SYNOPSIS

Competencies for Effective Management Teaching - Perception of Teachers and Administrators of Indian B-Schools

(A study of B-Schools in National Capital Region of India)

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1. Introduction

In the present scenario, management education and managerial skills are required in every sphere of life. Management education is in great demand especially after the change towards liberalization, privatization, and globalization. Management Education has a become big business across the world today. But the halo attached to the Management Education has sharply faded. According to a research note in India by CRISIL (Credit Rating Information Services of India Limited), a research and advisory firm, approximately 176 Business-Schools have closed between 2012 and 2013. In its report on management education, it notes that the number of business schools increased from 3,000 in 2009-10 to 4,500 in 2012-13, with no corresponding increase in demand [22]. Some of the challenges of management education are integration of management education with corporate sector, up gradation of curriculum and course content, designing of different programs for executives, maintenance of an efficient and effective regulatory system to check mushrooming, and emphasis on research. Hence there is a need for change in the character and structure of management education.

If has been observed that management education has been successful in producing Post Graduates in quantity rather than in quality. Quality of knowledge is hardly taken care of in many management institutions. India is facing a crisis of quality management education. As compared to international standards, the Indian management institutions (with a few exceptions) are far behind. There is a need to fill this gap [5]. Various researchers have emphasized on quality of management education. The education imparted to business students should be in accordance to the changes and requirement of the society, and it should be experience-based, active, problem oriented and modified by feedback [69] [87] [119] [100] [101] [118] [16] [68] [95] [38][71][48][93]. Hence, management institutions should rethink and redesign their intuitional priorities to increases managerial effectiveness.

2. Competency and its Impact

Competency-based practices are popular among large and mid-sized employers as an integral tool for talent selection, retention, and development. Competencies describe the skills, knowledge, behaviors, personal characteristics, and motivations associated with success in a job. The value of competency has been widely explored. From the Romans, who used a form of competency profiling in selecting good soldiers and leaders, to its more modern roots in the U.S. (United States) Army's development of a critical incident methodology to identify what behaviors and actions were common to exceptional pilots, organizations have sought to gain competitive advantage by identifying what matters for high performance and how to best find and develop it [115]. While Flanagan [34], who was part of the U.S. Army task force, was the first to apply the methodology to the private sector, McClelland and later Boyatzis, popularized and spread the application of what they defined as "competencies." Since Boyatzis' work in the 1980s, competency models have been used to align individual behavior to organizational goals, create clear expectations, guide development, and show how behaviors must change as leader's progress through the organization.

Competency-based practices utilize a competency framework to align the strategic objectives of an organization with its key HR (Human Resource) business processes. Any coordinated or strategic effort across talent management requires a lingua franca – a common language. For strategic HR, the lingua franca is competencies. Defining and using competencies for talent management practices has a high return on investment (Ulrich, 2010)