. Introducing any change in such programmes is a logistical nightmare. Something has to give in. In Chicago, both students and faculties enjoy a ‘free market’, with very little compulsory components in the curriculum; Harvard has a regimented first year and case pedagogy, never mind the heterogeneity amongst students. Stanford prefers compulsory courses at three different levels to cater to students with different levels of prior learning and experience. This avoids the wastage of time of the students in their first year. However, it raises the question whether the ‘core’ requirements of an MBA is merely a credit-quota requirement. After all, European Business Schools like INSEAD, France have been offering equally effective 10-month MBA programmes. It is a well-known secret, at least among
India’s management schools, that the second-year is a virtual washout as far as classroom learning is concerned. In the US, they call it ‘networking’, ‘internships’, ‘interviewing got jobs’, ‘global immersions’ etc.

There are some good and bad practices the world over in management education. India’s management education needs an Indian management thought because of its diversity, profound cultural base, collective thinking and possession of self-respect. Unlike business, it seems better if India’s management education has only one stakeholder to be served: The student or the pupil or the disciple whatever the form may be. But core remains unchanged. Are B-schools ready for it?

**Regulatory Environment of Post Graduate Management Education**

The management education in India has a regulatory environment at different levels – Central and State, as illustrated below:

<table>
<thead>
<tr>
<th>Body / Key Regulations</th>
<th>Higher Education (Universities/Colleges)</th>
<th>Technical Education (Management)</th>
</tr>
</thead>
</table>
### Key Regulations

| UGC Act, 1956 / UGC Private University regulations | AICTE Act, 1987 / AICTE Regulations / Approval Handbook |

### State Regulators

| Department of Higher Education / State Level Committees | Department of Technical Education / State Level Committees |

### Key Regulations

| Private University Act / Rules & Regulations | Notifications / Guidelines / Others |

### Accreditation Agencies (Non Mandatory)

| National Assessment and Accreditation Council (NAAC) | National Board of Accreditation (NBA) |

Source: [www.deloitte.com/in](http://www.deloitte.com/in) Report on Indian Higher Education Sector

Table 5: Regulatory environment for Higher Education

### 1.2 Evolution of Management Theory

The evolution in management theory over the last century is the history of the constantly changing role of leaders in organizations. As organizational leaders evolved from the carrot-and-stick wielding owner-managers of the earlier Industrial Era to the Servant Leaders of the 21st Century, the impact of individual leaders on organizations became progressively important. Whereas early managers could rely on authority and strong-arm tactics to reach their goals, servant leaders in our time are challenged to set personal examples by living the values and principles they wish their followers to achieve.
Early Management and the study of management

Although great feats of human achievement such as the Egyptian pyramids, the Great Wall of China, the Colosseum in Rome and the Taj Mahal in India all bear testimony to skilled management in ancient times, the formal study of management only began late in the 19th century.

The main driving force behind this development of management as a science was the transition from 19th century “entrepreneurial capitalism” to early 20th century “managerial capitalism”. Whereas the first capitalists were business owners who used their own finances to fund organizations that they managed themselves, rapid industrial growth saw the formation of large organizations with capital often provided by outsiders. This not only “widened the gap” between owners or shareholders and management, it also brought new management challenges (Smit & Cronjé, 2002, p34-35; George, 1968).

Scientific Management

One of the early pioneers of management theory was Frederick W. Taylor (1856-1915), a mechanical engineer who believed that it was management’s task to design jobs properly and to provide incentives to motivate workers to achieve higher productivity.

While working at the Midvale Steel Company in Philadelphia, Taylor developed a new, and at the time radical approach to managing, known as scientific management. He conducted studies into how workers or
machines performed tasks, measuring and analyzing each measurable aspect of the work. He then determined standard times and sequences for the completion of each task. With this information, Taylor provided managers with realistic production standards per man- and machine-hour.

Taylor's scientific management changed the role of managers from being run-of-the-mill whip men to specialized foremen who were adequately equipped to supervise each phase of the production process. On a larger scale, he revolutionized managerial thought and laid the foundation for the formation of many other management systems in decades to come.

Taylorism involved breaking down the components of manual tasks in manufacturing environments, timing each movement ('time and motion' studies) so that there could be a proven best way to perform each task. Thus employees could be trained to be 'first class' within their job. This type of management was particularly relevant to performance drives e.g. 'Action On' projects.

This was a rigid system where every task became discrete and specialized. It is fair to suggest that this is unlikely to be of value to the NHS with the Modernisation agenda suggesting that we should have a flexible workforce.

Key points about Taylor, who is credited with what we now call 'Taylorism':
- he was in the scientific management school

- his emphases were on efficiency and productivity

- but he ignored many of the human aspects of employment

For the managers, scientific management required them to:

- develop a science for each operation to replace opinion and rule of thumb

- determine accurately from the science the correct time and methods for each job (time and motion studies)

- set up a suitable organisation to take all responsibility from the workers except that of the actual job performance

- select and train the workers (in the manner described above)

- Accept that management itself be governed by the science deployed for each operation and surrender its arbitrary powers over the workers, i.e. cooperate with them.

For the workers, scientific management required them to:

- Stop worrying about the divisions of the fruits of production between wages and profits.

- Share in the prosperity of the firm by working in the correct way and receiving wage increases.

- give up their idea of time wasting and co-operate with the management in developing the science
- accept that management would be responsible for determining what was done and how

- agree to be trained in new methods where applicable

The **benefits** (mainly for the management) arising from scientific management can be summarized as follows:

- its rational approach to the organizational work enables tasks and procedures to be measured with a considerable degree of accuracy

- measurement of paths and processes provide useful information on which to base improvements in working methods, plant design, etc

- improving work methods brought enormous increases in productivity

- it enabled employees to be paid by results and to take advantage of incentive payments

- It stimulated management into adopting a more positive role in leadership at shop floor level.

- it contributed to major improvements in physical working conditions for employees

- it provided the formation for modern work studies

The **drawbacks** were mainly for the workers:

- it reduced the worker's role to that of a rigid adherence to methods and procedures over which he/she had no discretion
- it led to increased fragmentation of work due to its emphasis on divisional labour

- it generated an economically based approach to the motivation of employees by linking pay to geared outputs

- it put the planning and control of workplace activities exclusively in the hands of the managers

- it ruled out any realistic bargaining about wage rates since every job was measured and rated 'scientifically'

Therefore, in summary, while the scientific management technique has been employed to increase productivity and efficiency both in private and public services, it has also had the disadvantages of ignoring many of the human aspects of employment. This led to the creation of boring repetitive jobs with the introduction of systems for tight control and the alienation of shop floor employees from their managers.

Taylorism prevailed in the ‘30s through to the early ‘60s - and in many organisations considerably later than this. Peters and Waterman in the 70s/80 and Senge late '80s/early '90s led us towards what we now call 'systems thinking' where the rights and potential wider contributions of employees received considerably greater emphasis.

The Administrative Approach

Across the Atlantic ocean Jules Henri Fayol (1841-1925), a fellow engineer and manager of a group of French mines, came to the conclusion that management was an activity common to all human
undertakings (including home, business, government, schools, etc.) and that all these undertakings needed five basic administrative functions (planning, organizing, commanding, coordinating and controlling). He argued that because management was an all-encompassing activity, it should be taught in schools, colleges and universities.

Fayol’s approach rejected the old notion that “managers are born, not made”, proposing instead that management is a skill which can be acquired if its principles are understood.

<p>| 1. Division of work | Reduces the span of attention or effort for any one person or group. Develops practice and familiarity |
| 2. Authority | The right to give an order. Should not be considered without reference to responsibility |
| 3. Discipline | Outward marks of respect in accordance with formal or informal agreements between firm and its employees |
| 4. Unity of command | One man superior |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Unity of direction</td>
<td>One head and one plan for a group of activities with the same objective</td>
<td></td>
</tr>
<tr>
<td>6. Subordination of individual interests to the general interest</td>
<td>The interests of one individual or one group should not prevail over the general good. This is a difficult area of management</td>
<td></td>
</tr>
<tr>
<td>7. Remuneration</td>
<td>Pay should be fair to both the employee and the firm</td>
<td></td>
</tr>
<tr>
<td>8. Centralisation</td>
<td>Is always present to a greater or less extent, depending on the size of the company and quality of its managers</td>
<td></td>
</tr>
<tr>
<td>9. Scalar chain</td>
<td>The line of authority from top to bottom of the organisation</td>
<td></td>
</tr>
<tr>
<td>10. Order</td>
<td>A place for everything and everything in its place; the right man in the right place</td>
<td></td>
</tr>
<tr>
<td>11. Equity</td>
<td>A combination of kindliness and justice towards the employees</td>
<td></td>
</tr>
</tbody>
</table>
12. Stability of tenure of personnel

Employees need to be given time to settle into their jobs, even though this may be a lengthy period in the case of the managers

13. Initiative

Within the limits of authority and discipline, all levels of staff should be encouraged to show initiative

14. Esprit de corps

Harmony is a great strength to an organisation; teamwork should be encouraged

Table 6: Fayol’s Administrative approach

Advantages

- Fayol was the first person to actually give a definition of management which is generally familiar today namely ‘forecast and plan, to organise, to command, to co-ordinate and to control’.

- Fayol also gave much of the basic terminology and concepts, which would be elaborated upon by future researchers, such as division of labour, scalar chain, unity of command and centralization.

Disadvantages

- Fayol was describing the structure of formal organizations.
• Absence of attention to issues such as individual versus general interest, remuneration and equity suggest that Fayol saw the employer as paternalistic and by definition working in the employee's interest.

• Fayol does mention the issues relating to the sensitivity of patients’ needs, such as initiative and 'esprit de corps', he saw them as issues in the context of rational organisational structure and not in terms of adapting structures and changing people's behaviour to achieve the best fit between the organisation and its customers.

• Many of these principles have been absorbed into modern day organisations, but they were not designed to cope with conditions of rapid change and issues of employee participation in the decision making process of organisations, such as are current today in the early 21st century.

**The Bureaucratic Approach**

Max Weber (1864-1920) was a German sociologist who approached management by focusing on organizational structure, dividing organizations into hierarchies with clear lines of authority and control. This meant that managers were given “legal authority” based on their position in the organizational structure, to enforce rules and policy (Smit & Cronjé, 2002, p41).

Weber’s bureaucratic system helped large organizations to function in a more stable, organized and systematic manner. However, by doing away with personality based or charismatic leadership, individuality and
creativity is often sacrificed. Bureaucratic leaders and workers are required to obey rules and do only what they are told. The result is that these leaders seldom think “outside the box” and therefore find it very difficult to adapt to changing environments and new challenges.

Bureaucracy in this context is the organisational form of certain dominant characteristics such as a hierarchy of authority and a system of rules.

Bureaucracy in a sense of red tape or officialdom should not be used as these meanings are value-ridden and only emphasize very negative aspects of the original Max Weber model.

Through analyses of organisations Weber identified three basic types of legitimate authority: Traditional, Charismatic, Rational-Legal. Authority has to be distinguished from power in this discussion. Power is a unilateral thing - it enables a person to force another to behave in a certain way, whether by means of strength or by rewards. Authority, on the other hand, implies acceptance of the rules by those over whom it is to be exercised within limits agreeable to the subordinates that Weber refers to in discussing legitimate authority.

Weber presented three types of legitimate authority:

- Traditional authority: where acceptance of those in authority arose from tradition and custom.
- Charismatic authority: where acceptance arises from loyalty to, and confidence in, the personal qualities of the ruler.
- Rational-legal authority: where acceptance arises out of the office, or position, of the person in authority as bounded by the rules and procedures of the organization.

It is the rational-legal authority form that exists in most organisations today and this is the form to which Weber ascribed the term 'bureaucracy'.

The main features of bureaucracy according to Weber were:

- a continuous organisation or functions bounded by rules
- that individuals functioned within the limits of the specialisation of the work, the degree of authority allocated and the rules governing the exercise of authority
- a hierarchical structure of offices
- appointment to offices made on the grounds of technical competence only
- the separation of officials from the ownership of the organisation
- The authority was vested in the official positions and not in the personalities that held these posts. Rules, decisions and actions were formulated and recorded in writing.

It is not coincidence that Weber's writings were at a time of the major industrial revolutions and the growth of large complex organisations out of the cottage industries and/or entrepreneurial businesses.

The efficiency of this rational and logistical organisation shares a considerable amount of common ground with the thinking of Fayol. In
particular, features such as scalar chain, specialisation, authority and the definition of jobs which were so essential to successful management as described by Fayol, are typical of bureaucracy. There is also little doubt that Weber's ideas concerning specific spheres of competence and employment based on technical competence would have considerable appeal for Taylor's scientific managers.

Advantages

- Appointment, promotion and authority were dependent on technical competence and reinforced by written rules and procedures of promoting those most able to manage rather than those favoured to manage. We take a lot of this for granted in the UK today. Anything else is regarded as nepotism and corruption.
- The adoption of bureaucratic type of management systems allow organisations to grow into large complex organised systems that are focused towards formalised explicit goals.
- It cannot be stated strongly enough that the Weber theory has the advantage of being used as a 'gold standard' on which to compare and develop other modern theories.

Disadvantages

Subsequent analysis by other researchers have identified many disadvantages:

- Tendency for organisations to become procedure dominated rather than goal dominated.
- Tendency for heavily formalised organisational roles to suppress initiative and flexibility of the job holders.
- Rigid behaviour by senior managers can lead to standardised services that do not meet the needs of the client.
- Rigid procedures and rules are demotivating for the subordinates that work in the organizations.
- Exercise of control based on knowledge as advocated by Weber has led to the growth of 'experts' whose opinions and attitudes may frequently clash with those of the more generalised managers and supervisors.

The Human Relations Movement

Where Classical theorists were concerned with structure and mechanics of organisations, the theorists of human relations were, understandably, concerned with the human factors.

The foci of human relations theory is on motivation, group motivation and leadership.

At the centre of these foci are assumptions about relationship between employer and employee. Best summarised by Schein (1965) or Elton Mayo

- they were academic, social scientists
- their emphasis was on human behaviour within organisations
- they stated that people's needs are decisive factors in achieving an organisation's effectiveness
they were descriptive and attempted to be predictive of behaviour in organisations

A 'motive' = a need or driving force within a person.

The process of motivation involves choosing between alternative forms of action in order to achieve some desired end or goal

Figure 2: Process of Motivation – Human Relations Movement

Alternative forms of action of motivation depend on a manager’s assumptions about his/her subordinates:

<table>
<thead>
<tr>
<th>Prime Motivators</th>
<th>Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Rational-economic man</td>
<td>Basis of Classical, especially, Taylor/Scientific</td>
</tr>
<tr>
<td>Self-interest and maximisation of gain</td>
<td></td>
</tr>
</tbody>
</table>

Source: http://www.healthknowledge.org.uk/public-health-textbook/organisation-management/5c-management-change/basic-management-models
Elton Mayo (1880-1949) was a Harvard professor who proposed that managers should become more “people-orientated” (Smit & Cronjé, 2002, p43). Conducting experiments on conditions in the workplace and incorporating the well-published findings of the Hawthorne Studies, Mayo declared that “logical factors were far less important than emotional factors in determining productive efficiency” (George, 1968, p129). He concluded that participation in social groups and “group pressure”, as opposed to organizational structures or demands from management, had the strongest impact on worker productivity (Smit & Cronjé, 2002, p43).

Mayo’s findings once again revolutionized the role of managers in organizations. The work performed by individuals has to satisfy their “personal, subjective” social needs as well as the company’s productive
requirements. He and other proponents of this movement therefore called for managers to “accept a new role” in their relationship with workers; develop a new concept of authority; and help foster a new social order in the workplace (George, 1968). In practice managers were encouraged to consult workers about change, take note of their views, and to show concern for their physical and mental health (Wren, 2005, p. 293).

**Hawthorne Studies**

The ground-breaking Hawthorne studies carried out in the Hawthorne plant of the Western Electric Company (USA) 1927 - 32.

Stage 1 (1924 -27)
Study of the physical surroundings (lighting level) on productivity of workers. Control group and experimental group previously had similar productivity before study began

Control Group = constant lighting level
Experimental Group = varied lighting level

Result
Both groups productivity increased - even when experimental group was working in dim light

Product leader called Mayo and colleagues to explain

Stage 2 (1927 - 29) ‘Relay assembly room stage'
Still analysing effect of physical surroundings (rest, pauses, lunch break duration, length of working week) on output
Result
Output increased even when worsening conditions
Hypothesis was now that it was the attitudes of subjects at work and not the physical conditions. This gave rise to the 'Hawthorne Effect' - employees were responding not so much to changes in the environment as to the fact they were the centre of attention - a special group.

Stage 3 (1928 - 30)
A Total of 20,000 interviews were collected with the workers on employee attitudes to working conditions, their supervision and their jobs.

Stage 4 (1932) 'Bank winning observation room'
This time the new subjects (14 men) put in separate room for six months

Result
Productivity restricted due to pressure from peers to adopt a slower rate to circumvent company wages incentive scheme to generally adopt own group rules and behaviour

Advantages
- first real attempt to undertake genuine social research in industrial setting
- individuals cannot be treated in isolation, but function with group members
- that individual motivation did not primarily lie in monetary or physical condition, but in need and status in a group
- the strength of informal (as opposed to formal) groups demonstrated a behaviour of workers (formal supervisors were powerless in Stage 4)
- it highlighted need for supervisors to be sensitive and cater for social needs of workers within the group

Disadvantages

- from 1930s - 1950s some doubt was cast on the increased applicability of these theories to every day working life

**Servant Leadership**

Although the concept of servant-leadership is found in the Bible and might even date further back into antiquity, it was first proposed as a management approach by Peter Greenleaf (1904-1990) in his book Servant Leadership (Smit & Cronje, 2002). He explained that becoming a servant-leader “begins with the natural feeling that one wants to serve” followed by the aspiration to lead (Carroll, 2005).

This approach completely revolutionized the role of managers in organizations as it calls for leaders to place the priorities and needs of their followers before their own or that of the organization. It also differentiates clearly between the functions of leadership and management, although the ideal is that modern day servant leader / managers should be able to perform both functions simultaneously.
Servant-leadership “encourage collaboration, trust, foresight, listening, and the ethical use of power and empowerment as a way of improving the life of the individuals and/or the organizations” (Hartley p288). According to Greenleaf, the ultimate test for successful servant leadership is whether or not followers have grown as persons as a result of being served – becoming “healthier, wiser, freer, more autonomous and more likely themselves to become servants”.

**Neo-Human Relations Theory**

This group had social psychologists who developed more complex theories:

- Maslow
- McGregor (theory X and theory Y)
- Likert
- Argyris

Maslow is often-quoted still today, having developed a seminal theory of the needs of human beings. Herzberg's and McGregor's neo-human relations theories both focus on motivation and leadership, but their theories are, as we shall see, very different.

In this group we find a particular focus on human motivation including:

- satisfaction
- incentive
- intrinsic
Maslow (1943) - This psychologist, from his studies, proposed a hierarchy of human needs building from basic needs at the base to higher needs at the top.

Source: http://www.healthknowledge.org.uk/public-health-textbook/organisation-management/5c-management-change/basic-management-models

Figure 3: Maslow's Hierarchy of Needs

1. Maslow made assumptions that people need to satisfy each level of need, before elevating their needs to the next higher level e.g. a hungry person's need is dominated by a need to eat (i.e. survival), but not to be loved, until he/she is no longer hungry.

2. Today the focus in most Western societies is on the elements towards the top of Maslow's hierarchy - in which work environments and 'jobs' (including 'having a job' and the satisfaction or otherwise such jobs provide - have become typical features. Notably the
attainment of self-esteem and, at the very top of the hierarchy, what Maslow calls 'self-actualisation' - fundamentally the synthesis of 'worth', 'contribution' and perceived 'value' of the individual in society.

Advantages

- Managers can/should consider the needs and aspirations of individual subordinates.

Disadvantages

- The broad assumptions in 2 above have been disproved by exceptions e.g. hungry, ill artist working in a garret.
- Empirical research over the years has not tended to support this theoretical model.

Regarding monetary reward, sometimes beyond certain level of pays (e.g. consultant) other things become more important than another £1000 a year e.g. working conditions, boss, environment etc.

**McGregor (Theory X and Theory Y)**

Managers were perceived by McGregor, whose theories are still often quoted, to make two noticeably different sets of assumptions about their employees.

<table>
<thead>
<tr>
<th>Theory X (essentially 'scientific' management)</th>
<th>Theory Y</th>
</tr>
</thead>
</table>

35
<table>
<thead>
<tr>
<th>Lazy</th>
<th>Like working</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoid responsibility</td>
<td>Accept/seek responsibility</td>
</tr>
<tr>
<td>Therefore need control/coercion</td>
<td>Need space to develop imagination/ingenuity</td>
</tr>
<tr>
<td>Schein type: ‘rational economic man’</td>
<td>Schein type: ‘self-actualising man’</td>
</tr>
</tbody>
</table>

Table 8: Theory X & Theory Y comparison

Advantages

- Identifies two main types of individual for managers to consider and how to motivate.

Disadvantages

Only presents two extremes of managerial behaviour.

200 engineers and accountants were asked to recall the times/occasions when they experienced satisfactory and unsatisfactory feeling about their jobs. Later this also involved manual and clerical staff similar results claimed:

Herzberg showed two categories of findings:

Motivators - factors giving rise to satisfaction

Hygiene factors - factors giving rise to dissatisfaction
<table>
<thead>
<tr>
<th>Important Motivators</th>
<th>Important Hygienes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement</td>
<td>Company policy and recognition</td>
</tr>
<tr>
<td>Recognition</td>
<td>Supervision - the technical aspects</td>
</tr>
<tr>
<td>Work itself</td>
<td>Salary</td>
</tr>
<tr>
<td>Responsibility</td>
<td>Interpersonal relations - supervision</td>
</tr>
<tr>
<td>Advancement</td>
<td>Working conditions</td>
</tr>
</tbody>
</table>

**Other features include:**

<table>
<thead>
<tr>
<th>Motivators</th>
<th>Hygiene Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>related to content of work</td>
<td>related to context/environment of work</td>
</tr>
<tr>
<td>promote satisfaction</td>
<td>only prevent dissatisfaction</td>
</tr>
<tr>
<td>only neo-human school attempts to address these</td>
<td>Taylor (salary) + Mayo (interpersonal relations) look at these</td>
</tr>
</tbody>
</table>

Table 9a & b: Herzberg’s Motivators and Hygiene factors
Advantages

- Herzberg’s work led to a practical way to improve motivation, which had, up to that point, been dominated by Taylorism (salary, wages). In particular ‘job enrichment’ programs mushroomed. The aim of these was to design work and work structures to contain the optimum number of motivators.

- This approach counters the years of Taylorism, which sought to break down work into its simplest components and to remove responsibility from individuals for planning and control.

Disadvantages

- There remain doubts about Herzberg’s factors applicability to non-professional groups, despite the fact that some of his later studies involved the clerical and manual groups. The numbers were in these categories though were small and many researchers still argue about the results in these groups.

- Social scientists argue about the validity of his definition of ‘job satisfaction’

Likert

Likert described ‘new patterns of management’ based on the behaviours of managers.
Four main patterns:

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Exploitative - Authoritative</td>
<td>Where power and direction come from the top downwards, where threats and punishment are employed, where communication is poor and teamwork non-existent. Productivity is typically mediocre.</td>
</tr>
<tr>
<td>2. Benevolent - Authoritative</td>
<td>Similar to the above but allows some upward opportunities for consultation and some delegation. Rewards may be available as well as threats. Productivity is typically fair to good but at cost of considerable absenteeism and turnover.</td>
</tr>
<tr>
<td>3. Consultative</td>
<td>Where goals are set or orders issued after discussion with subordinates, where communication is upwards and downwards and where teamwork is encouraged, at least partially.</td>
</tr>
</tbody>
</table>

Rational economic man

Weaker version of 'rational economic man'

'Social man'
Some involvement of employees as a motivator

4. Participative - group is reckoned by many to be the ideal system. Under this system, the keynote is participation, leading to commitment to the organisation's goals in a fully co-operative way. Communication is both upwards, downwards and lateral. Motivation is obtained by a variety of means. Productivity is excellent and absenteeism and turnover are low

Table 10: Likert's “new patterns of management”

Another useful way of looking at this is that (1) is a highly task-orientated management style, whereas (4) is a highly people-orientated management style.

Advantages

Essentially Likert's work gives more alternatives in the spectrum between Theory X and Theory Y of McGregor
Disadvantage

Criticised for being based more on theory than empirical practice. Therefore not widely accepted by practising managers.

Argyris

Studied the needs of people and the needs of organisation. He felt that classical models of organisation promoted 'immaturity' (see below). He felt that it was important to understand the needs of people and integrate them with needs of organisation. Only in this way, he said, can employees become co-operative rather than defensive or aggressive

![Figure 4: Argyris’ characteristics of employee](image)

Advantages

- Argyris is moving here towards a 'contingency approach' i.e. remedy depends on diagnosing problems first
- He presents a spectrum rather than bipolar patterns of employees behaviour could be expected from immaturity to maturity. Certain behaviours of employees may be preferred
Disadvantages

- Still too centred around 'self-actualising man'. Viewed not to be applicable to production lines with manual workers, workers in sterile supplies, people manning phone helplines etc whose needs are perceived to be typically lower in Maslow's hierarchy of needs

System Theories

Attention began to focus on organisations as 'systems' with a number of inter-related sub-systems. The 'systems approach' attempted to synthesise the classical approaches ('organisations without people') with the later human relations approaches that focused on the psychological and social aspects, emphasised human needs - almost 'people without organisations'.

Systems theory focuses on complexity and interdependence of relationships. A system is composed of regularly interacting or interdependent groups of activities/parts that form the emergent whole.

Part of systems theory, system dynamics is a method for understanding the dynamic behaviour of complex systems. The basis of the method is the recognition that the structure of any system -- the many circular, interlocking, sometimes time-delayed relationships among its components -- is often just as important in determining its behaviour as the individual components themselves. Early systems theorists aimed at finding a general systems theory that
could explain all systems in all fields of science. The term goes back to Bertalanffy's basic work 'General Systems Theory'. Sociologists like Niklas Luhmann also worked towards a general systems theory. As of today, whilst no systems theory can live up to this claim, there are general system principles which are found in all systems. For example, every system is an interaction of elements manifesting as a whole. Miller and Rice likened the commercial and industrial organisation to biological organisms.

Systems theories took much more of an holistic view of organisations, focusing on the total work organisation and the inter-relationships between structures and human behaviours producing a wide range of variables within organisations. They help us understand the interactions between individuals, groups, organizations, communities, larger social systems, & their environments and help us enhance our understanding of how human behaviour operates in a context.

A system is a part, and it is a whole, at the same time.

An example of this in the Modern NHS is care pathways for patients which will often require a range of health disciplines to work together and will often also include professionals from social services or the local authority as well.

System Theory Key Terms:

Boundary - an imaginary line around system of focus. Regulates flow of energy (e.g. information, resources) into & out of the system.
Focal system - the system on which you are concentrating at any given time (e.g.: a manufacturing plant or a family).

Subsystem - a part of the focal system (e.g., in a family, it may be children or parents), sometimes referred to as 'sibling subsystem' & 'parental subsystem').

Suprasystem - is external to focal system; it is its environment. May include place of employment, school, neighbourhood, church, social service system.

Open system - Relatively open systems have a freer exchange of information and resources within the system and also allow relatively free passage of energy from and to the outside of the system.

Closed system - is more self-contained & isolated from their environment.

The business organisation is an Open System: there is continual interaction with the broader external environment of which it forms a part, The systems approach considers the organisation within its total environment and emphasises the importance of 'multiple channels of interaction'. Thus the systems approach views organisations as a whole and involves the study of the organisation in terms of the relationship between technical and social variables with the systems. Thus changes in one part, technical or social, will affect other parts and therefore the whole system.
It was Trist and others at the Tavistock Institute of Human relations who focused in on socio-technical systems arising from their study of the effects of changing technology in the coal-mining industries in the 1940s.

The following Timeline gives an interesting perspective to the development of Systems Theory:

- 1950 General Systems Theory (founded by Ludwig von Bertalanffy)
- 1970 catastrophe theory (René Thom, E.C. Zeeman) Branch of mathematics that deals with bifurcations in dynamical systems, classifies phenomena characterized by sudden shifts in behavior arising from small changes in circumstances.
- 1990 complex adaptive systems (CAS) (John H. Holland, Murray Gell-Mann, Harold Morowitz, W. Brian Arthur). The "new" science of complexity which describes emergence, adaptation and self-organization, all of which are basic system principles, was established mainly by researchers of the Santa Fe Institute (SFI). It is based on
agents and computer simulations and includes multi-agent systems (MAS) which have become an important tool to study social and complex systems.CAS are still an active field of research.

Tavistock Institute of Human Relations mentioned:

- organisation is an 'open system' with environment

- organisations are complex systems of people, task, technology

- technological environmental factors are just as important as social/psychological

**Contingency Theories**

From the late 1950s, a new approach to organisation theory was developed which became known as contingency theory. This theory argues that there is no 'one best way' to structure an organisation. An organisation will face a range of choices when determining how it should be structured, how it should be organised, how it should be managed. Successful organisations adopt structures that are an appropriate response to a number of variables, or contingencies, which influence both the needs of the organisation and how it works.

- these theories take a comprehensive view of people in organisations

- they recommend a diagnosis of people/ task/ technology/environment - then suggest the development of appropriate solutions
Contingency theorists have found that three contingencies are particularly important in influencing an organisation's structure. These are:

- Its size
- The technology it uses
- Its operating environment.

There are two significant implications of contingency theory:

- If there is no 'one best way', then even apparently quite similar organisations, for example, two nearby colleges, may choose significantly different structures and still survive, be reasonably successful in achieving their missions, and so on
- If different parts of the same organisation are influenced in different ways by the contingencies bearing upon them, then it may be appropriate for them to be structured differently, for example, one university department may have a functional structure, whilst another may have a matrix structure

As a summary, the role and responsibilities of leaders in organizations has undergone some radical changes over the last 100 years. Evolving from the strong-armed bosses of early entrepreneurial capitalism to bureaucrats whose authority rested in their organizational position, to leaders who have to find new ways to convince employees to follow them in the quick-changing information era, the challenges and opportunities for leadership is perhaps now greater than ever.
1.3 University Grants Commission

Genesis

From ancient Bharat to modern India, higher education has always occupied a place of prominence in Indian history. In ancient times, Nalanda, Taxila and Vikramasila universities were renowned seats of higher learning, attracting students not only from all over the country but from far off countries like Korea, China, Burma (now Myanmar), Ceylon (now Sri Lanka), Tibet and Nepal. Today, India manages one of the largest higher education systems in the world*.

The present system of higher education dates back to Mountstuart Elphinstone's minutes of 1823, which stressed on the need for establishing schools for teaching English and the European sciences. Later, Lord Macaulay, in his minutes of 1835, advocated "efforts to make natives of the country thoroughly good English scholars". Sir Charles Wood's Dispatch of 1854, famously known as the 'Magna Carta of English Education in India', recommended creating a properly articulated scheme of education from the primary school to the university. It sought to encourage indigenous education and planned the formulation of a coherent policy of education. Subsequently, the universities of Calcutta, Bombay (now Mumbai) and Madras were set up in 1857, followed by the University of Allahabad in 1887.
The Inter-University Board (later known as the Association of Indian Universities) was established in 1925 to promote university activities, by sharing information and cooperation in the field of education, culture, sports and allied areas.

The first attempt to formulate a national system of education in India came in 1944, with the Report of the Central Advisory Board of Education on Post War Educational Development in India, also known as the Sargeant Report. It recommended the formation of a University Grants Committee, which was formed in 1945 to oversee the work of the three Central Universities of Aligarh, Banaras and Delhi. In 1947, the Committee was entrusted with the responsibility of dealing with all the then existing Universities.

Soon after Independence, the University Education Commission was set up in 1948 under the Chairmanship of Dr. S Radhakrishnan “to report on Indian university education and suggest improvements and extensions that might be desirable to suit the present and future needs and aspirations of the country”. It recommended that the University Grants Committee be reconstituted on the general model of the University Grants Commission of the United Kingdom with a full-time Chairman and other members to be appointed from amongst educationists of repute.

In 1952, the Union Government decided that all cases pertaining to the allocation of grants-in-aid from public funds to the Central Universities and other Universities and Institutions of higher learning might be
referred to the University Grants Commission. Consequently, the University Grants Commission (UGC) was formally inaugurated by late Shri Maulana Abul Kalam Azad, the then Minister of Education, Natural Resources and Scientific Research on 28 December 1953.

The UGC, however, was formally established only in November 1956 as a statutory body of the Government of India through an Act of Parliament for the coordination, determination and maintenance of standards of university education in India. In order to ensure effective region-wise coverage throughout the country, the UGC has decentralised its operations by setting up six regional centres at Pune, Hyderabad, Kolkata, Bhopal, Guwahati and Bangalore. The head office of the UGC is located at Bahadur Shah Zafar Marg in New Delhi, with two additional bureaus operating from 35, Feroze Shah Road and the South Campus of University of Delhi as well.

**Mandate**

The UGC has the unique distinction of being the only grant-giving agency in the country which has been vested with two responsibilities: that of providing funds and that of coordination, determination and maintenance of standards in institutions of higher education.

The UGC's mandate includes:

- Promoting and coordinating university education.
- Determining and maintaining standards of teaching, examination and research in universities.
- Framing regulations on minimum standards of education.
- Monitoring developments in the field of collegiate and university education; disbursing grants to the universities and colleges.
- Serving as a vital link between the Union and state governments and institutions of higher learning.

Advising the Central and State governments on the measures necessary for improvement of university education.

1.4 Professional Council

Professional councils are responsible for recognition of courses, promotion of professional institutions and providing grants to undergraduate programmes and various awards. The statutory professional councils are:

- All India Council of Technical Education (AICTE)
- Medical Council of India (MCI)
- Indian Council for Agricultural Research (ICAR)
- National Council for Teacher Education (NCTE)
- Dental Council of India (DCI)
- Pharmacy Council of India (PCI)
- Indian Nursing Council (INC)
- Bar Council of India (BCI)
- Central Council of Homeopathy (CCH)
- Central Council for Indian Medicine (CCIM)
- Council of Architecture
- Distance Education Council (DEC)
- Rehabilitation Council
- National Council for Rural Institutes (NCRI)
- State Councils of Higher Education (SCHE)

1.5 All India Council of Technical Education

Overview

Technical education in India contributes a major share to the overall education system and plays a vital role in the social and economic development of our nation. In India, technical education is imparted at various levels such as: craftsmanship, diploma, degree, post-graduate and research in specialized fields, catering to various aspects of technological development and economic progress.

The beginning of formal Technical Education in India can be dated back to the mid-19th Century. The major policy initiatives in the pre-independence period included appointment of the Indian Universities Commission in 1902, issue of the Indian Education policy resolution in 1904 and the Governor General’s policy statement of 1913 stressing the importance of Technical Education, the establishment of IISc in Bangalore, Institute for Sugar, Textile and Leather Technology in Kanpur, N.C.E. in Bengal in 1905 and Industrial schools in several provinces. Significant developments include:

- Constitution of the Technical Education Committee of the Central Advisory Board of Education (CABE) of 1943;
- Preparation of the Sergeant Report of 1944; and
- Formation of the All India Council for Technical Education (AICTE) in 1945 by the Government of India.

All India Council for Technical Education (AICTE) was set-up in November 1945 as a national level Apex Advisory Body to conduct survey on the facilities on technical education and to promote development in the country in a coordinated and integrated manner. And to ensure the same, as stipulated in, the National Policy of Education (1986), AICTE be vested with statutory authority for planning, formulation and maintenance of norms and standards, quality assurance through accreditation, funding in priority areas, monitoring and evaluation, maintaining parity of certification and awards and ensuring coordinated and integrated development and management of technical education in the country.

The Government of India (Ministry of Human Resource Development) also constituted a National Working Group to look into the role of AICTE in the context of proliferation of technical institutions, maintenance of standards and other related matters. The Working Group recommended that AICTE be vested with the necessary statutory authority for making it more effective, which would consequently require restructuring and strengthening with necessary infrastructure and operating mechanisms.

Pursuant to the above recommendations of the National Working Group, the AICTE Bill was introduced in both the Houses of Parliament
and passed as the AICTE Act No. 52 of 1987. The Act came into force w.e.f. March 28, 1988. The statutory All India Council for Technical Education was established on May 12, 1988 with a view to proper planning and coordinated development of technical education system throughout the country, the promotion of qualitative improvement of such education in relation to planned quantitative growth and the regulation and proper maintenance of norms and standards in the technical education system and for matters connected therewith.

The purview of AICTE (the Council) covers programmes of technical education including training and research in Engineering, Technology, Architecture, Town Planning, Management, Pharmacy, Applied Arts and Crafts, Hotel Management and Catering Technology etc. at different levels.

**AICTE - The Organisation**

In accordance with the provisions of the AICTE Act (1987), for the first five years after its inception in 1988, the Minister for Human Resource Development, Government of India was the Chairman of the Council. The first full time Chairman was appointed on July 2, 1993 and the Council was re-constituted in March 1994 with a term of three years. The Executive Committee was re-constituted on July 7, 1994 and All India Boards of Studies and Advisory Boards were constituted in 1994-95. Regional Offices of the Ministry of Human Resource Development, Government of India, located at Kolkata, Chennai, Kanpur and Mumbai were transferred to AICTE and the staff working at these offices were
also deputed to the Council on foreign service terms w.e.f. October 1, 1995. These offices functioned as secretariats of Regional Committees in the four regions (East, South, North and West). Three new Regional Committees in southwest, central and northwest regions with their secretariats located at Bangalore, Bhopal and Chandigarh respectively were also established on July 27, 1994. One more Regional Committee in South-Central region with its Secretariat at Hyderabad was notified on March 8, 2007.

The AICTE has its Headquarters in New Delhi and is presently housed in a building having a covered area of 12187 sq. ft. located on 7th Floor, Chanderlok Building, Janpath, New Delhi. Three Departments of the Council are housed in its own building having a covered area of 10630 sq. ft. at IV Floor, East Tower, NBCC Place, Pragati Vihar, New Delhi. The Government of India has allocated 5 acres land in the campus of Jawaharlal Nehru University, New Delhi, for constructing the administrative and other buildings of the Council.

The AICTE comprises of eight Departments, namely:

- Administration (Admin) Bureau
- Academic (Acad.) Bureau
- Engineering & Technology (E&T) Bureau
- Finance (Fin) Bureau
- Management & Technology (M&T) Bureau
- Planning and Co-ordination (PC) Bureau
- Quality Assurance (QA) Bureau
- Research and Institutional Development (R&D) Bureau

For each Bureau, Adviser is the Bureau Head who is assisted by technical officers and other supporting staff. The multidiscipline technical officers and staff of the Council are on deputation or on contract from various Government Departments, University Grants Commission, academic institutions etc.

1.6 Directorate of Technical Education, Maharashtra

Overview

The role of the Directorate is to maintain, enhance the standard, quality of technical education by laying the policies, establishing developing Govt. Institutions, guiding supervising the aided, private institutions, interacting with industry and national level institutions, co-ordinating with other departments of State Government, Government of India Statutory Organisations and to contribute to the development of industry society at large.

Vision

To become a world class, globally competitive, flexible and learning higher education institutions responsive to the individual, institutional and social developmental needs of the people of Maharashtra and India.
Mission

To integrate in a self-sustainable manner IT education and IT enabled education with the basic teaching, learning process and its management. The goal is to prepare the graduates for the knowledge-based economy, champion the cause of life long learning and stimulate the creation of world class resources through information technology.

Directorate of Industry-Institute Co-ordination (DIIC)

Directorate of Industry-institute Co-ordination was established in 1996 MHRD World Bank Project has been started to look after the quality improvement of the faculty, staff as well as the students and the efficiency enhancement of Technical Education system (TES) in total. This is a separate Directorate to manage the externally funded projects for total quality management (TQM) of TES of Maharashtra.

Staff Development Program

Staff Development cells are established at six lead centre polytechnics in Maharashtra state. These cells have identified training need & training facilities and design need based training programmes for the teaching faculties and supporting staff. About 475 faculty members have been trained in various areas like educational technology, content updating, computer, MIS, entrepreneurship, educational management etc. with the help of TTTI Bhopal, IIT Bombay and National Institute of Industrial Engg. Bombay.
Sufficient numbers of teachers are being deputed for post graduates and post-doctoral programmes, every year. Foreign fellowship programmes are also being arranged for senior administrators and teachers engaged in teaching high-tech courses.

Industry Institute Interaction

With fast growing needs of the industries for man-power with specialisation in specific areas it became necessary to have proper interaction with the industry. Therefore special 28 Industry Institute Interaction Cells have been established in Institutions. The main function of the cell is to promote interrelationship between industry & institution through training programmes, visiting faculty from industry, industrial visits & practical training etc.

These cells are establishing liaison with industries around for the benefit of students, teachers & support staff. A Memorandum of Understanding (M.O.U.) has been signed between confederation of Indian Industry and Directorate of Technical Education, Bombay for this purpose. Advisory committees are formed in all technical institutes for participation from industries & business houses.
Chapter 2

LITERATURE REVIEW

2.1 Survey of Literature related to B-school Learning

2.2 Survey of Literature related to Employability

2.3 Approaches and strategies for enhanced Learning and Employability

2.4 Summary of the main Literature Review findings

2.5 Research Gap
LITERATURE REVIEW

B-school education and its role in creating workforce for the industry have prompted numerous studies that compare learning approaches and identify methods to enhance employability. This chapter provides a comprehensive evaluation of empirical studies about B-school learning approaches and employability. The purpose of this literature review is to offer an overview of significant literature published on the topic related to B-school learning and employability. This literature review surveys scholarly articles, books and other sources (e.g. dissertations, conference proceedings, journals, working papers and research oriented web portals) relevant to the issues of B-school learning and employability of students. This chapter comprises research, theories, description, summary and critical evaluation of each work in the area of B-school learning and student employability.

This chapter provides the background to the current development and future trends of B-school learning and student employability with the aim of adding to our understanding, by surveying the contribution available and developing a research agenda.

The literature review is structured into five sections, as mentioned below:

2.1: Surveys the literature related to B-school learning with focus on stimulating the discussion on the conceptual and contextual issues involved in B-school education and the resulting outcomes
2.2: Surveys the literature related to Employability and relates it to B-school output making it contextual to the Indian scenario

2.3: Surveys the approaches and strategies involved in enhancing B-school learning outcomes and student employability

2.4: Summarizes the main findings of the Literature Review

2.5: Identifies the research gap and sets the research agenda

2.1 Survey of Literature related to B-school Learning

The sustained existence of B-schools hinges on continued delivery and evolution of learning that supports building an industry-relevant workforce. This section focuses on the survey of literature related to student learning outcomes and employability.

Alexander W. Astin in his book ‘Assessment for excellence: The philosophy and practice of assessment and evaluation in higher education” has stated that student learning outcomes are "those aspects of the student's development that the institution either does influence or attempts to influence through its educational programs and practices" (Astin 1991, 38). In regard to student learning, these outcomes describe specific knowledge, skills, and abilities that the student should demonstrate after they have finished their education (CHEA 2003, 5).

Dr. R. Gopal in his article, “Towards an Educated India: Innovations in Education” in the Free Press Journal, expressed that innovation is the very essence of success in all walks of life. In the field of education,
particularly in the Indian context, innovation is the need of the hour even for survival. This is more applicable for business education where output is linked to employability and there is stiff competition. It is in this context that B-school learning becomes critically linked to employability of students.

The CHEA (Council for Higher Education Accreditation of USA) Chronicle highlights that student learning outcomes are distinguished from institutional performance outcomes (the aggregated results of a program) in that they are focused on the performance of individual students (CHEA 2002, 2). Essentially, student learning outcomes are statements of expectation. They specify what a student is expected to be able to "do" after completing a particular learning activity, be it a particular lesson, course, or an entire program of study. The practical emphasis on a student's demonstrated knowledge, skills and abilities sets the learning outcomes approach apart from other forms based on less tangible goals, such as educational aims or objectives or assessment projects. By maintaining a student focus and a clear statement of what students are expected to be able to do as a result of their academic work, learning outcomes are intended to help students and instructors better understand what is expected of them (Terenzini 1989, 647).

Vygotsy's Social Development theory suggests that learning is an active, cognitive, student-centered and constructive process (Jonassen, 2004; Schunk, 2008). Learners are viewed as information creators, as they link new information to prior knowledge (Jonassen,
The “scaffolding” model has been used to guide improvement of instructional methods and to create effective sequences of learning experiences (Hammond, 2001; Walqui, 2006). The role of developmental courses is “to scaffold learning in ways that contribute to increased self-regulation and enhance student preparation for higher level study” (The California Center for Student Success, 2007, p. 18).

Dr. R. Gopal in the book, “Educating India”, edited by Nalini Menon and published by Study World, emphasised that the holistic development of a student is a must. Student pedagogy must include activities and methodologies through which students develop not only in their functional areas but also in the development of soft skills. This helps in the overall development not only as managers but also as responsible and responsive citizens. In this context, the curriculum design of B-school education becomes a critical focus area.

Sound curriculum development takes place when coherent sequences of learning experiences occur (Huball & Gold, 2007), and programs are reviewed to assess gaps, discrepancies, and redundancies, and to align objectives, content, and learning experiences (Diamond, 2008; Wolf, 2007). It is argued that students are more likely to demonstrate success when their learning outcomes, in sequenced courses, are well aligned and when students’ enrollment is consistent with the course sequences intended by faculty (Schwartz & Jenkins, 2007). How the material is taught and whether the material is introduced in a simple-to-complex manner to influence students’ learning is a key idea of the “scaffolding” model.
Introducing the “scaffolding” construct in curriculum design is believed to be beneficial to learners (Schunk, 2008). That is why a great emphasis has been placed on this topic in recent studies, such as a report from the Carnegie Foundation for the Advancement of Teaching (Bond, 2009), on exploring “good practices” and effective strategies of teaching basic skills. Scaffolding is a metaphor for a structure that is put into place to help learners reach their goals. Thus it represents the interactions between teachers and learners that enable the learner to do something beyond his or her independent efforts. The structure is “removed bit by bit as it is no longer needed” (Johassen, 2004, p. 815).

An effective educational program includes an analysis of student needs, a cohesive curriculum to address those needs, trained faculty, a thorough implementation process, and strong administrative support (Grubb & Cox, 2005). “Good practices” in education and skills training take many forms and include diverse policies, assessment instruments, and program elements (California Community Colleges, 2007; Levin & Calcagno, 2008; Perin, 2006). Programs can provide a range of experiences, from short-term learning modules to entire sequences of courses, from one-on-one tutoring, or supplemental instruction to computerized or group skill development sessions. Programs can be centralized and exist in stand-alone structures (Dale & Drake, 2005). These programs can be decentralized (“mainstreamed”), to allow faculty in a single department to teach both developmental and instructional courses (Perin, 2002; Raftery, 2005). No matter what kind of organizational structures the basic skills programs employ, research
suggests that holistic approaches be used for educational program
development and program implementation (Schwartz & Jenkins, 2007).

In addition to this, remediation may be most effective when it is
combined with other student support services and when it includes
cross-campus collaboration, institutional commitment to developmental
education and comprehensive faculty training. Basic skills curricula are
common across almost all institutions (Horn, McCoy, Campbell, &
Brock, 2009). While the carefully designed and sequenced basic skills
courses may be complemented and reinforced by other student support
services, it is critical that the sequences be carefully developed
(Schwartz & Jenkins, 2007). Once the curriculum has been aligned, it is
important to know to what degree students are following the course
sequences that form the foundation of the B-school educational
program.

Dr. R. Gopal in his article, “Towards an Educated India: Transforming
the Unemployable MBA into an Employable MBA” in the Free Press
Journal, highlights the necessity of a fine balance of soft skills like
negotiating skills, group working, empathy for the downtrodden etc. and
hard skills like knowledge in the areas of general management,
environment, economy & the implication of state policies, technology,
financial management and it’s link to marketing & other business
strategies. Overall the focus is on development of the student’s
behaviour which is ruthless yet humane in nature and also ethically
sound and transparent. Therefore this necessitates alignment of B-
school education with the changing dimensions of business and the global economy.

This literature review also focuses on the Learning Environment of B-schools. And it is interesting to note that the ‗The science of designing learning environments is currently remarkably under-developed‘, as argued by architect and CABE Commissioner Emeritus the late Richard Feilden in 2004. In a similar vein, Professor Stephen Heppell argued that ‗whereas, traditionally, we have designed for productivity, processing large numbers of children through the effective use of buildings, designing a room for learning is very complex. No one knows how to prevent ‗learning-loss‘ when you design a room ―pedagogically‖, whereas we know lots about designing for minimum heat loss‖.

Toby Greany, Campaign Leader – Learning Environment, Design Council, UK in the article ‗The Impact of School Environment – A Literature Review‘ mentions that it is striking to note that there is relative paucity of research on effective learning environments. Not only is the evidence incomplete, particularly in areas such as the systems and processes and communications approaches that schools need to underpin their physical environment, but the research that has been done seems to be largely predicated on a traditional view of ‗chalk and talk‘ learning in standardised ‗one-size-fits-all‘ institutions.

Maslow and Mintz (1956) found that participants in an ‗ugly‘ room made significantly less positive judgements about photographs than did the participants doing the same task in a ‗beautiful‘ room. In an
American college in the 1970s, Sommer and Olsen (1980) found that a renovated room, including soft furnishings and designed to be more friendly and attractive, seemed to increase student participation. They report that student participation rates in discussions and in asking questions during classes were 'two or three times as high' (op. cit, p.13) as in comparable classes taught in traditional rooms.

Professor David Hopkins, the Education Minister's Chief Advisor on School Standards in the UK, argued that 'Schools today have the responsibility for personalised learning and its design.' Personalised learning reflects a much broader and subtler view of learning than the 'chalk and talk' alternative. As globalisation and societal change transform the world we live in, the demands placed on learners and our education systems are changing to reflect this. At the same time our understanding of learning itself is changing.

Research on learning styles, formative assessment, multiple and emotional intelligences, constructivism and so on have combined with the rapid development of technology-enabled, peer-to-peer and self-directed learning to facilitate very different approaches to the students-in-rows model.

The UK Design Council's research also illustrates that the extent to which, and the ways in which, school users are engaged in the design process determines the successor failure of the resulting design. The message is clear. Educational building designs cannot be imposed nor bought off-the-shelf. Success lies in users being able to articulate a
distinctive vision for their school and then working with designers and architects to create integrated solutions. In a changing world no design solution will last forever, so the process of user involvement must be continually refreshed and iterated to support ongoing change. This approach has the added benefit of sustaining the meta-cognitive and motivational power of user involvement in creating the environment over time. In this context, identifying the impact of the Learning Environment which transcends across all the physical environmental domains like B-school classroom set-up, library facilities, IT infrastructure, residential facilities and sports facilities become critical to examine and understand their role on learning.

Another key area of B-schools is the director and faculty who are the nerve centre and backbone of the educational process. Dr. R. Gopal in his article, “Towards an Educated India: Sustainable strategies for a B-school in India” in the Free Press Journal, conclusively states that the Director of a B-school should both be given freedom to operate and a term of at least three to four years. Only then can the director grasp the key issues, plan and implement sustainable strategies. Dr. R. Gopal also illustrates in the same article, the challenges of faculty shortages in Indian B-schools and highlights that almost 30-40% of the total cost of running a B-school is spent on salaries of the faculty. However he points out that commitment and loyalty of faculty towards students is an area which needs to be worked upon through treating faculty as a family, co-creation of faculty, 360 degree faculty feedback, including encouraging faculty for research or summer internships in the
corporate world. In this context it becomes imperative to evaluate the impact of faculty on B-school learning.

Owing to the globalization, privatization & liberalization lot of changes are noticed in the functioning of industries. Naturally industries across the world are required to have the manpower with multi-skills rather than simply knowledge oriented. Western B-Schools are moulding their self & making the changes in their curricula as per the demand of industries. Top B-Schools are continuously changing the contents & delivery modes. It is equally imperative to Indian B-Schools to make management education context specific (Goutam G. Saha, 2012).

Dr. R. Gopal in his article, “Towards an Educated India: Academia-Industry partnership” in the Free Press Journal, effectively propounds that the extremely dynamic business world is driving the industry to improve workforce efficiency as personnel costs accounts for 20-30% of total per unit cost of any product. Therefore academia-corporate tie-up becomes crucial to go beyond placements and internships, to develop Day one ready employees through a symbiotic relationship. In this context it becomes important to evaluate the inter-linkages of learning with industry specific knowledge and skill sets.

2.2 Survey of Literature related to Employability

Brown, Hesketh, and Williams (2003), defined employability as “the relative chance of acquiring and maintaining different kinds of employment” (p. 111). For many people employability is simply about getting a job and the term is increasingly used carelessly and
 interchangeably with 'enterprise’ which in turn is confused with ‘entrepreneurship’ (Pool, L.D. 2007).

Hillage & Pollard (1998) suggest that - “In simple terms, employability is about being capable of getting and keeping fulfilling work. More comprehensively employability is the capability to move self-sufficiently within the labour market to realise potential through sustainable employment.”

They propose employability consists of four main elements. The first of these, a person’s ‘employability assets’ consists of their knowledge, skills and attitudes. The second, ‘deployment’ includes career management skills, including job search skills. Thirdly, ‘presentation’ is concerned with ‘job getting skills’, for example CV writing, work experience and interview techniques. Finally, Hillage & Pollard also make the important point that for a person to be able to make the most of their ‘employability assets’ a lot depends on their personal circumstances (for example family responsibilities) and external factors (for example the current level of opportunity within the labour market).

Bennett, Dunne & Carré (1999) proposed a model of course provision in higher education which included five elements: disciplinary content knowledge, disciplinary skills, workplace awareness, workplace experience and generic skills. This model goes some way towards including all the necessary elements to ensure a student achieves an optimum level of employability but is still missing some vital elements.
The **USEM** account of employability (Yorke & Knight, 2004, Knight & Yorke, 2004) is probably the most well known and respected model in this field. **USEM** is an acronym for four inter-related components of employability:

- **Understanding**
- **Skills**
- **Efficacy beliefs**
- **Metacognition**

The authors suggest that behind the USEM model is “an attempt to put thinking about employability on a more scientific basis, partly because of the need to appeal to academic staff on their own terms by referring to research evidence and theory…” (Knight & Yorke, 2004).

The USEM model forms part of a large body of research based, scholarly work on employability. However, this strength could also be perceived as a weakness in that it does not assist in explaining to non-experts in the field, particularly the students themselves and their parents, exactly what is meant by employability.

Dr. R. Gopal in his article, “Towards an Educated India: Transforming the Unemployable MBA into an Employable MBA” in the Free Press Journal, highlights that only 21 per cent of the MBAs produced in India are employable. Dr. Gopal emphasises the need for inculcating integrated knowledge with understanding of inter-linkages between various areas of business, communication skills for internal and
external interactions, high moral values, high commitment and long-term orientation towards their future customers.

The Centre for Employability (CfE) at the University of Central Lancashire (UCLan) in the UK has been developing practical solutions to enhance the prospects of students and graduates. As a consequence of the careers service origins of this unit, the main theoretical model which has underpinned this work has been the DOTS model (Law & Watts 1977), which consists of:

“Planned experiences designed to facilitate the development of:

- Decision learning – decision making skills
- Opportunity awareness – knowing what work opportunities exist and what their requirements are
- Transition learning – including job searching and self-presenting skills
- Self awareness – in terms of interests, abilities, values, etc.” (Watts, 2006).

The value of this model lies in its simplicity, as it allows individuals to organise a great deal of the complexity of career development learning into a manageable framework. However, the model has attracted some criticism. McCash (2006) argues that the model is over reliant on a mechanistic matching of person and environment and therefore underplays other critical issues such as social and political contexts. He also points out that there is an implication that failure to secure a ‘self-fulfilling’ occupation can be presented, or experienced, as the fault of
the unsuccessful individual. These criticisms overlook the fact that the elegant simplicity of the DOTS model is precisely why it has proved so enduring and popular. They also seem to suggest that students introduced to basic concepts of career development through DOTS, would be incapable of developing and learning about more sophisticated analyses through this simple introductory structure.

The concerns raised in the CfE about DOTS in relation to employability are different. For some time, it has become evident that the model has shortcomings when it is applied beyond careers education to the broader concept of employability. An early effort to capture the CfE definition of employability was reported in Hinchcliffe (2001):

“Reflecting the range of views we see Peter Sewell of the CLASS Faculty Centre for Employability making the career development case and defining employability as: Having a set of skills, knowledge and personal attributes that make a person more likely to secure, and be successful in their chosen occupation.”

The most recent articulation of this, which incorporates an important additional new element of ‘satisfaction’, stems from the recognition that from an individual’s perspective a person may be successful in their chosen occupation but not necessarily satisfied.

“Employability is having a set of skills, knowledge, understanding and personal attributes that make a person more likely to choose and secure occupations in which they can be satisfied and successful.”
This definition has been used as a starting point from which to develop a new theoretical and practical framework for employability called ‘The Key to Employability’ model.

It could be argued that in addition to drawing together the essential conceptual issues that underpin an understanding of the concept of employability, this model also provides a clear, visual answer to the simple question of what employability is. This has the benefit of not only articulating the concept of employability in a theoretically rigorous manner but doing so in a way that is easily accessible both to practitioners and students. The framework also opens up new opportunities for the development of assessment tools and research into the impact of various employability interventions.

Employability skills are defined as “transferable core skill groups that represent essential functional and enabling knowledge, skills and attitudes required by the 21st century workplace necessary for career success at all levels of employment and for all levels of education” (Overtoom, 2000, p. 2). Robinson (2006) indicated that leadership skills, communication skills and conflict management skills are some of the employability skills desired by employers.

According to Woods and King (2002), “effective communication is the lubricant that allows organizations to smoothly and productively operate” (p.191). They further contended “the payoff for effective communication is that managers and employees who develop strong communication skills are usually strong performers on the job” (p.191).
Employers are looking for employees who are good communicators (Coplin, 2003). Communication skills, which include listening skills, prominently top the list of qualities employers seek for entry-level jobs (McKay, 2005; Woods & King).

Communication skills include oral communication skills, written communications skills, listening skills, face-to-face communication skills and the ability to resolve conflicts positively (Woods & King, 2002). Evers, Rush and Berdrow (1998) defined oral communication as “the ability to present information verbally to others either one-to-one or in groups” (p. 85). They defined written communication as “effective transfer of written information, whether formally or informally” (p. 82). According to Coplin (2003), both written and oral communication skills are intended to promote mutual understanding among two or more people. Face-to-face communication skills involve the use of non-verbal communication skills such as eye contact, facial expression, yes-no nodding, head movement, hand signals, physical stance, hand gesture, etc (Evers et al.; Rampersad, 2001). All the above non-verbal communication skills help to clarify the transfer of information from the communicator to the audience.

In the industry, managers are constantly communicating. Communication skills are used for leading, interviewing, recruiting, training, coaching, motivating, evaluating, counselling, interacting with others, and for many other functions of an active manager (Woods & King, 2002).
Conflict management is an employability skill that requires effective communication skills. Conflict management is the ability to resolve conflicts between oneself and others, and/or the ability to resolve conflicts between other people (Evers et al., 1998). Resolving conflicts require good communication skills (Wood & King, 2002). Resolving conflicts or providing feedback to others is an important function of every manager. A manager who is bad with feedback often creates unintended conflicts within the organization. Most employees like to hear good news. Managers who communicate acceptable behaviours clearly and positively reinforce them can reduce conflicts since “their employees do the right things more often than not” (Wood & King, p. 197).

Students, educators and employers agree that an internship experience, which provides students with practical work experience and management competencies, is important for the success of management graduates (Tas, 1988; Walo, 2000).

Dr. R. Gopal in his article, “Measuring effectiveness of management education in B-school – Carving out a niche, creating competitive advantage” in Edutech, volume 1, issue 12, advocates live projects incorporating interaction with the industry, visits to medium and large-scale industrial organizations with an objective of understanding their functioning and Guest Lectures or industrial interactions, at a functional and corporate level. Dr. Gopal elaborates that the framework of an Indian MBA program is primarily based on American or European models. These prove to be inadequate in the Indian context. Hence
instead of cases from Harvard Business Review, case studies related to Indian or Asian companies are more appropriate for students.

Internships provide students the advantage to practice theoretical concepts learned in the classroom, examine career choices, know more about the industries’ skill requirements, and most importantly, develop hands-on workplace skills (Tas; Nelson & Dobson, 2001; Petrillose & Montgomery, 1998; Walo, 2000).

Many researchers also contended that internship helps students develop their employability competencies including leadership skills, human resources skills, oral and written communication skills, problem solving skills, interpersonal communication skills, teamwork, decision-making skills, and planning skills (Knight, 1984; Lebruto & Murray, 1994; Mariampolski, Spears & Vaden, 1980; McMullin, 1998; Walo, 2001).

Breiter and Clements (1996), in their study of higher education curriculum for management programs in the 21st Century, indicated that leadership competency is the most critical competency deserving high level of attention in management curriculum in the future. Many studies indicated that employers desired employees with employee-centered leadership competencies, especially in the areas of problem solving and teamwork (Andelt, Barrett & Bosshamer 1997; Kay & Russette 2000). Brown and Fritz (1993) indicated that today’s students need better leadership preparation to succeed in the workplace.
Ashley et al. (1995) set a major direction for this issue when the following question was asked: Should management education programs focus on general management skills or specific skills? They contended that teaching traditional skills is not enough to prepare students to be society-ready graduates. They suggested that education programs must include in its curricula, the skills needed to quickly adapt to changes (Ashley et al.). Some of the employability skills include problem solving skills, communication skills, critical thinking skills, teamwork, interpersonal skills and much more (Billing, 2003; Schmidt, 1999). 

Employers are readily urging higher educators to incorporate employability skills into students’ learning experiences (Atkins, 1999; Hewitt, 2005). 

Strategic administrative changes during the past 20 years have led to a new structure in the industry which allows entry-level and upper management to take care of customers faster and more efficiently. However, according to Lecours, (1993), these changes also require entry-level managers to conduct additional leadership functions (as cited in Miranda, 1999). Recruiters are now looking beyond the functions of entry-level management positions when hiring, to include elevated requirements for leadership progression within the organization (Cousin, 1992). According to Enz, Renaghan, and Geller (1993), management education should adhere to leadership role, providing society-ready graduates that are able to conduct business affairs and resolve management issues in the industry. Since leadership skills is very important to the industry leaders, the
preparation and development of management undergraduates' leadership skills for entry-level management positions in a rapidly growing and changing industry must be of vital interest to the management educators as well as the industry leaders. As the demands of the shareholders and patrons increase in an era of rapidly growing and changing industry, managers must maintain appropriate employability skills, which include some leadership skills and styles that would enable success.

Leadership skill is not the only employability skill that is deficient among college graduates. According to Brown, Hesketh and Williams (2003), employers urge college graduates to be more social and creative in the workplace. Andelt et al. (1997) indicated that communication skills such as the ability to listen and speak clearly are also very important to employers. Some other employability skills important to employers include the ability to supervise, coordinate, manage conflict, have a clear vision, be creative, innovate, adapt to change, lifelong learner, and motivate (Brashears, 1995; Evers et al., 1998; Rainbird, 2000). Since employability skills is very important to industry leaders, this study intends to investigate the linkage of B-school education and student employability and identify the critical success factors that enhance both these vital outputs of a B-school stint.

Dr. R. Gopal in his article, “Towards an Educated India: Imperatives of Character Education” in the Free Press Journal, sums up the vital ingredient of a student’s lifelong success which is Character education - A process that encourages the students to develop fundamental
moral and cultural values that affect their behaviour throughout in life, rather than be just smart in lessons or in business. Dr. R. Gopal’s golden words eulogize the role of the faculty – the first contact, the management of the institution and finally the society, in building character education in B-schools.

2.3 Approaches and strategies for enhanced learning and employability

Authentic learning typically focuses on real-world, complex problems and their solutions, using role-playing exercises, problem-based activities, case studies, and participation in virtual communities of practice. The learning environments are inherently multidisciplinary. They are “not constructed in order to teach geometry or to teach philosophy. A learning environment is similar to some ‘real world’ application or discipline: managing a city, building a house, flying an airplane, setting a budget, solving a crime, for example” (Downes, S., 2007). Going beyond content, authentic learning intentionally brings into play multiple disciplines, multiple perspectives, ways of working, habits of mind, and community.

Students immersed in authentic learning activities cultivate the kinds of “portable skills” that newcomers to any discipline have the most difficulty acquiring on their own:

- The judgment to distinguish reliable from unreliable information
- The patience to follow longer arguments
• The synthetic ability to recognize relevant patterns in unfamiliar contexts
• The flexibility to work across disciplinary and cultural boundaries to generate innovative solutions (Jenkins, H. et al 2006)

Learning researchers have distilled the essence of the authentic learning experience down to 10 design elements, providing educators with a useful checklist that can be adapted to any subject matter domain (Reeves, T. C. et al 2002).

1. **Real-world relevance:** Authentic activities match the real-world tasks of professionals in practice as nearly as possible. Learning rises to the level of authenticity when it asks students to work actively with abstract concepts, facts, and formulae inside a realistic—and highly social—context mimicking “the ordinary practices of the [disciplinary] culture.” (Brown, J. S. et al 1988).

2. **Ill-defined problem:** Challenges cannot be solved easily by the application of an existing algorithm; instead, authentic activities are relatively undefined and open to multiple interpretations, requiring students to identify for themselves the tasks and subtasks needed to complete the major task.

3. **Sustained investigation:** Problems cannot be solved in a matter of minutes or even hours. Instead, authentic activities comprise complex tasks to be investigated by students over a sustained period of time, requiring significant investment of time and intellectual resources.

4. **Multiple sources and perspectives:** Learners are not given a list of resources. Authentic activities provide the opportunity for
students to examine the task from a variety of theoretical and practical perspectives, using a variety of resources, and requires students to distinguish relevant from irrelevant information in the process.

5. **Collaboration:** Success is not achievable by an individual learner working alone. Authentic activities make collaboration integral to the task, both within the course and in the real world.

6. **Reflection (metacognition):** Authentic activities enable learners to make choices and reflect on their learning, both individually and as a team or community.

7. **Interdisciplinary perspective:** Relevance is not confined to a single domain or subject matter specialization. Instead, authentic activities have consequences that extend beyond a particular discipline, encouraging students to adopt diverse roles and think in interdisciplinary terms.

8. **Integrated assessment:** Assessment is not merely summative in authentic activities but is woven seamlessly into the major task in a manner that reflects real-world evaluation processes.

9. **Polished products:** Conclusions are not merely exercises or substeps in preparation for something else. Authentic activities culminate in the creation of a whole product, valuable in its own right.

10. **Multiple interpretations and outcomes:** Rather than yielding a single correct answer obtained by the application of rules and procedures, authentic activities allow for diverse interpretations and competing solutions.
Educational researchers have found that students involved in authentic learning are motivated to persevere despite initial disorientation or frustration, as long as the exercise simulates what really counts—the social structure and culture that gives the discipline its meaning and relevance (Herrington, J. et al 2003). The learning event essentially encourages students to compare their personal interests with those of a working disciplinary community: “Can I see myself becoming a member of this culture? What would motivate me? What would concern me? How would I work with the people around me? How would I make a difference?”

Colleges and universities across the country are turning to authentic learning practices and putting the focus back on the learner in an effort to improve the way students absorb, retain, and transfer knowledge.

Authentic learning aligns with research into the way the human mind turns information into useful, transferable knowledge. Cognitive scientists are developing a comprehensive portrait of the learner. Three principles illustrate the alignment between learning research and authentic learning:

- **Learners look for connections:** When we approach a subject for the first time, we immediately try to perceive the relevance of the new concept to our lived experience. When a new piece of information simply doesn’t fit in any of our existing knowledge structures (or “schemas”), it is often rejected. This means that the more
encouragement a learner has to become invested in material on a personal level, the easier it will be to assimilate the unfamiliar.

- **Long-lived attachments come with practice:** Concepts need to be “aired” repeatedly and regularly, defended against attack, deployed in new contexts, and associated with new settings, activities, and people. Otherwise, the attachment is broken and the information lost (Bahr, N., & Rohner, C. 2004)

- **New contexts need to be explored:** The concepts being learned are always part of a much larger “learning event” and are directly linked in the learner’s mind with social circumstances—the setting, the activities, the people (Bereiter, C. & Scardamalia, M. 1985).

Along with this emerging learner profile, cognitive scientists are studying the mind-set of the educator or subject matter expert, with some illuminating results.

- **Experts have blind spots:** Most faculty receive little or no training in the art and science of instruction and tend to rely on their intuitions about how novices learn. Current learning research demonstrates that those intuitions are commonly faulty simply because the instructor is an expert in the field. The longer experts continue to work in their discipline, the further removed they become from the perspective of the novice. Known as “the expert’s blind spot,” this inability to recognize (or empathize with) beginning students’ difficulties can lead expert instructors to teach in a manner that makes sense from their perspective but not necessarily from the student’s perspective.
• **Educators evoke feelings:** The teacher-as-facilitator can make or break a learning event. Learning methods evoke feelings in students that reinforce, support, or detract from knowledge construction. Since even the cleverest team of students dealing with complex, sustained investigations may have difficulty making good judgments in the absence of appropriate “scaffolding,” it is the educator’s role to design appropriate comprehension checks and feedback loops into the authentic learning exercise, preferably the very kinds of interventions commonly exhibited in real-world settings. For example, students engaged in publishing a peer-reviewed journal will evaluate each other over the course of the project and may receive additional guidance from the educator in the role of publisher or editorial board member.

• **Higher education should include the conative domain:** Instructors that provide engaging activities supported by the proper scaffolding can help students develop expertise across all four domains of learning:
  
  o Cognitive capacity to think, solve problems, and create
  o Affective capacity to value, appreciate, and care
  o Psychomotor capacity to move, perceive, and apply physical skills
  o Conative capacity to act, decide, and commit

Researchers warn that higher education has focused for too long on inculcating and assessing those cognitive skills that are relatively easy to acquire—remembering, understanding, and applying—rather than the arguably more important skills of analyzing, evaluating, and
creating. Moreover, in developing these lower-order thinking skills, educators have largely ignored the other major learning domains, particularly the conative, which determines whether a student has the necessary will, desire, commitment, mental energy, and self-determination to actually perform at the highest disciplinary standards. By engaging students in issues of concern to them, from global warming to world hunger, authentic learning awakens in learners the confidence to act.

Those who adopt innovative learning strategies must be ready to adjust their assessment strategies accordingly. Otherwise, the purpose of the entire enterprise may well be defeated. There are eight critical factors that researchers say must be aligned to ensure a successful learning environment:

- goals
- content
- instructional design
- learner tasks
- instructor roles
- student roles
- technological affordances
- assessment

An educator can introduce authentic content, replacing textbooks with historical documents and scientific data from remote sensors. She can design problem-based activities to replace lectures. She can expect
students to collaborate with one another (despite student resistance to these active requirements). She can even surrender some of her own power as an expert to join students as co-learners. And she can support all this innovation with visualizations, simulations, and interactive technologies. Still, she may not achieve her goals if she neglects to rethink her assessment strategies.

After all, what is the use of adopting loftier goals for yourself and your students if you continue to use multiple-choice tests that seek the “right” answer, capturing only the lower-level knowledge that is easiest to measure? Rather than relying on a single assessment method, instructors who adopt authentic learning methods must analyze multiple forms of evidence to measure student performance, including observations of student engagement and artifacts produced in the process of completing tasks.

Jean Lave and Etienne Wenger argue that all would-be scientists, mathematicians, engineers, and historians need to be “enculturated” into the discipline—and the earlier, the better. Along with memorizing facts and practicing technical procedures, beginning students should be learning what John Seely Brown calls the “genres” of the discipline—the schema through which full members of the disciplinary community "recognize whether a problem is an important problem, or a solution an elegant solution, or even what constitutes a solution in the first place." What’s more, students should know what it feels like for actual stakeholders beyond the classroom to hold them accountable for their work products. So, whether the learning activity results in a
business plan, a set of design specifications, a presentation to the city council, or a short film, evaluation occurs naturally over the course of the project, coming from several sources (as it would in real life), including peers, supervisors, and clients. The goal is to give learners the confidence that comes with being recognized as “legitimate peripheral participants” in a community of practice.

Authentic learning may be more important than ever in a rapidly changing world, where the half-life of information is short and individuals can expect to progress through multiple careers. According to Frank Levy and Richard Murnane, expert thinking and complex communication will differentiate those with career-transcending skills from those who have little opportunity for advancement. Expert thinking involves the ability to identify and solve problems for which there is no routine solution. This requires pattern recognition and metacognition. Another differentiator is complex communication, such as persuading, explaining, negotiating, gaining trust, and building understanding.

Although foundational skills (reading, writing, mathematics, history, language) remain essential, a more complex set of competencies are required today. These go beyond being technically competent to being able to get things done, demonstrate ethics and integrity, and work well with others. According to employers, the most important skills in new hires include teamwork, critical thinking/reasoning, assembling/organizing information, and innovative thinking/creativity.

Why isn’t authentic learning more common? The reliance on traditional instruction is not simply a choice made by individual faculty—students
often prefer it. This resistance to active learning may have more to do with their epistemological development than a true preference for passivity. Entering freshmen are likely to use a right-or-wrong, black-or-white mental model. At this dualistic stage, students believe that the “right answer exists somewhere for every problem, and authorities know them. Right answers are to be memorized by hard work.” By confronting students with uncertainty, ambiguity, and conflicting perspectives, instructors help them develop more mature mental models that coincide with the problem-solving approaches used by experts. Authentic learning exercises expose the messiness of real-life decision making, where there may not be a right or a wrong answer per se, although one solution may be better or worse than others depending on the particular context. Such a nuanced understanding involves considerable reflective judgment, a valuable lifelong skill that goes well beyond the memorization of content.

To be competitive in a global job market, today’s students must become comfortable with the complexities of ill-defined real-world problems. The greater their exposure to authentic disciplinary communities, the better prepared they will be “to deal with ambiguity” and put into practice the kind of “higher order analysis and complex communication” required of them as professionals.
2.4 Summary of the main Literature Review findings

This section tabulates the main Literature Review findings and links it to the present study to support the hypothesis and create the building blocks for the research process.

Table 11: Summary of the main Literature Review findings

<table>
<thead>
<tr>
<th>Study</th>
<th>Title of the Paper / Article</th>
<th>Findings</th>
<th>Comments / Relevance to this study</th>
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</thead>
<tbody>
<tr>
<td>Ashley et al., 1995</td>
<td>A customer-based approach to hospitality education</td>
<td>Teaching traditional skills is not enough to prepare students to be society-ready graduates. Education programs must include in its curricula, the skills needed to quickly adapt to changes</td>
<td>Curricula for management needs to incorporate life skill development</td>
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<tr>
<td>Astin, 1991</td>
<td>Assessment for excellence: The philosophy and practice of assessment and evaluation in higher education.</td>
<td>Student Learning Outcomes are &quot;those aspects of the student's development that the institution either does influence or attempts to influence through its educational programs and practices&quot;</td>
<td>This supports the idea that institutions can help in a student’s development through its programs &amp; practices</td>
</tr>
<tr>
<td>Billing, 2003</td>
<td>Generic cognitive abilities in higher education: An international analysis of skills sought by stakeholders.</td>
<td>Employability skills include problem solving skills, communication skills, critical thinking skills, team work, interpersonal skills and much more</td>
<td>Employability has several sub factors that are depended on overall personality development of students</td>
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<tr>
<td>Breiter and Clements, 1996</td>
<td>Hospitality management curricula for the 21st century.</td>
<td>Leadership competency is the most critical competency deserving high level of attention in management curriculum in the future.</td>
<td>Soft skill development like Leadership competency development is a key ingredient of B-school curriculum to prepare students for their future success.</td>
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<tr>
<td>Brown, Hesketh and Williams, 2003</td>
<td>Employability in a knowledge-driven economy.</td>
<td>Employability is “the relative chance of acquiring and maintaining different kinds of employment”</td>
<td>Employability refers to the ability to remain employed and have the potential to be employed over the short to medium term</td>
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<tr>
<td>CHEA (Council for Higher Education Accreditation of USA), 2003</td>
<td>Statement of mutual responsibilities for student learning outcomes: Accreditation, institutions, and programs.</td>
<td>Student learning outcomes are distinguished from institutional performance outcomes (the aggregated results of a program) in that they are focused on the performance of individual students</td>
<td>The individual (student) and institutional (B-school) performance are separate aspects and requires independent focus for understanding &amp; deliberation</td>
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<tr>
<td>Coplin, 2003</td>
<td>10 things employers want you to learn in college: The know-how you need to succeed.</td>
<td>Employers are looking for employees who are good communicators</td>
<td>Communication skills are an important criteria for job recruiters</td>
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<tr>
<td>Cousin, 1992</td>
<td>Modern hospitality operations versus educational traditions.</td>
<td>Recruiters are now looking beyond the functions of entry-level management positions when hiring, to include elevated requirements for leadership progression within the organization</td>
<td>Ability to progress in a career span is important consideration for recruiters</td>
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<tr>
<td>Enz, Renaghan, and Geller, 1993</td>
<td>Graduate level education “a survey of stakeholders”</td>
<td>Management education should adhere to leadership role, providing society-ready graduates that are able to conduct business affairs and resolve management issues in the industry</td>
<td>B-school administrators have an opportunity to inculcate in their students, societal sensitivities and abilities to resolve industry issues</td>
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<tr>
<td>Gopal R. (Dr.), 2010</td>
<td>Towards an Educated India: Academia-Industry Partnership</td>
<td>The extremely dynamic business world is driving the industry to improve workforce efficiency as personnel costs accounts for 20-30% of total per unit cost of any product. Therefore academia-corporate tie-up becomes crucial to go beyond placements and internships, to develop Day one ready employees through a symbiotic relationship.</td>
<td>In this context it becomes important to evaluate the inter-linkages of learning with industry specific knowledge and skill sets.</td>
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<td>Gopal R. (Dr.), 2010</td>
<td>Measuring effectiveness of management education in B-school – Carving out a niche, creating competitive advantage.</td>
<td>Live projects should incorporate interaction with the industry, industry visits with an objective of understanding their functioning, at a functional and corporate level. The framework of an Indian MBA program is primarily based on American or European models. These prove to be inadequate in the Indian context.</td>
<td>Industry interaction and understanding of the local i.e. Indian business context is critical for success of B-school students.</td>
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<tr>
<td>Gopal R. (Dr.), 2012</td>
<td>Towards an Educated India: Innovations in Education</td>
<td>Innovation is the very essence of success in all walks of life. In the field of education, particularly in the Indian context, innovation is the need of the hour even for survival. This is more applicable for business education where output is linked to employability and there is stiff competition.</td>
<td>In this context from an Indian perspective, B-school learning becomes critically linked to employability of students.</td>
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<td>Gopal R.</td>
<td>Towards an Educated India: Transforming the Unemployable MBA into an Employable MBA</td>
<td>Only 21 per cent of the MBAs produced in India are employable. Dr. Gopal emphasises the need for inculcating integrated knowledge with understanding of inter-linkages between various areas of business, communication skills for internal and external interactions, high moral values, high commitment and long term orientation towards their future customers.</td>
<td>This requires a balanced approach in the curriculum design to promote holistic learning in a B-school.</td>
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<tr>
<td>Gopal R. (Dr.), 2012</td>
<td>Towards an Educated India: Transforming the Unemployable MBA into an Employable MBA</td>
<td>B-school education should have a fine balance of soft skills like negotiating skills, group working, empathy for the downtrodden etc. and hard skills like knowledge in the areas of general management, environment, economy &amp; the implication of state policies, technology, financial management and it’s link to marketing &amp; other business strategies. Overall the focus is on development of the student’s behaviour which is ruthless yet humane in nature and also ethically sound and transparent.</td>
<td>This necessitates alignment of B-school education with the changing dimensions of business and the global economy.</td>
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<tr>
<td>Gopal R. (Dr.), 2012</td>
<td>Towards an Educated India: Sustainable strategies for a B-school in India</td>
<td>The Director of a B-school should both be given freedom to operate and a term of at least three to four years to grasp the key issues, plan and implement sustainable strategies. Dr. R. Gopal also illustrates that the commitment and loyalty of faculty towards students is an area to be worked upon through treating faculty as a family, co-creation of faculty, 360 degree faculty feedback, including encouraging faculty for research or summer internships in the corporate world.</td>
<td>In this context it becomes imperative to evaluate the impact of administrators and faculty on B-school learning.</td>
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<tr>
<td>Gopal R. (Dr.), 2013</td>
<td>Accreditation is a must for Global status, Educating India.</td>
<td>The holistic development of a student is a must. Student pedagogy must include activities and methodologies through which students develop not only in their functional areas but also in soft skills.</td>
<td>In this context, the curriculum design of B-school education becomes a critical focus area.</td>
</tr>
<tr>
<td>Gopal R. (Dr.), 2013</td>
<td>Towards an Educated India: Imperatives of Character Education</td>
<td>The vital ingredient of a student’s lifelong success is Character education—it is a process to develop fundamental moral and cultural values. The role of the faculty, the management of the institution and finally the society, in building character education in B-schools is critical.</td>
<td>Character education is a vital ingredient for future success of B-school students in the current world of high ethical standards demanded by society.</td>
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<td>Matthews, 2013</td>
<td>Business Schools seizing the Future.</td>
<td>Every year, people say that it’s a “turning point” or a “make or break” period for B-schools.</td>
<td>There is urgency for improvement of B-school education as it has an existential impact.</td>
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<td>Overtoom, 2000</td>
<td>Employability skills: An update.</td>
<td>Employability skills are defined as “transferable core skill groups that represent essential functional and enabling knowledge, skills and attitudes required by the 21st century workplace necessary for career success at all levels of employment and for all levels of education”</td>
<td>Employability epitomizes the intrinsic skills that help career success.</td>
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<td>Robinson, 2006</td>
<td>Graduates’ and employers’ perceptions of entry-level employability skills needed by Agriculture, Food and Natural Resources graduates.</td>
<td>Leadership skills, communication skills and conflict management skills are some of the employability skills desired by employers.</td>
<td>Employers are specifically looking at skills that enable employees to lead, communicate &amp; manage complex situations</td>
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<tr>
<td>Saha, G.G. 2012</td>
<td>Management Education in India: Issues &amp; Concerns</td>
<td>Industries are required to have the manpower with multi-skills rather than simply knowledge oriented. It is imperative for B-Schools to make management education context specific</td>
<td>B-schools need to make changes in curricula as per the demand of the industries. This will both determine the success of the B-school as well as the students.</td>
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<td>Tas, R.F. 1988</td>
<td>Teaching Future Managers</td>
<td>Students, educators and employers agree that an internship experience, which provides students with practical work experience and management competencies, is important for the success of management graduates.</td>
<td>Internship experience is a key success factor for management students.</td>
</tr>
<tr>
<td>Terenzini, 1989</td>
<td>Assessment with open eyes: Pitfalls in studying student outcomes.</td>
<td>By maintaining a clear statement of what students are expected to be able to do as a result of their academic work, learning outcomes are intended to help students better understand what is expected of them.</td>
<td>Study of Learning outcomes helps both the individual and the stakeholders of the institution.</td>
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<td>Woods &amp; King, 2002</td>
<td>Leadership and management in the hospitality industry</td>
<td>Communication skills include oral communication skills, written communication skills, listening skills, face-to-face communication skills and the ability to resolve conflicts positively</td>
<td>Communication skills transcends personal and impersonal contacts and is important in today's connected world</td>
</tr>
<tr>
<td>Woods and King, 2002</td>
<td>Leadership and management in the hospitality industry</td>
<td>Effective communication is the lubricant that allows organizations to smoothly and productively operate. The payoff for effective communication is that managers and employees who develop strong communication skills are usually strong performers on the job</td>
<td>Communication skills is directly correlated to employability as it is key for getting employed and succeeding on the job</td>
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</table>
2.5 Research Gaps

The literature review helped identify the need for congruence of learning outcomes and concept of employability that should then be embedded in B-school education.

The following research gaps were identified:

1. *B-School education and its linkage to Learning outcomes*: There is a need to align B-school education with delivery of knowledge so that it enables self-discovery, relevant education and sustainable skill development.

2. *Influences of B-school infrastructural facilities on learning outcomes*: The extent to which infrastructural facilities like library, internet access, computer/laptop usage impacts learning outcomes has not been delved into. This is an area of enquiry that is taken up in the study.

3. *Linkage of Employability with input quality of students and the education process*: Employability through development of skills, and understanding the personal attributes that enable successful placement in companies as the default choice of employees.
Chapter 3

OBJECTIVE OF STUDY & RESEARCH METHODOLOGY

3.1 Statement of the Problem

3.2 Benefits of the Study

3.3 Definition of Terms

3.4 Objectives of the Study

3.5 The Hypotheses

3.6 Research Design and Conceptual Framework

3.7 Population and Sampling Frame

3.8 Sample Selection

3.9 Research Instrument and Data Collection
OBJECTIVE OF STUDY & RESEARCH METHODOLOGY

The purpose of this study was to identify the Critical Success Factors that impact B-school Learning Outcomes and Student Employability. The design used for this study is a descriptive-correlational research design.

This chapter describes how the research was designed and carried out including the variables, conceptual framework, research instrument, population and sample, validity and reliability, data collection, response rate and data analysis. This chapter is divided into nine sections, as mentioned below:

3.1 Statement of the Problem, which verbalizes the research question

3.2 Benefits of the Study, focuses on the utility of the study

3.3 Definition of Terms, elaborates the operational definitions of the terms used in the study

3.4 Objectives of the Study, formulates the purpose of the study

3.5 The Hypotheses, states the hypotheses of the study

3.6 Research Design and Conceptual Framework, outlines the blueprint for the collection, measurement and analysis of data

3.7 Population and Sampling Frame, details out how a comprehensive, correct, reliable and appropriate sample was drawn out
3.8 Sample Selection, elaborates the approach for identifying the sample

3.9 Research Instrument and Data Collection, details out the research instrument used for the study and the data collection approach

**3.1 Statement of the Problem**

The disparity has been persistent between the skills that students acquire in Management education and the knowledge needed to succeed in the corporate world. This gap in student academic attainment has been well documented (Bond, 2009; Moore & Shulock, 2009; Murray, 2008) and significant efforts are being made by top management institutes to provide students with learning that better prepares them for success in the industry.

The interest of employers on improved employability skills of management graduates has also been well documented by many studies. Breiter and Clements (1996) found leadership competency to be the most critical competency deserving a high level of attention in management curricula for the 21st Century. Many other studies, both in the past and recent years, also indicated the importance of leadership skills in management functions (Andelt, Barrett, & Bosshamer 1997; Arnaldo, 1981; Ley, 1980; Shortt, 1989; Tas, 1988; Tas, LeBrecque & Clayton, 1996). In addition to leadership skills, the ability to supervise, coordinate, manage conflict, have a clear vision, be creative, innovate, adapt to change, motivate, lifelong learner are some other employability skills important to motivate colleagues and employees in
an organization (Brashears, 1995; Evers, Rush, & Berdrow, 1998; Rainbird, 2000).

In addition to this, the B-school students, who are essentially the customers of a B-school, also have high expectation of the key outputs of the B-school educational program. And these outputs are classified under two major expectations:

1. Learning outcomes
2. Employability

Maximization of these two outputs is a key interest area. Hence the study focuses on this requirement through formulation of the research question as below:

“What are the Critical Success Factors that determine the enhancement of B-school Learning Outcomes and Student Employability?”

In addition to answering this research question mentioned above, the intent of this study was to develop a foundation for future research on what will address other aspects of learning and getting employed in the industry by undertaking a management education program. For example, future studies may explain why students adopt certain courses to enhance their soft skills or knowledge about specific industry solutions. Findings in this area may have certain policy implications related to enrolment in B-schools, curricula design of
management education and success of management students in the
industry.

3.2 Benefits of the Study

This research will provide the management institutes in India and
current or prospective management students, with information on the
elements to focus on during the educational program to drive pertinent
learning approaches and enable creation of day-one ready managers, who can be more successful over the longer term.

Based on the recommendations of this study, faculty of management
institutions would be able to make informed decisions regarding further
improvements in the curriculum, with complete knowledge of why these
improvements are essential.

The findings of the study could be used to design student activities and
internships that may lead to development of soft skills, technical skills
and employability skills.

This research also will be interpreted within a theoretical framework
that may be useful to other professional colleges as they refine their
curricula in the pursuit of student success.

3.3 Definition of terms

The following terms are operationally defined as they apply to this
study:
B-school Environment: It is defined by the physical infrastructure, residential facilities, faculty (including faculty industry exposure, student to faculty ratio), educational resources (e.g. library, computer to student ratio, internet access, wi-fi etc.)

Competency: “Those activities and skills judged essential to perform the duties of a specific position” (Tas, 1988, p. 41).

Curricula: Curricula is the plural of curriculum, see the definition of curriculum.

Curriculum: Gaff, Ratcliff and Associates (1997) defined curriculum as “all required classroom work and electives at the university level. Also included is work experience…it can also refer to the educational plan of an institution, school, college, or a department, or to a program or course” (p. 7).

Employability: Brown, Hesketh, and Williams (2003), defined employability as “the relative chance of acquiring and maintaining different kinds of employment” (p. 111).

Employability skills: Overtoom (2000), defined employability skills as “transferable core skill groups that represent essential functional and enabling knowledge, skills and attitudes required by the 21st century workplace… necessary for career success at all levels of employment and for all levels of education” (p. 2).
**Entry-level Manager:** Entry-level manager is a management position given to individuals that have attained the necessary theoretical basis for performing a management function.

**Leadership:** There are many definitions of leadership. However, the operational definition for this study is that leadership can be defined as a process that requires appropriate styles to influence the activities of an organized team towards the achievement of a specified goal (Northouse, 2004; Stogdill, 1950).

**Learning Experience:** It relates to the exposure provided in B-schools through Industry internships, personality development courses, soft skills enhancement opportunities, industry top management or expert guest lecture series/interactions.

**Learning outcomes:** It is a qualitative aspect potentially measured through level of conceptual understanding; skill set development or technical knowledge enhancement. Learning outcomes are statements that describe significant and essential learning that learners have achieved, and can reliably demonstrate at the end of a course or program. In other words, learning outcomes identify what the learner will know and be able to do by the end of a course or program.

**Skill:** Skill can be defined as a present, observable competence to perform a learned behaviour regarding the relationship between mental activity and bodily movements (Maxine, 1997).
Student Intrinsic Qualities: It is defined by the input quality of B-school students and can be gauged through demographic factors such as age, educational qualification, family background, past work experience, skills, personality, knowledge etc.

Upper-Level Manager: Upper-level manager is a management position given to individuals with previous management and leadership experience coupled with the attainment of the necessary theoretical basis for performing management and leadership functions.

3.4 Objectives of the Study

The following objectives were formulated to accomplish the purpose of this study

1. Identify critical success factors influencing the learning outcomes and student employability in Mumbai and Navi Mumbai B-schools

2. Identify the level of importance of the above identified factors and the level of correlation to the mentioned two critical outputs of B-school education viz. Learning Outcomes and Student Employability

3. Describe the relationship between the identify factors and build an understanding of key focus areas for management education

4. Provide recommendations for action by management institutes on the key focus areas
3.5 The Hypotheses

The following hypotheses are proposed for the study of the research objectives and would be tested at 5% level of significance:

$H_{01}$ There is no significant relationship between Learning Outcomes (LO) and B-school Environment (BE)

$H_{11}$ There is a significant relationship between Learning Outcomes (LO) and B-school Environment (BE)

$H_{02}$ There is no significant relationship between Learning Outcomes (LO) and Learning Experience (LE)

$H_{12}$ There is a significant relationship between Learning Outcomes (LO) and Learning Experience (LE)

$H_{03}$ There is no significant relationship between Learning Outcomes (LO) and Student Intrinsic Qualities (SIQ)

$H_{13}$ There is a significant relationship between Learning Outcomes (LO) and Student Intrinsic Qualities (SIQ)

$H_{04}$ There is no significant relationship between Student Employability (SE) and B-School Environment (BE)

$H_{14}$ There is a significant relationship between Student Employability (SE) and B-School Environment (BE)

$H_{05}$ There is no significant relationship between Student Employability (SE) and Learning Experience (LE)
H_{15} \quad \text{There is a significant relationship between Student Employability (SE) and Learning Experience (LE)}

H_{06} \quad \text{There is no significant relationship between Student Employability (SE) and Student Intrinsic Qualities (SIQ)}

H_{16} \quad \text{There is a significant relationship between Student Employability (SE) and Student Intrinsic Qualities (SIQ)}

### 3.6 Research Design and Conceptual Framework

Research Design “is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure”. It is the conceptual structure within which research is conducted and constitutes the blueprint for the collection, measurement and analysis of data.

This research was designed as a Descriptive Cross-sectional study, aimed to provide further insight into the research problem by describing the variables of interest. The intent is to use this for profiling, defining, estimating, predicting and examining associative relationships.

The Cross-sectional study was designed to support providing a snapshot of the interactions of the variables of interest and involves conducting a survey of a sample population at one point in time.

The dependent variables in the study were chosen as learning outcomes and student employability.
Through a pilot study, the following independent variables were identified for detailed study:

4. Student intrinsic qualities
5. B-school environment
6. Learning Experience

Conceptual Framework:

The conceptual framework illustrating the interactions of the independent and dependent variables is provided below:

![Conceptual Framework](image)

Source: Author’s compilation

Figure 1: Conceptual Framework for the study
The framework outlines the variables that are bounded by the B-school stint of students and what precedes and succeeds it. Therefore, the Student Intrinsic Qualities (SIQ) variable has been depicted as a preceding element which is also one of the criteria for admission to a B-school, and has been identified as an area of interest for further understanding. The B-school Environment and Learning Experience have been considered as variables impacted within the confines of the B-school educational program. And the output at the end of the academic program that is of interest to this study has been identified as the Learning Outcomes and Student Employability.

A mixed methods approach was considered appropriate for the study. The Quantitative approach was adopted to examine the component parts and the relationship between these parts, from a reductionistic perspective. This was undertaken to establish facts, demonstrate relationships and determine effects. The aim was to be able to generalize the findings to more broadly defined populations.

The Qualitative approach was used to gain insights and identify the participants’ viewpoint in order to interpret the totality of the phenomenon of B-school learning outcomes and Student Employability.

3.7 Population and Sampling Frame

The focus of the study was on post graduate management programs. In addition to this the aim of the study was to be able to draw a sample that is comprehensive, correct, reliable and appropriate. At the same
time, it was crucial to ensure that the sample was a good representative of the population.

**Target population and Sampling Frame**

The concept of B-school Learning Outcomes and Student Employability is universally applicable to all B-schools around the world. This is a large universe for the purpose of an efficient & reliable study hence it was imperative to understand the context of the subject from the overall perspective of management institutes in India, which was selected as the Target Population.

Since the study also intends to generalize the findings to the Target Population, it was imperative to understand the Target Population. As per the AICTE data in 2013-14, India had 3,364 management institutes with annual enrollment of 3,54,421 students.

It is also important to highlight that B-school Learning Outcomes and Student Employability, the dependent variables of the present study, are impacted by the contextual nature and specificity of the academic and industry landscape of a regional or local geographical unit.

Hence the study focused on identifying the Source List or Sampling Frame for the study which was decided as the Management institutes of India and the state of Maharashtra.

As per the AICTE data in 2013-14, the number of approved management institutes in the state of Maharashtra was 424 institutes with annual enrollment of 59,339 students.


Sampling Unit

The sampling unit was a convenient sampling unit of Mumbai and Navi Mumbai.

As per AICTE data in 2013-14, the number of management institutes in Mumbai and Navi Mumbai (including Thane) was 90 with an annual enrolment of 17,245 students.

3.8 Sample Selection

Sample selection is a critical element of the research study. The aim is to generalize findings from the drawn sample back to the population, within limits of random error.

When critiquing business education research, Wunsch (1986:31) stated that “two of the most consistent flaws included (1) disregard for sampling error when determining sample size, and (2) disregard for response and nonresponse bias”. Within a quantitative survey design, determining sample size and dealing with nonresponse bias is essential.

“One of the real advantages of quantitative methods is their ability to use smaller groups of people to make inferences about larger groups that would be prohibitively expensive to study” (Holton & Burnett, 1997:71).

To estimate the percentage of respondents who would give high importance to B-school learning and Student Employability, it is expected that about 50% of the respondents would give high
importance. So the sample size at 95% confidence level and 5% confidence interval (margin of error), with correction for finite population was calculated as 376 as shown below:

Percentage picking a choice, p=50% (expressed as decimal i.e. 50),

Confidence Level = 95% or +/- 5, expressed as decimal)

\[ Z = 1.96 \text{ (for 95% confidence level)} \]

\[ n = \frac{Z^2 p(100-p)}{C^2} \]

\[ n = \frac{(1.96)^2(50)(50)}{5^2} = 384 \]

Correction for finite population, where \( P \) is the population:

\[ \text{New } n = \frac{n}{1 + \frac{n-1}{P}} \]

\[ \frac{n}{1 + \frac{384-1}{17245}} \]

Since here \( P = 17,245 \) (which is the number of students in Management institutes of Mumbai and Navi Mumbai),

\[ \text{Sample size, } n = 376 \]

However in order to account for the response and non-response bias, it was decided to survey 600 students.

3.9 Research Instrument and Data Collection

The Research Instrument used in this study was a questionnaire for B-school students and alumni (Appendix A).
The Questionnaire for B-school student and alumni had 6 questions or segments. The following is the description of the construct of the questionnaires:

Question 1 included items that solicited information about the personal and academic characteristics of the participants to understand the demographics and background of the survey participants, as below:

- Institution name,
- Gender,
- Age,
- Linkage to the B-school,
- Past educational background
- Past work experience
- Exposure to prior short term / correspondence courses in B-school before joining the B-school

Question 2 sought to understand the B-school Environment / Infrastructure. A four point Likert-type scale with the following choices was used in this part of the instrument:

4 = Very Good,

3 = Good,

2 = Poor,

1 = Very Poor.
The question 2 had sub-segments which sought information on the following:

- B-school physical infrastructure (Campus size and location, built up area, number of classrooms, auditoriums, library, wi-fi facilities etc.),
- Residential facilities and
- Sports facilities.

Question 3 included items that solicited information on the B-school Learning experience. A four point Likert-type scale with the following choices was used for some questions in this part of the instrument:

4 = Very Good,
3 = Good,
2 = Poor,
1 = Very Poor.

Also some questions had 3 choices:

2 = Yes, 1 = No, 0 = Don’t know.

The question 3 had sub-segments which sought information on the following:

- Student-Faculty ratio,
- Ratio of learning inputs via theory vs. practical knowledge sharing (Practical knowledge could involve live case studies, industry internships etc.)
- Curriculum designing through consultation with industry experts
- Mechanism for students to provide feedback about the faculty
- Industry interactions (guest lectures, industry internships)
- Faculty / student involvement in research and consultancy
- Development of soft skills (presentations, communication skills), personality development and leadership skill training
- Student and faculty exchange programs

Question 4 sought to understand the B-school Learning Outcomes. A ten point Likert-type scale was used 1 = very low and 10 = very high. The question 4 had sub-segments which sought information on the following:

- Academic knowledge enhancement
- Industry exposure
- Soft skill development
- Business acumen training & development

Question 5 included items that solicited information on the Student Employability at the B-school. A ten point Likert-type scale was used 1 = very low and 10 = very high. The question 5 had sub-segments which sought information on the following:

- Placement percentage
- Salary offered in campus placement
- Number of recruiters
- Number of repeat recruiters
Question 6 was an open field question to capture the comments or recommendations for improvement of B-school Learning Outcomes and Student Employability. This was designed to capture Qualitative information from the participants.

**Validity and Reliability of the Instrument**

Validity refers to the ability of a survey instrument (questionnaire) to measure what it claims to measure (Ary, Jacobs, & Razavieh, 2002). Reliability indicates the extent to which data are free from errors but capitulate consistent results (Ary et al., 2002; Harris & Ogbonna, 2001).

The instrument used for this study was a comprehensive construct that was based on two different types of validity: Facevalidity and Content validity (Robinson, 2006). The face validity indicates that the questionnaire is pleasing to the eye and applicable for its intended use (Ary et al.).

Content validity indicates that the items in questionnaire represent the objective of the instrument (Gall, Gall, & Borg 2003). Dr. R. Gopal and other experts established the face and content validity of the instrument and a pilot study was used to establish the reliability of the instrument.

The common measure of reliability is the Cronbach’s alpha and the usual criterion is a Cronbach’s alpha coefficient of .70 (Harris & Ogbonna, 2001). A Cronbach’s alpha coefficient of .70 and above indicates a high degree of internal consistency among the data collected (Harris & Ogbonna; Hsu et al., 2003).
The pilot test of the questionnaire was administered to twenty-nine students of first year from two different institutions who were not part of the frame for this study. This group of respondents was instructed to respond to questionnaire items and indicate their concerns regarding any of the items. In addition, data were analyzed to measure the reliability of the instrument. Input from the pilot study indicated that questionnaire was clear and easy to follow. A Cronbach’s alpha of .90 was found from the pilot test, indicating that the instrument was reliable with a high degree of internal consistency. Because of these positive results, no modifications were made.

After the study was completed, Cronbach’s alpha was applied to this portion of the instrument. An alpha of .99 was found at that time to the instrument.

Data Collection

Data collection is any process of preparing and collecting data, as part of a research process or an improvement project. The purpose of data collection is to obtain information to keep on record, to make decisions about important issues, or to pass information on to others. Data is primarily collected to provide information regarding a specific topic. A formal data collection process is necessary as it ensures that data gathered are both defined and accurate and that subsequent decisions based on arguments embodied in the findings are valid.

Data collection was undertaken as part of this study very early in the research process and was formalized through a data collection plan. A
pre-collection activity was also undertaken, which dealt with defining goals, target data, definitions and methods.

The study focused on quantitative methods to acquire insights into the factors driving B-School Learning Outcomes and Student Employability. However at the same time a mixed methods approach was also felt relevant for use, hence an open ended question was added to the Research Instrument to collect feedback on how these variables could be influenced. These qualitative inputs were also considered in developing the recommendations.

It was planned to all conduct focused interviews with respondents who provide interesting insights in the open field of the research instrument. However the constraint of access to the respondents was also factored in and acknowledged that not all respondents would provide qualitative inputs now would they agree to be subject to focused interview session to clarify their inputs on the questionnaire.

However this was still kept part of the data collection plan, as the institutions being covered under the study was a convenient sample where the researcher had access to easily. Plus the respondents, in several cases were known to the researcher; hence it would be convenient to conduct the follow-up interviews.

The data collection activity was targeted at 4 B-schools. The choice of the 4 B-schools was selected using a convenient sampling approach to ensure that it represents different facets of B-schools in the sample of respondents and had the followings aspects covered viz.
- Mumbai university led institution: 1 B-school
- Private institution: 3 B-schools
- Residential and non-residential institution
- All AICTE approved institutions
Chapter 4

DATA ANALYSIS

4.1 Data Analysis
DATA ANALYSIS

4.1 Data Analysis

Collected data was processed by means of quantitative research methods. Prior to data analysis, pre-analysis data screening was performed to ensure the accuracy of the data and to deal with missing and incomplete data. Data was analyzed using Statistical Package for Social Sciences (SPSS) version 22.0 for Windows, a product of SPSS, Inc. Frequency was used to screen the data for any irregularities. Pearson correlation coefficient was used to describe the relationships between the variables. Descriptive statistics was used to analyze the demographic profiles of B-school students.

Correlation coefficients were used to determine the relationships between variables and sub-variables. Interpretations of the correlation coefficients were based on Davis’ (1983) conventions for interpreting correlation associations. Those conventions are as follows:

0.70 or higher = Very strong association,

0.50-.69 = Substantial association,

0.30-.49 = Moderate association,

0.10-.29 = Low association and

0.01-.09 = Negligible association.
One way Analysis of Variance (ANOVA)

One way Analysis of Variance or ANOVA was used to determine if there was any significant difference between the means of different independent (unrelated) groups. For example, the analysis was done for Learning Outcomes (under past educational area 5 independent groups were chosen viz. Arts, Science, Commerce, Engineering, Other graduation), and for Student Employability (under duration of work experience, 3 groups were formed viz. less than 1 year, 1 to 2 years and above 2 years). The aim was to identify impact of Student Intrinsic Qualities, which is an input into the B-school system, and the relationship with the output in the form of Learning Outcomes and Student Employability.

Response Rate

The sample selected for this study was B-school students or Alumni ($N = 600$). The sample selection for this study was a convenient sample of second year students, first year students and alumni who had graduated in the last 2 years. Four hundred thirty four responses of B-school students and alumni were collection, resulting in a usable response rate of 72%.

Non-Participant Issue

Out of 600 students targeted for this study, 434 usable responses were collected. on-participation or non-response error could constitute a threat to external validity in a generalizable study (Miller & Smith,
1983). However, since this study was based on a convenient sample, and since the calculated sample size was 376, while the study was able to collect 434 usable responses, the non-participants (non-respondents) were ignored (Miller & Smith).
Chapter 5

FINDINGS

5.1 Demographics

5.2 Results – Correlation and One way ANOVA

5.3 Data Conclusion
FINDINGS

The purpose of this study was to identify the Critical Success Factors that enhance B-School Learning Outcomes and Student Employability. The study also assessed the environment in which students developed their level of competence.

This chapter is a presentation of the findings of this study including descriptive statistics, demographic information and correlations between selected intrinsic student qualities, B-school environment, learning experience and the B-school Learning Outcomes and Student Employability.

5.1 Demographics

The first part of the findings delves into describing the demographic characteristics of the respondents i.e. B-school student and alumni (of last 2 years) including: gender, age, past educational area/field, duration of past work experience and number of organizations the students had worked prior to joining the B-school.

Descriptive statistics were used to analyse the selected demographic characteristics. Gender and past educational area/field were both analysed as a nominal data. Therefore, they were reported using frequency and percentage. Age, duration of past work experience and number of organizations the students had worked prior to joining the B-
school were all analysed as an interval data. Therefore, they were reported using mean and standard deviation.

The following tables present the demographic data of the respondents. More than half (53.23%) of the respondents were female. 164 (38%) respondents reported that they had done graduation in Engineering before joining the B-school. 142 (33%) respondents reported they had graduation in commerce, 54 (12%) had graduation in arts, 34 (8%) had graduation in Science, 32 (7%) had graduation in other fields, while 8 (2%) respondents reported they were post graduates before joining the B-school.

Gender and past educational area/field (n=434)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender Distribution</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>203</td>
<td>46.77%</td>
</tr>
<tr>
<td>Female</td>
<td>231</td>
<td>53.23%</td>
</tr>
<tr>
<td><strong>Past educational area/field</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate in Arts</td>
<td>54</td>
<td>12%</td>
</tr>
<tr>
<td>Graduate in Science</td>
<td>34</td>
<td>8%</td>
</tr>
<tr>
<td>Graduate in Commerce</td>
<td>142</td>
<td>33%</td>
</tr>
<tr>
<td>Graduate in Engineering</td>
<td>164</td>
<td>38%</td>
</tr>
<tr>
<td>Graduate Others</td>
<td>32</td>
<td>7%</td>
</tr>
<tr>
<td>Post Graduate</td>
<td>8</td>
<td>2%</td>
</tr>
</tbody>
</table>

Table 1: Demographic data of participants

This is also represented in the form of pie-charts below:
Figure 5: Gender Distribution of respondents (n=434)

Figure 6: Past educational area/field of the respondents (n=434)

The below table summarizes additional demographic information about the respondents. The mean age of the respondents was 23.13 years with a standard deviation of 0.76. The mean duration of past work experience (in months) was 16.65 months with a standard deviation of 12.51.
Table 2: Additional demographic data of participants

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>434</td>
<td>23.13</td>
<td>0.76</td>
</tr>
<tr>
<td>Number of organizations worked in prior to joining B-school</td>
<td>227</td>
<td>1.18</td>
<td>1.13</td>
</tr>
<tr>
<td>Duration of past work experience (in months)</td>
<td>227</td>
<td>16.65</td>
<td>12.51</td>
</tr>
</tbody>
</table>

5.2 Results – Correlation and One way ANOVA

The primary objective of the study was to identify the Critical Success Factors that enhance B-school Learning Outcomes and Student Employability. The quantitative analysis used in this study tested 6 hypotheses related to the primary objective of the study.

Relationship between Learning Outcomes and B-school Environment

The first research question was to identify if there was a positive impact of the B-school Environment on the Learning Outcomes:

H₀₁ There is no significant relationship between Learning Outcomes (LO) and B-school Environment (BE)

H₁₁ There is a significant relationship between Learning Outcomes (LO) and B-school Environment (BE)

A correlation analysis was done using Statistical Package for Social Sciences (SPSS) version 22.0 for Windows, a product of SPSS, Inc. Pearson correlation coefficient was used to describe the relationships between the variables.
Correlation coefficients were used to determine the relationships between variables and sub-variables. Interpretations of the correlation coefficients were based on Davis’ (1983) conventions for interpreting correlation associations.

Those conventions are as follows:

0.70 or higher = Very strong association,

0.50-.69 = Substantial association,

0.30-.49 = Moderate association,

0.10-.29 = Low association and

0.01-.09 = Negligible association.

The result showed that the correlation coefficient for Learning Outcomes and B-school Environment was 0.372 which is a moderate positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed). The presence of a moderate positive relationship also meant that there could be some extraneous variables which are affecting the relationship between the two variables under study.
Table 12: Correlation between Learning Outcomes and B-school Environment

Hence the relationship of Learning Outcomes with the below B-school Environment sub-variables was also identified:

1. B-school Physical Infrastructure (Campus size and location, built up area, number of classrooms, auditoriums, library, wi-fi facilities etc.)

2. Residential Facilities

3. Sports Facilities

The result showed that the correlation coefficient for Learning Outcomes and B-school Physical Infrastructure was 0.562 which is a substantial positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).
Correlation between Learning Outcomes (LO) and B School Physical Infrastructure (BSE1)

<table>
<thead>
<tr>
<th>Correlation output</th>
<th>LO Average</th>
<th>BSE1</th>
</tr>
</thead>
<tbody>
<tr>
<td>LO Average</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>434</td>
<td>434</td>
</tr>
<tr>
<td>BSE1</td>
<td>Pearson Correlation</td>
<td>0.562*</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>434</td>
<td>434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)

Table 13: Correlation between Learning Outcomes and B-school Physical Infrastructure

The correlation coefficient for Learning Outcomes and Residential Facilities was 0.397 which is a moderate positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

Correlation between Learning Outcomes (LO) and Residential Facilities (BSE2)

<table>
<thead>
<tr>
<th>Correlation output</th>
<th>LO Average</th>
<th>BSE2</th>
</tr>
</thead>
<tbody>
<tr>
<td>LO Average</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>434</td>
<td>434</td>
</tr>
<tr>
<td>BSE2</td>
<td>Pearson Correlation</td>
<td>0.397*</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>434</td>
<td>434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)

Table 14: Correlation between Learning Outcomes and Residential Facilities

The result showed that the correlation coefficient for Learning Outcomes and Sports Facilities was 0.132 which is a low positive
correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

*Correlation is significant at the 0.01 level (2-tailed)

Table 15: Correlation between Learning Outcomes and Sports Facilities

<table>
<thead>
<tr>
<th></th>
<th>LO Average</th>
<th>BSE3</th>
</tr>
</thead>
<tbody>
<tr>
<td>LO Average</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>434</td>
</tr>
<tr>
<td>BSE3</td>
<td>Pearson Correlation</td>
<td>0.132*</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>434</td>
</tr>
</tbody>
</table>

This illustrated that the B-school physical infrastructure played a substantial role in the Learning outcomes, though overall the B-school Environment was of moderate influence. It also threw up the findings that Residential facilities have a moderate role and Sports facilities have a low contribution to Learning Outcomes.

**Relationship between Learning Outcomes and Learning Experience**

The second research question was to identify if there was a positive impact of the Learning Experience on the Learning Outcomes:

H_{02} There is no significant relationship between Learning Outcomes (LO) and Learning Experience (LE)

H_{12} There is a significant relationship between Learning Outcomes (LO) and Learning Experience (LE)
A correlation analysis was done using Statistical Package for Social Sciences (SPSS) version 22.0 for Windows, a product of SPSS, Inc. Pearson correlation coefficient was used to describe the relationships between the variables.

Correlation coefficients were used to determine the relationships between variables and sub-variables. Interpretations of the correlation coefficients were based on Davis’ (1983) conventions for interpreting correlation associations.

Those conventions are as follows:

0.70 or higher = Very strong association,

0.50-.69 = Substantial association,

0.30-.49 = Moderate association,

0.10-.29 = Low association and

0.01-.09 = Negligible association.

The result showed that the correlation coefficient for Learning Outcomes and Learning Experience was 0.791 which is a very high positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).
Due to the high correlation between Learning Outcomes and Learning Experience it was imperative to understand the impact of individual Learning Experience sub-variables which were:

1. Student-Faculty ratio
2. Ratio of learning inputs via Theory vs. Practical knowledge sharing (e.g. live case studies, industry internships etc.)
3. Curriculum design through consultation with industry experts
4. Faculty feedback mechanism where students can provide their feedback
5. Industry interactions (e.g. guest lectures, industry internships etc)
6. Faculty / student involvement in research and consultancy
7. Development of soft skills (e.g. presentations, communication skills), personality development and leadership skill training
8. Student & faculty exchange programs

Table 16: Correlation between Learning Outcomes and Learning Experience

<table>
<thead>
<tr>
<th>Correlation output</th>
<th>LO Average</th>
<th>LE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>0.791*</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>434</td>
<td>434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)
The result showed that the correlation coefficient for Learning Outcomes and Student Faculty ratio was 0.334 which is a moderate positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

**Correlation between Learning Outcomes (LO) and Student-Faculty ratio (LE1)**

<table>
<thead>
<tr>
<th>LO Average</th>
<th>LE1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td>434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)

Table 17: Correlation between Learning Outcomes and Student-Faculty ratio

The result showed that the correlation coefficient for Learning Outcomes and Learning Inputs ratio was 0.784 which is a very strong positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

**Correlation between Learning Outcomes (LO) and Learning Inputs Ratio (LE2)**

<table>
<thead>
<tr>
<th>LO Average</th>
<th>LE2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td>434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)

Table 18: Correlation between Learning Outcomes and Learning inputs ratio
The result showed that the correlation coefficient for Learning Outcomes and Curriculum Design was 0.799 which is a very strong positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

*Correlation is significant at the 0.01 level (2-tailed)*

**Correlation between Learning Outcomes (LO) and Curriculum Design (LE3)**

<table>
<thead>
<tr>
<th>Correlation output</th>
<th>LO Average</th>
<th>LE3</th>
</tr>
</thead>
<tbody>
<tr>
<td>LO Average</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td>434</td>
<td>434</td>
</tr>
<tr>
<td>LE3</td>
<td>Pearson Correlation</td>
<td>0.799*</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td>434</td>
<td>434</td>
</tr>
</tbody>
</table>

Table 19: Correlation between Learning Outcomes and Curriculum Design

The result showed that the correlation coefficient for Learning Outcomes and Faculty feedback mechanism was 0.088 which is a negligible positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

*Correlation is significant at the 0.01 level (2-tailed)*

**Correlation between Learning Outcomes (LO) and Faculty feedback mechanism (LE4)**

<table>
<thead>
<tr>
<th>Correlation output</th>
<th>LO Average</th>
<th>LE4</th>
</tr>
</thead>
<tbody>
<tr>
<td>LO Average</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td>434</td>
<td>434</td>
</tr>
<tr>
<td>LE4</td>
<td>Pearson Correlation</td>
<td>0.088*</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td>434</td>
<td>434</td>
</tr>
</tbody>
</table>

Table 20: Correlation between Learning Outcomes and Faculty feedback mechanism
The result showed that the correlation coefficient for Learning Outcomes and Industry Interactions was 0.827 which is a very strong positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

**Correlation between Learning Outcomes (LO) and Industry Interactions (LE5)**

<table>
<thead>
<tr>
<th>Correlation output</th>
<th>LO Average</th>
<th>LE5</th>
</tr>
</thead>
<tbody>
<tr>
<td>LO Average</td>
<td>1</td>
<td>0.827*</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>0.827*</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td>434</td>
<td>434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)

Table 21: Correlation between Learning Outcomes and Industry Interactions

The result showed that the correlation coefficient for Learning Outcomes and Research-Consultancy involvement was 0.117 which is a low positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

**Correlation between Learning Outcomes (LO) and Research-Consultancy involvement (LE6)**

<table>
<thead>
<tr>
<th>Correlation output</th>
<th>LO Average</th>
<th>LE6</th>
</tr>
</thead>
<tbody>
<tr>
<td>LO Average</td>
<td>1</td>
<td>0.117*</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>0.117*</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td>434</td>
<td>434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)

Table 22: Correlation between Learning Outcomes and Research-Consultancy involvement
The result showed that the correlation coefficient for Learning Outcomes and Soft Skills Development was 0.886 which is a very strong positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

**Correlation between Learning Outcomes (LO) and Soft Skills Development (LE7)**

<table>
<thead>
<tr>
<th></th>
<th>LO Average</th>
<th>LE7</th>
</tr>
</thead>
<tbody>
<tr>
<td>LO Average</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>434</td>
</tr>
<tr>
<td>LE7</td>
<td>Pearson Correlation</td>
<td><strong>0.886</strong>*</td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)

**Table 23: Correlation between Learning Outcomes and Soft Skills Development**

The result showed that the correlation coefficient for Learning Outcomes and Exchange Programs was 0.644 which is a very strong positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

**Correlation between Learning Outcomes (LO) and Exchange Programs (LE8)**

<table>
<thead>
<tr>
<th></th>
<th>LO Average</th>
<th>LE8</th>
</tr>
</thead>
<tbody>
<tr>
<td>LO Average</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>434</td>
</tr>
<tr>
<td>LE8</td>
<td>Pearson Correlation</td>
<td><strong>0.644</strong>*</td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)

**Table 24: Correlation between Learning Outcomes and Exchange programs**
This illustrated that the following four factors played a critical role in the Learning outcomes:

1. Ratio of learning inputs via Theory vs. Practical knowledge sharing (e.g. live case studies, industry internships etc.)
2. Curriculum design through consultation with industry experts
3. Industry interactions (e.g. guest lectures, industry internships etc)
4. Development of soft skills (e.g. presentations, communication skills), personality development and leadership skill training

It also illustrated that Faculty Feedback mechanism and Research-Consultancy involvement had a negligible to low impact on Learning outcomes.

It also threw up the insight that Exchange Programs and Student-Faculty ratio had a moderate to substantial impact on Learning Outcomes.

**Relationship between Learning Outcomes and Student Intrinsic Qualities**

The third research question was to identify if there was an association between the Student Intrinsic Qualities and the Learning Outcomes:

\[ H_{03} \quad \text{There is no significant relationship between Learning Outcomes (LO) and Student Intrinsic Qualities (SIQ)} \]

\[ H_{13} \quad \text{There is a significant relationship between Learning Outcomes (LO) and Student Intrinsic Qualities (SIQ)} \]
A correlation analysis was done using Statistical Package for Social Sciences (SPSS) version 22.0 for Windows, a product of SPSS, Inc. Pearson correlation coefficient was used to describe the relationships between the variables.

Correlation coefficients were used to determine the relationships between variables and sub-variables. Interpretations of the correlation coefficients were based on Davis’ (1983) conventions for interpreting correlation associations.

Those conventions are as follows:

0.70 or higher = Very strong association,

0.50-.69 = Substantial association,

0.30-.49 = Moderate association,

0.10-.29 = Low association and

0.01-.09 = Negligible association.

The Student Intrinsic Qualities was studied with respect to the sub-variables as mentioned below:

1. Past educational area / field
2. Past work experience
3. Duration of past work experience

The result showed that the correlation coefficient for Learning Outcomes and Past Educational area / field was 0.287 which is a low
positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

Correlation between Learning Outcomes (LO) and Past Educational area / field (SIQ1)

<table>
<thead>
<tr>
<th>Correlation output</th>
<th>LO Average</th>
<th>SIQ1</th>
</tr>
</thead>
<tbody>
<tr>
<td>LO Average</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>434</td>
</tr>
<tr>
<td>SIQ1</td>
<td>Pearson Correlation</td>
<td>0.287*</td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)

Table 25: Correlation between Learning Outcomes and Past Educational area / field

The result showed that the correlation coefficient for Learning Outcomes and Past Work Experience was 0.766 which is a very strong positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

Correlation between Learning Outcomes (LO) and Past Work Experience (SIQ2)

<table>
<thead>
<tr>
<th>Correlation output</th>
<th>LO Average</th>
<th>SIQ2</th>
</tr>
</thead>
<tbody>
<tr>
<td>LO Average</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>434</td>
</tr>
<tr>
<td>SIQ2</td>
<td>Pearson Correlation</td>
<td>0.766*</td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)

Table 26: Correlation between Learning Outcomes and Past Work Experience

150
The result showed that the correlation coefficient for Learning Outcomes and Duration of Past Work Experience was 0.437 which is a moderate positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

*Correlation is significant at the 0.01 level (2-tailed)*

<table>
<thead>
<tr>
<th></th>
<th>LO Average</th>
<th>SIQ3</th>
</tr>
</thead>
<tbody>
<tr>
<td>LO Average</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td></td>
<td>0.437*</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td>434</td>
<td>434</td>
</tr>
<tr>
<td>SIQ3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td></td>
<td>0.437*</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td>434</td>
<td>434</td>
</tr>
</tbody>
</table>

Table 27: Correlation between Learning Outcomes and Duration of Work Experience

This illustrated that Past Work Experience was the critical factor in the Student Intrinsic Qualities that had a high impact on Learning Outcomes. It also should that Past Educational area / field had low impact while duration of past work experience had a moderate impact.

Relationship between Student Employability and B-school Environment

The fourth research question was to identify if there was a positive impact of the B-school Environment on Student Employability:

H₀₄ There is no significant relationship between Student Employability (SE) and B-school Environment (BE)
H₁₄ There is a significant relationship between Student Employability (SE) and B-school Environment (BE)

A correlation analysis was done using Statistical Package for Social Sciences (SPSS) version 22.0 for Windows, a product of SPSS, Inc. Pearson correlation coefficient was used to describe the relationships between the variables.

Correlation coefficients were used to determine the relationships between variables and sub-variables. Interpretations of the correlation coefficients were based on Davis’ (1983) conventions for interpreting correlation associations.

Those conventions are as follows:

0.70 or higher = Very strong association,

0.50-.69 = Substantial association,

0.30-.49 = Moderate association,

0.10-.29 = Low association and

0.01-.09 = Negligible association.

The result showed that the correlation coefficient for Student Employability and B-school Environment was 0.177 which is a low positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed). The presence of a low positive relationship also meant that there could be some extraneous variables which are affecting the relationship between the two variables under study.
Correlation between Student Employability (SE) and B School Environment (BSE)

Hence the relationship of Student Employability with the below B-school Environment sub-variables was also identified:

1. B-school Physical Infrastructure (Campus size and location, built-up area, number of classrooms, auditoriums, library, wi-fi facilities etc.)
2. Residential Facilities
3. Sports Facilities

The result showed that the correlation coefficient for Student Employability and B-school Physical Infrastructure was 0.276 which is a low positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

Table 28: Correlation between Student Employability and B-school Environment

<table>
<thead>
<tr>
<th></th>
<th>SE Average</th>
<th>BSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE Average</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>434</td>
</tr>
<tr>
<td>BSE</td>
<td>Pearson Correlation</td>
<td>0.177*</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)
Table 29: Correlation between Student Employability and B-school Physical Infrastructure

The correlation coefficient for Student Employability and Residential Facilities was 0.197 which is a low positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

Table 30: Correlation between Student Employability and Residential Facilities

The result showed that the correlation coefficient for Student Employability and Sports Facilities was 0.033 which is a negligible
positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

**Correlation between Student Employability (SE) and Sports Facilities (BSE3)**

<table>
<thead>
<tr>
<th>Correlation output</th>
<th>SE Average</th>
<th>BSE3</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE Average</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>434</td>
</tr>
<tr>
<td>BSE3</td>
<td>Pearson Correlation</td>
<td>0.033*</td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)

Table 31: Correlation between Student Employability and Sports Facilities

This illustrated that overall the B-school Environment played a minor role in Student Employability, with B-school physical infrastructure and Residential facilities having minor influence. It also threw up the findings that Sports facilities have a negligible contribution to Student Employability.

**Relationship between Student Employability and Learning Experience**

The fifth research question was to identify if there was a positive impact of the Learning Experience on Student Employability:

\[ H_{05} \text{ There is no significant relationship between Student Employability (SE) and Learning Experience (LE)} \]
H_{15} \quad \text{There is a significant relationship between Student Employability (SE) and Learning Experience (LE)}

A correlation analysis was done using Statistical Package for Social Sciences (SPSS) version 22.0 for Windows, a product of SPSS, Inc. Pearson correlation coefficient was used to describe the relationships between the variables.

Correlation coefficients were used to determine the relationships between variables and sub-variables. Interpretations of the correlation coefficients were based on Davis’ (1983) conventions for interpreting correlation associations.

Those conventions are as follows:

0.70 or higher = Very strong association,

0.50-.69 = Substantial association,

0.30-.49 = Moderate association,

0.10-.29 = Low association and

0.01-.09 = Negligible association.

The result showed that the correlation coefficient for Student Employability and Learning Experience was 0.766 which is a very high positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).
Table 32: Correlation between Student Employability and Learning Experience

Due to the high correlation between Student Employability and Learning Experience it was imperative to understand the impact of individual Learning Experience sub-variables which were:

1. Student-Faculty ratio
2. Ratio of learning inputs via Theory vs. Practical knowledge sharing (e.g. live case studies, industry internships etc.)
3. Curriculum design through consultation with industry experts
4. Faculty feedback mechanism where students can provide their feedback
5. Industry interactions (e.g. guest lectures, industry internships etc)
6. Faculty / student involvement in research and consultancy
7. Development of soft skills (e.g. presentations, communication skills), personality development and leadership skill training
8. Student & faculty exchange programs
The result showed that the correlation coefficient for Student Employability and Student Faculty ratio was 0.022 which is a negligible positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

**Correlation between Student Employability (SE) and Student-Faculty ratio (LE1)**

<table>
<thead>
<tr>
<th>Correlation output</th>
<th>SE Average</th>
<th>LE1</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE Average</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>434</td>
</tr>
<tr>
<td>LE1</td>
<td>Pearson Correlation</td>
<td>0.022*</td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)

**Table 33: Correlation between Student Employability and Student-Faculty ratio**

The result showed that the correlation coefficient for Student Employability and Learning Inputs ratio was 0.833 which is a very strong positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

**Correlation between Student Employability (SE) and Learning Inputs Ratio (LE2)**

<table>
<thead>
<tr>
<th>Correlation output</th>
<th>SE Average</th>
<th>LE2</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE Average</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>434</td>
</tr>
<tr>
<td>LE2</td>
<td>Pearson Correlation</td>
<td>0.833*</td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)

**Table 34: Correlation between Student Employability and Learning inputs ratio**
The result showed that the correlation coefficient for Student Employability and Curriculum Design was 0.884 which is a very strong positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

**Correlation between Student Employability (SE) and Curriculum Design (LE3)**

<table>
<thead>
<tr>
<th>Correlation output</th>
<th>SE Average</th>
<th>LE3</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE Average</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>434</td>
<td>434</td>
</tr>
<tr>
<td>LE3</td>
<td>Pearson Correlation</td>
<td>0.884*</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>434</td>
<td>434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)

Table 35: Correlation between Student Employability and Curriculum Design

The result showed that the correlation coefficient for Student Employability and Faculty feedback mechanism was 0.042 which is a negligible positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

**Correlation between Student Employability (SE) and Faculty feedback mechanism (LE4)**

<table>
<thead>
<tr>
<th>Correlation output</th>
<th>SE Average</th>
<th>LE4</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE Average</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>434</td>
<td>434</td>
</tr>
<tr>
<td>LE4</td>
<td>Pearson Correlation</td>
<td>0.042*</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>434</td>
<td>434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)

Table 36: Correlation between Student Employability and Faculty feedback mechanism
The result showed that the correlation coefficient for Student Employability and Industry Interactions was 0.871 which is a very strong positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

*Table 37: Correlation between Student Employability and Industry Interactions*

<table>
<thead>
<tr>
<th></th>
<th>SE Average</th>
<th>LE5</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE Average</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>434 434</td>
</tr>
<tr>
<td>LE5</td>
<td>Pearson Correlation</td>
<td>0.871*</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>434 434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)*

The result showed that the correlation coefficient for Student Employability and Research-Consultancy involvement was 0.117 which is a low positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

*Table 38: Correlation between Student Employability and Research-Consultancy involvement*

<table>
<thead>
<tr>
<th></th>
<th>SE Average</th>
<th>LE6</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE Average</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>434 434</td>
</tr>
<tr>
<td>LE6</td>
<td>Pearson Correlation</td>
<td>0.117*</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>434 434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)*
The result showed that the correlation coefficient for Student Employability and Soft Skills Development was 0.819 which is a very strong positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

**Correlation between Student Employability (SE) and Soft Skills Development (LE7)**

<table>
<thead>
<tr>
<th>Correlation output</th>
<th>SE Average</th>
<th>LE7</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE Average</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>434</td>
</tr>
<tr>
<td>LE7</td>
<td>Pearson Correlation</td>
<td>0.819*</td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)

Table 39: Correlation between Student Employability and Soft Skills Development

The result showed that the correlation coefficient for Student Employability and Exchange Programs was 0.631 which is a very strong positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

**Correlation between Student Employability (SE) and Exchange Programs (LE8)**

<table>
<thead>
<tr>
<th>Correlation output</th>
<th>SE Average</th>
<th>LE8</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE Average</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>434</td>
</tr>
<tr>
<td>LE8</td>
<td>Pearson Correlation</td>
<td>0.631*</td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)

Table 40: Correlation between Student Employability and Exchange programs
This illustrated that the following four factors played a critical role in Student Employability:

1. Ratio of learning inputs via Theory vs. Practical knowledge sharing (e.g. live case studies, industry internships etc.)
2. Curriculum design through consultation with industry experts
3. Industry interactions (e.g. guest lectures, industry internships etc)
4. Development of soft skills (e.g. presentations, communication skills), personality development and leadership skill training

It also illustrated that Student Faculty ratio, Faculty Feedback mechanism and Research-Consultancy involvement had a negligible to low impact on Student Employability.

It also threw up the insight that Exchange Programs had a substantial impact on Learning Outcomes.

**Relationship between Student Employability and Student Intrinsic Qualities**

The sixth and last research question was to identify if there was an association between the Student Intrinsic Qualities and Student Employability:

\[ H_{06} \] There is no significant relationship between Student Employability (SE) and Student Intrinsic Qualities (SIQ)

\[ H_{16} \] There is a significant relationship between Student Employability (SE) and Student Intrinsic Qualities (SIQ)
A correlation analysis was done using Statistical Package for Social Sciences (SPSS) version 22.0 for Windows, a product of SPSS, Inc. Pearson correlation coefficient was used to describe the relationships between the variables.

Correlation coefficients were used to determine the relationships between variables and sub-variables. Interpretations of the correlation coefficients were based on Davis' (1983) conventions for interpreting correlation associations.

Those conventions are as follows:

0.70 or higher = Very strong association,

0.50-.69 = Substantial association,

0.30-.49 = Moderate association,

0.10-.29 = Low association and

0.01-.09 = Negligible association.

The Student Intrinsic Qualities was studied with respect to the sub-variables as mentioned below:

1. Past educational area / field
2. Past work experience
3. Duration of past work experience

The result showed that the correlation coefficient for Learning Outcomes and Past Educational area / field was 0.634 which is a
substantial positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

Correlation between Student Employability (SE) and Past Educational area / field (SIQ1)

<table>
<thead>
<tr>
<th></th>
<th>SE Average</th>
<th>SIQ1</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE Average</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>434</td>
</tr>
<tr>
<td>SIQ1</td>
<td>Pearson Correlation</td>
<td>0.634*</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)

Table 41: Correlation between Student Employability and Past Educational area / field

The result showed that the correlation coefficient for Learning Outcomes and Past Work Experience was 0.718 which is a very strong positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

Correlation between Student Employability (SE) and Past Work Experience (SIQ2)

<table>
<thead>
<tr>
<th></th>
<th>SE Average</th>
<th>SIQ2</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE Average</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>434</td>
</tr>
<tr>
<td>SIQ2</td>
<td>Pearson Correlation</td>
<td>0.718*</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>434</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)

Table 42: Correlation between Student Employability and Past Work Experience
The result showed that the correlation coefficient for Learning Outcomes and Duration of Past Work Experience was 0.599 which is a moderate positive correlation. The correlation was found to be significant at the 0.01 level (2 tailed).

*Correlation is significant at the 0.01 level (2-tailed)*

| Correlation between Student Employability (SE) and Duration of Work Experience (SIQ3) |
|---------------------------------|-----------------|-----------------|
|                                | SE Average      | SIQ3            |
| SE Average                     | Pearson Correlation | 1               |
|                                | Sig (2-tailed)   | 0.000           |
|                                | N                | 434             |
| SIQ3                           | Pearson Correlation | 0.599*          |
|                                | Sig (2-tailed)   | 0.000           |
|                                | N                | 434             |

Table 43: Correlation between Student Employability and Duration of Work Experience

This illustrated that Past Work Experience was the critical factor in the Student Intrinsic Qualities that had a very high impact on Student Employability. It also showed that Past Educational area / field and Duration of past work experience had substantial impact on Student Employability.

**One-way Analysis of Variance (ANOVA)**

One way Analysis of Variance or ANOVA was used to determine if there was any significant difference between the means of different independent (unrelated) groups.
The aim was to identify impact of the independent variables or sub-variables on the dependent variables of the study. For example, Student Intrinsic Qualities, which is an input into the B-school system, and the relationship with the output in the form of Learning Outcomes and Student Employability, was studied.

The following two test cases were found interesting for reporting:

1. Is there a significant difference in Learning Outcomes for groups with different independent (unrelated) past educational area? The study had identified 6 different groups of past educational area of which 5 groups were selected for further analysis (viz. Arts, Science, Commerce, Engineering, Other graduation)

2. Is there a significant difference in Student Employability for groups with different independent (unrelated) past duration of work experience? The study had identified 3 different groups of past duration of work experience viz. past educational area 5 independent groups were chosen viz. less than 1 year, 1 to 2 years and above 2 years)

The first test case to determine if there is a significant difference in Learning Outcomes, selected 10 subjects in each of the 5 groups viz. Arts, Science, Commerce, Engineering, Other graduation.
Below is the output of the analysis:

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1.966</td>
<td>4</td>
<td>.492</td>
<td>22.319</td>
<td>.000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>1.013</td>
<td>46</td>
<td>.022</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2.979</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Value of F Prob. = 0.000 which is smaller than α Level of 0.05

Table 44: Summary of One-way ANOVA – Significant difference between past educational areas for Learning Outcomes

This illustrates that there is significant difference in the Learning Outcomes based on the past educational area. It was therefore important to identify which of the groups was significantly different and hence a LSD post hoc test was also run using SPSS ANOVA procedures.

The LSD post hoc test identified that the “Other graduation” group had a lower Learning Outcome score, while the Commerce and Engineering groups had a higher Learning Outcome score.

The second test case to determine if there is a significant difference in Student Employability, selected 10 subjects in each of the 3 groups viz. less than 1 year, 1 to 2 years and above 2 years.
Below is the output of the analysis:

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1.911</td>
<td>2</td>
<td>.956</td>
<td>25.651</td>
<td>.000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>1.043</td>
<td>28</td>
<td>.037</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2.954</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Value of F Prob. = 0.000 which is smaller than α Level of 0.05

Table 45: Summary of One-way ANOVA – Significant difference between past duration of work experience for Student Employability

This illustrates that there is significant difference in the Student Employability based on the past duration of work experience. It was therefore important to identify which of the groups was significantly different and hence a LSD post hoc test was also run using SPSS ANOVA procedures.

The LSD post hoc test identified that the “1 to 2 years” group had a higher Student Employability score, while the “less than 1 year” group had the least Student Employability score.

**Qualitative results**

The research instrument also provided opportunities to capture the qualitative aspects of B-school Learning Outcomes and Student Employability. In addition to this, the researcher had the opportunity to interview 64 respondents to understand the qualitative inputs provided by them in the questionnaire.
This section, documents the feedback that was collated from the research instrument and the follow-up interviews.

The qualitative inputs are presented here in the sequence of B-school admission, education and placement events.

**B-school admission related qualitative inputs**

206 respondents mentioned that the output quality of B-schools depends largely on the input quality of the students. This was corroborated with focussed interviews on this topic with 32 of these respondents and the following insights were documented.

The respondents believed that the quality of the students taking admission into a B-school is determined by the following aspects:

- Academic track record e.g. throughout their academic stint getting high scores or distinctions, including academic achievement medals
- High entrance exam scores
- Good quality past work experience, including exposure of cross-cultural work environments
- Brand name of the company or companies worked in before joining the B-school
- Trainings or exposure to management concepts prior to joining the B-school
B-school education related qualitative inputs

311 respondents mentioned one or more of the following as the cornerstones of higher Learning Outcomes and better Student Employability:

- Nature of academic inputs – theoretical or soft skills development,
- Mode of learning,
- Diversity of educators.

This was corroborated with focused interviews on this topic with 43 of these respondents and the following insights were documented.

The academic inputs for theoretical inputs was felt to be important in different contextual usage and delved with the following:

- Cross-industry utilization examples of concepts
- Cross pollination of academic concepts e.g. application of concepts like branding-business planning-organization effectiveness to the social sector

Soft skill development was mentioned as an important area of student development that was also emphasised as a key need for recruiters. In this regard the following soft skills were identified as focus for academic delivery or training:

- Communication skills
- Leadership skills
- Motivational skills
- Inter-personal skills
- Team skills
- Positive work ethic
- Desire to learn and be trained
- Reliability
- Flexibility & Adaptability
- Self-supervising and organized
- Dedication
- Dependability

On the topic of mode of learning, the qualitative feedback summed up the following options:

- Case study learning
- Internships
- Exchange programs, in order to understand application of concepts in a different consumer environment or cultural setting
- Webinars was also highlighted as a potential access to leading thinkers and educators
- Conferences and award functions were also identified as potential forums where students could learn best practices or live case studies in a local context
Placement related qualitative inputs

197 respondents mentioned that B-school education was a stepping stone for better career prospects and hence the Learning Outcomes should focus on focussed industry requirements.

The research also corroborated these inputs provided in the questionnaire through focussed interviews with 42 interviews with the respondents.

The general perception was that B-schools provide direction to the career through a generic management education and soft skill development. The focus on communication skills development through periodic presentation preparation, delivery and involvement of audience, helps to a large extent future work requirements as entry level manager or upper level manager. Plus the group work during the academic sessions help to foster team skills, leadership skills and inter-personal skills. All of these are very important aspects which are not usually provided in any other prior educational program.
5.3 Data Conclusion

This chapter summarizes the findings and provides the path forward to arrive at the Recommendations. First all the correlation analysis output with the Pearson Coefficient of the dependent variables and dependent sub-variables with regard to the independent variables is provided.

The below tabulates the correlation association of the Independent variables or sub-variables with Learning Outcomes:

<table>
<thead>
<tr>
<th>Independent Variable / Sub-variable</th>
<th>Correlation Association with Learning Outcomes</th>
<th>Pearson Coefficient of Correlation: $r$</th>
</tr>
</thead>
<tbody>
<tr>
<td>B School Environment (BSE)</td>
<td></td>
<td>0.372</td>
</tr>
<tr>
<td>B School Physical Infrastructure (BSE1)</td>
<td></td>
<td>0.562</td>
</tr>
<tr>
<td>Residential Facilities (BSE2)</td>
<td></td>
<td>0.397</td>
</tr>
<tr>
<td>Sports Facilities (BSE3)</td>
<td></td>
<td>0.132</td>
</tr>
<tr>
<td>Learning Experience (LE)</td>
<td></td>
<td>0.791</td>
</tr>
<tr>
<td>Student-Faculty ratio (LE1)</td>
<td></td>
<td>0.334</td>
</tr>
<tr>
<td>Learning Inputs Ratio (LE2)</td>
<td></td>
<td>0.784</td>
</tr>
<tr>
<td>Curriculum Design (LE3)</td>
<td></td>
<td>0.799</td>
</tr>
<tr>
<td>Faculty feedback mechanism (LE4)</td>
<td></td>
<td>0.088</td>
</tr>
<tr>
<td>Industry Interactions (LE5)</td>
<td></td>
<td>0.827</td>
</tr>
<tr>
<td>Research-Consultancy involvement (LE6)</td>
<td></td>
<td>0.117</td>
</tr>
<tr>
<td>Soft Skills Development (LE7)</td>
<td></td>
<td>0.886</td>
</tr>
<tr>
<td>Exchange Programs (LE8)</td>
<td></td>
<td>0.644</td>
</tr>
<tr>
<td>Past Educational area / field (SIQ1)</td>
<td></td>
<td>0.287</td>
</tr>
<tr>
<td>Past Work Experience (SIQ2)</td>
<td></td>
<td>0.766</td>
</tr>
<tr>
<td>Duration of Work Experience (SIQ3)</td>
<td></td>
<td>0.437</td>
</tr>
</tbody>
</table>

Table 46: Correlation association of Independent variables & sub-variables with Learning Outcomes
The below tabulates the correlation association of the Independent variables or sub-variables with Student Employability:

<table>
<thead>
<tr>
<th>Independent Variable / Sub-variable</th>
<th>Correlation Association with Student Employability</th>
</tr>
</thead>
<tbody>
<tr>
<td>B School Environment (BSE)</td>
<td>0.177</td>
</tr>
<tr>
<td>B School Physical Infrastructure (BSE1)</td>
<td>0.276</td>
</tr>
<tr>
<td>Residential Facilities (BSE2)</td>
<td>0.197</td>
</tr>
<tr>
<td>Sports Facilities (BSE3)</td>
<td>0.033</td>
</tr>
<tr>
<td>Learning Experience (LE)</td>
<td>0.766</td>
</tr>
<tr>
<td>Student-Faculty ratio (LE1)</td>
<td>0.022</td>
</tr>
<tr>
<td>Learning Inputs Ratio (LE2)</td>
<td>0.833</td>
</tr>
<tr>
<td>Curriculum Design (LE3)</td>
<td>0.884</td>
</tr>
<tr>
<td>Faculty feedback mechanism (LE4)</td>
<td>0.042</td>
</tr>
<tr>
<td>Industry Interactions (LE5)</td>
<td>0.871</td>
</tr>
<tr>
<td>Research-Consultancy involvement (LE6)</td>
<td>0.117</td>
</tr>
<tr>
<td>Soft Skills Development (LE7)</td>
<td>0.819</td>
</tr>
<tr>
<td>Exchange Programs (LE8)</td>
<td>0.631</td>
</tr>
<tr>
<td>Past Educational area / field (SIQ1)</td>
<td>0.634</td>
</tr>
<tr>
<td>Past Work Experience (SIQ2)</td>
<td>0.718</td>
</tr>
<tr>
<td>Duration of Work Experience (SIQ3)</td>
<td>0.599</td>
</tr>
</tbody>
</table>

Table 47: Correlation association of Independent variables & sub-variables with Student Employability

One way Analysis of Variance or ANOVA was used to determine if there was any significant difference between the means of different independent (unrelated) groups.

The aim was to identify impact of the independent variables or sub-variables on the dependent variables of the study. For example, Student Intrinsic Qualities, which is an input into the B-school system, and the relationship with the output in the form of Learning Outcomes and Student Employability, was studied.
The one-way ANOVA tables are also provided below:

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1.966</td>
<td>4</td>
<td>.492</td>
<td>22.319</td>
<td>.000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>1.013</td>
<td>46</td>
<td>.022</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2.979</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Value of F Prob. = 0.000 which is smaller than α Level of 0.05

Table 44: Summary of One-way ANOVA – Significant difference between past educational area for Learning Outcomes

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1.911</td>
<td>2</td>
<td>.956</td>
<td>25.651</td>
<td>.000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>1.043</td>
<td>28</td>
<td>.037</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2.954</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Value of F Prob. = 0.000 which is smaller than α Level of 0.05

Table 45: Summary of One-way ANOVA – Significant difference between past duration of work experience for Student Employability
Chapter 6
DISCUSSIONS

6.1 Discussion on Findings
6.2 Significance of the Findings
6.3 Recommendation of the study
6.4 Limitations of the study
6.5 Recommendation for further study
DISCUSSIONS

The purpose of this study is to identify the Critical Success Factors impacting B-school Learning Outcomes and Student Employability in Mumbai and Navi Mumbai.

This chapter comprises five sections:

- Discussion on Findings
- Significance of the Findings
- Recommendations of the Study
- Limitations of the Study
- Recommendations for further Study

6.1 Discussion on Findings

The section seeks to establish the key insights emanating from the study. The findings are based on the responses to the questionnaire or research instrument that was administered to 434 B-school students across 4 B-schools. The choice of the 4 B-schools was selected using a convenient sampling approach to ensure that it represents different facets of B-schools in the sample of respondents and had the followings aspects covered viz.

- Mumbai university led institution: 1 B-school
- Private institution: 3 B-schools
- Residential and non-residential institution
- All AICTE approved institutions
Institutions with a good placement track record

Based on these facets, the study sought to identify the Critical Success Factors impacting B-school Learning Outcomes and Student Employability.

The dependent variables and their sub-variables are enlisted below:

1. B-school Environment:
   - B-school Physical Infrastructure
   - Residential Facilities
   - Sports Facilities

2. Learning Experience:
   - Student-Faculty ratio
   - Learning inputs ratio
   - Curriculum Design
   - Faculty feedback mechanism
   - Industry interactions
   - Research/Consultancy involvement
   - Soft skills development
   - Exchange programs

3. Student Intrinsic Qualities
   - Past educational area / field
   - Past Work Experience
   - Duration of work experience

The output of the correlation analysis clearly defined the independent variables and sub-variables association with the depended variables.
The below two tables clearly illustrate that there are six critical factors for B-school Learning Outcomes and Student Employability and these factors are:

- Soft Skill Development
- Industry Interactions
- Curriculum Design
- Learning Experience overall
- Learning Inputs ratio
- Past work experience
<table>
<thead>
<tr>
<th>Correlation Association (as per convention)</th>
<th>Correlation with Learning Outcomes</th>
<th>Independent Variable / Sub-variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.70 or higher = Very strong association</td>
<td>0.886</td>
<td>Soft Skills Development (LE7)</td>
</tr>
<tr>
<td></td>
<td>0.827</td>
<td>Industry Interactions (LE5)</td>
</tr>
<tr>
<td></td>
<td>0.799</td>
<td>Curriculum Design (LE3)</td>
</tr>
<tr>
<td></td>
<td>0.791</td>
<td>Learning Experience (LE)</td>
</tr>
<tr>
<td></td>
<td>0.784</td>
<td>Learning Inputs Ratio (LE2)</td>
</tr>
<tr>
<td></td>
<td>0.766</td>
<td>Past Work Experience (SIQ2)</td>
</tr>
<tr>
<td>0.50-.69 = Substantial association</td>
<td>0.644</td>
<td>Exchange Programs (LE8)</td>
</tr>
<tr>
<td></td>
<td>0.562</td>
<td>B School Physical Infrastructure (BSE1)</td>
</tr>
<tr>
<td>0.30-.49 = Moderate association</td>
<td>0.437</td>
<td>Duration of Work Ex (SIQ3)</td>
</tr>
<tr>
<td></td>
<td>0.397</td>
<td>Residential Facilities (BSE2)</td>
</tr>
<tr>
<td></td>
<td>0.372</td>
<td>B School Environment (BSE)</td>
</tr>
<tr>
<td></td>
<td>0.334</td>
<td>Student-Faculty ratio (LE1)</td>
</tr>
<tr>
<td>0.10-.29 = Low association</td>
<td>0.287</td>
<td>Past Educational area (SIQ1)</td>
</tr>
<tr>
<td></td>
<td>0.132</td>
<td>Sports Facilities (BSE3)</td>
</tr>
<tr>
<td></td>
<td>0.117</td>
<td>Research-Consultancy involvement (LE6)</td>
</tr>
<tr>
<td>0.01-.09 = Negligible association</td>
<td>0.088</td>
<td>Faculty feedback mechanism (LE4)</td>
</tr>
<tr>
<td>Correlation Association (as per convention)</td>
<td>Correlation with Student Employability</td>
<td>Independent Variable / Sub-variable</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>----------------------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>0.70 or higher = Very strong association</td>
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<td>Curriculum Design (LE3)</td>
</tr>
<tr>
<td></td>
<td>0.871</td>
<td>Industry Interactions (LE5)</td>
</tr>
<tr>
<td></td>
<td>0.833</td>
<td>Learning Inputs Ratio (LE2)</td>
</tr>
<tr>
<td></td>
<td>0.819</td>
<td>Soft Skills Development (LE7)</td>
</tr>
<tr>
<td></td>
<td>0.766</td>
<td>Learning Experience (LE)</td>
</tr>
<tr>
<td></td>
<td>0.718</td>
<td>Past Work Experience (SIQ2)</td>
</tr>
<tr>
<td>0.50-.69 = Substantial association</td>
<td>0.634</td>
<td>Past Educational area / field (SIQ1)</td>
</tr>
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<td></td>
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<td>Exchange Programs (LE8)</td>
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<tr>
<td></td>
<td>0.599</td>
<td>Duration of Work Experience (SIQ3)</td>
</tr>
<tr>
<td>0.10-.29 = Low association</td>
<td>0.276</td>
<td>B School Physical Infrastructure (BSE1)</td>
</tr>
<tr>
<td></td>
<td>0.197</td>
<td>Residential Facilities (BSE2)</td>
</tr>
<tr>
<td></td>
<td>0.177</td>
<td>B School Environment (BSE)</td>
</tr>
<tr>
<td></td>
<td>0.117</td>
<td>Research-Consultancy involvement (LE6)</td>
</tr>
<tr>
<td>0.01-.09 = Negligible association</td>
<td>0.042</td>
<td>Faculty feedback mechanism (LE4)</td>
</tr>
<tr>
<td></td>
<td>0.033</td>
<td>Sports Facilities (BSE3)</td>
</tr>
<tr>
<td></td>
<td>0.022</td>
<td>Student-Faculty ratio (LE1)</td>
</tr>
</tbody>
</table>
6.2 Significance on the Findings

The quantitative analysis and results clearly established the Critical Success Factors of B-school Learning Outcomes and Student Employability.

These six Critical Success Factors identified are enlisted below:

1. Soft Skill Development
2. Industry Interactions
3. Curriculum Design
4. Learning Experience overall
5. Learning Inputs ratio
6. Past work experience

These findings clearly help focus on how to enhance B-school Learning Outcomes and Student Employability.

The focus on these six factors can be clearly linked to the below mentioned milestones or events in a B-school:

- Admissions process
- Curriculum design
- Pedagogic approach
- Modes of teaching
- Mix of delivery of knowledge and skills development

This can help build consensus of having a key criteria for admission as students with past work experience.
The findings also illustrate the need for incorporation of Industry relevant topics in the curriculum, so the learning process can be more contextual to the needs and developments in the industry. In addition to this, the students could be day one ready for the industry.

With respect to the delivery of knowledge, it is important to note that emphasis is on higher interactions with industry experts or internships in the industry. This helps imbibe practical knowledge and contextual understanding of the industry. It also helps to hone the theoretical inputs by understanding their application.

Soft Skills development, as a critical success factor is also a significant aspect to improve B-school education. While soft skills of communication development is an inherent aspect of most B-school courses which require presentations to be prepared and delivered by the students – individually or in groups. However the broader emphasis of the soft skills development, as identified in the qualitative output of the study, is to enhance the team building skills, leadership skills, cross-cultural sensitivities, collaboration for joint success etc.

Overall the study’s significance lies in tailoring the B-school education to better fulfil the aspirations of the students, who are essentially the customers of the product/service called B-school education.
6.3 Recommendations of the study

The quantitative analysis and results clearly established the Critical Success Factors of B-school Learning Outcomes and Student Employability.

These six Critical Success Factors identified in the study are enlisted below:

1. Soft Skill Development
2. Industry Interactions
3. Curriculum Design
4. Learning Experience overall
5. Learning Inputs ratio
6. Past work experience

The recommendations of the study are aligned in the direction of these six Critical Success Factors and draws inputs from the Qualitative findings of the research process.

**Soft Skills Development**

The research process identified Soft Skills development as the highest contributor to Learning Outcomes and an equally high contributing factor towards Student Employability.

The contours of the soft skills requirement, as illustrated in the study are as below:

- Communication skills
- Inter-personal skills
- Team skills
- Leadership skills
- Motivational skills
- Positive work ethic
- Desire to learn and be trained
- Reliability
- Flexibility & Adaptability
- Self-supervising and organized
- Dedication

The communication skills, interpersonal skills and team skills can be honed through periodic assignments that necessitate presentation preparation, presentation delivery and fielding of question & answers. While these are inherent aspects that most B-schools follow, there is a need to have a focused subject on communication skills that help students understand the importance of fluency of speech, with the right word in the right order being part of any communication process. In addition to this, emphasis on vocabulary and syntax as a polishing process of the student’s communication and not a foundational training program should be in-built in the academic program.

There is also a need to education students on use of non-verbal language or body language. For example, the face is the index of the mind and it clearly displays the person’s interest. And body language presents to the audience what one feels & thinks about the particular matter, for example nodding one’s head, body language (e.g., arms
crossed, standing, sitting, relaxed), emotion of the sender & receiver (e.g., speaking clearly, enthusiastic).

Written communication is also another cornerstone of Student Employability as writing evaluates a person’s proficiency. Errors committed while filling up recruitment forms deter employers from selecting the candidates because as an Entry level Manager or Upper level manager writing circulars, reports & agenda is a key work element and any errors would considerably spoil the image of the writer as well as the organization. In addition to this, good visual presentation using graphics, colour, and balanced design layout- adds a lot to written communication. These aspects can be trained in the B-school academic program as a separate subject as well as a hygiene factor for all subjects in the course.

In addition to this, the personal attributes of Dependability, work ethics, dedication, adaptability, flexibility, desire to learn, self-supervising and organized can be developed with the academic work ethics and instruction by demonstration of the educators and administrations of the B-school. The core believe of building these soft skills is to be able to provide role models for the students and share the experiences of peers, instructors and industry experts, in free-wheeling interaction sessions specifically organized to develop these soft skills.

**Industry Interactions**

The qualitative inputs of the study identified the need to engage with three different segments of the industry viz.
Entry level managers – These are industry professionals in the relevant sphere of the management program who have been working for less than 5 years after their B-school education

Upper level managers – these are industry professional who have spent 10 to 15 years in different organizations

Top management – these are industry leaders who have reached the top of their organizations and are potential role models

These interactions can be factored in as part of individual courses, so the inputs could be forged with the academic inputs of the courses. Alternately, these could be organized as separate interactions, for example CEO Lecture Series, which provides a free-wheeling interaction of top management or industry leaders to share their experiences with the students.

In addition to this, one to many interactions, the research also identified aligning internships with key industry topics as an important area of improvement. More often than not, internships are a default offer from industry. However joint B-school and industry player internship topic could help bolster the knowledge enhancement potential as well as real results delivery for the industry.

**Curriculum Design & Learning inputs ratio**

Curriculum design is a matter of choice and compulsion as the qualitative results illustrated. In several cases the curriculum has to
be designed as per the University guidelines and there is limited scope for changes. However the Private institutions have more flexibility.

The recommendation is to constitute a cross industry-academia-alumni curriculum review panel. This panel should be tasked to meet every quarter to share ideas of industry developments and provide insights of how academic inputs can be aligned. For example, concepts like Cloud Computing are recent and changing rapidly and can be included in the ICT topics or subjects.

The need to balance theoretical and live case study was clearly demonstrated in the research findings. This can be integrated into the academic program in the following aspects:

- Student presentations on short industry cases – Each subject should be looked at identifying opportunities for doing secondary research of industry cases, in a local or global context
- Student presentations on internships – This builds peer learning and is an efficient real life contextual understanding from the course participants
- Case discussions – All courses should evaluate the opportunity to bring in high quality cases to establish the academic inputs in the minds of the participants
- Conferences and award ceremonies – Exposure to conferences and award ceremonies which document and discuss best practices is a great platform for practical knowledge building.
The B-school can host or organize such programs to enable access for their students

Aligning admissions process for higher Learning Outcomes & Student Employability

Since any process has an input-output relationship, it was critical to establish how the input into the B-school system could be aligned to the overall objective of the output of higher Learning Outcomes and Student Employability.

The study highlights the need for attention to specific groups of past educational area e.g. “Other graduation” streams to focus on higher Learning Outcomes. And also the study identified that the sweet spot for higher Student Employability is to have students with 1 to 2 years work experience.

6.4 Limitations of the study

The study was focused on management institutes of Mumbai and Navi Mumbai and the research subjects were students who were currently part of, or in the past had been a part of, the 4 institutions selected for the study. A convenient sample of 434 students of these institutions was utilized in the data collection. This demographic profile may not represent the average student in management education program.

Even if the students included in this study represent the average students in the management education program, the programs and
curricula vary from one institution to another. Since the study was only based on data collected from four institutions, the findings of this research can be selectively generalized beyond this group of students at these institutions.

6.5 Recommendation for further study

Since the present study was conducted using a convenient sample of 434 students across 4 management institutions in Mumbai and Navi Mumbai only, there is an opportunity to broad base the sample for future studies.

It is important to build in cultural differences in B-school learning hence B-school students across-regions within India could be a good comparison understand the differences in opinion of students across India. Plus it would be interesting to compare the B-school learning in institutions in other geographies like ASEAN, Europe and the US to be able to compare the B-school learning of students in India versus Asian and global context.

The Learning Outcomes can also be linked to the Academic Scores obtained by the respondents of future studies. This clearly brings in the dimension where high scoring candidates can be analysed for their responses and low scoring candidates responses can be corroborated accurately.

Student Employability is also intrinsically linked to local, regional and global job opportunities. Hence for further study on this topic,
global manager creation from B-schools in India can also be taken up as an area of enquiry, to gain perspective of the differences in requirements of specific skills and competencies e.g. working in a virtual world or culturally diverse workforce. These different perspectives can help delve into the success factors at a multi-national or global level.

Since this study was done as a one-time activity, there is no time horizon for building the association of learning to employment of the respondent and their success in the job. This is an important aspect that can be part of future studies.
APPENDICES

A1  Bibliography
A2  Webliography
A3  Questionnaire
BIBLIOGRAPHY


WEBLIOGRAPHY


RESEARCH QUESTIONNAIRE FOR B-SCHOOL STUDENTS/ALUMNI

How to complete the questionnaire:

- This questionnaire will take around 10-15 minutes to fill up
- There are no right or wrong answers
- The first question and its sub-parts helps understand you better
- From the second question onwards, you should evaluate each statement in the questionnaire to show to which extent you disagree or agree with the statement
- Some items may not be directly applicable to you, but answer each item about your current/past experience or perception about it
- Carefully evaluate and consider every statement and be absolutely honest when deciding to what extent it applies to you

1. Please provide your details below (Tick the appropriate box before the options provided):
   a. Name
      (Optional):________________________________________
   b. Institution name:____________________________________
   c. Gender:    □ Male       □ Female
   d. Please mentioned you Age (in years):
      _______________________________________________________
   e. How are you linked to a Business school:
      □ Student        □ B-school alumni (Mention year of post-graduation ____________________)
If you are a B-school student, please answer the following questions:

f. Please mention your past educational area / field:
   - □ Graduation - Arts
   - □ Graduation - Science
   - □ Graduation – Commerce
   - □ Graduation – Engineering
   - □ Graduation – Other courses (Pl specify _____________________)
   - □ Post Graduation, Pl specify your field of study_____________________________


g. Did you have past work experience before admission to the B-school?
   If yes, mention the duration (in months) & number of jobs:
   - □ Yes - Duration (in months) _______ and number of job/s _______
   - □ No past work experience

h. Have you undergone any prior short term / correspondence courses in Business Management before joining your B-school:
   - □ Yes, Pl outline the nature of the course/s______________________________
   - □ No

2. This section of the questionnaire seeks to understand the B-school Environment / Infrastructure:

   a. How do you rate the B-school physical infrastructure (Campus size and location, built up area, number of classrooms, auditoriums, library, wi-fi facilities etc.)?
      - □ Very Good
      - □ Good
      - □ Poor
      - □ Very Poor
b. How do you rate the B-school residential facilities?
   - □ Very Good □ Good □ Poor □ Very Poor

c. How do you rate the B-school sports facilities (Gym, sports ground, recreation room, swimming pool etc.)?
   - □ Very Good □ Good □ Poor □ Very Poor

3. This section of the questionnaire seeks to understand the B-school learning experience:
   a. How do you rate the Student-Faculty ratio in your institute (Note: If there are less faculty members, the Student-Faculty ratio is high)?
      - □ Very High □ High □ Low □ Very Low
   b. How do you rate the ratio of learning inputs via Theory vs. Practical knowledge sharing, in your B-School? Practical knowledge could involve live case studies, industry internships etc. (Note: If there are more theory sessions than practical inputs, the ratio is high)?
      - □ Very High □ High □ Low □ Very Low
   c. Has your B-school curriculum been designed through consultation with industry experts:
      - □ Yes □ No □ I don’t know
   d. Is there a faculty feedback mechanism where students can provide their feedback?
      - □ Yes □ No □ I don’t know
e. Does your institute organize industry interaction (guest lectures, industry internships)?
   □ Yes    □ No    □ I don’t know

f. Does your institute promote faculty / student involvement in research and consultancy?
   □ Yes    □ No    □ I don’t know

g. Does your institute develop student soft skills (presentations, communication skills), personality development and leadership skill training?
   □ Yes    □ No    □ I don’t know

h. Does your institute have student and faculty exchange programs?
   □ Yes – Both    □ Yes – one of them    □ None
   □ I don’t know

4. This section of the questionnaire seeks to understand the B-school learning outcomes:

   a. On a scale of 1 to 10, where 1 is very low and 10 very high, how do you rate the academic knowledge enhancement in your B-school (Pl tick above the choice of your score)?

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b. On a scale of 1 to 10, where 1 is very low and 10 very high, how do you rate the **industry exposure** provided by your B-school (Pl tick above the choice of your score)?

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c. On a scale of 1 to 10, where 1 is very low and 10 very high, how do you rate the **soft skill development** in your B-school (Pl tick above the choice of your score)?

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d. On a scale of 1 to 10, where 1 is very low and 10 very high, how do you rate **Business acumen training & development** in your B-school (Pl tick above the choice of your score)?

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5. This section of the questionnaire seeks to understand the Student Employability of your B-school:

   a. On a scale of 1 to 10, where 1 is very low and 10 very high, how do you rate the **placement percentage** of your B-school (Pl tick above the choice of your score)?

   
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   b. On a scale of 1 to 10, where 1 is very low and 10 very high, how do you rate the level of **salary offered in campus placement** in your B-school (Pl tick above the choice of your score)?

   
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   c. On a scale of 1 to 10, where 1 is very low and 10 very high, how do you rate the **number of recruiters** visiting your B-school (Pl tick above the choice of your score)?

   
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d. On a scale of 1 to 10, where 1 is very low and 10 very high, how do you rate the number of repeat recruiters visiting your B-school (Please tick above the choice of your score)?

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6. If you have any recommendation/s for improvement of B-School Learning Outcomes and Student Employability, please provide your inputs in the box below:

You have now completed the research questionnaire.

Thank you for your time and valuable inputs. Your inputs will help analyse, report findings and recommend improvements in B-school education to promote enhanced Learning Outcomes and higher Student Employability.

Have a nice day!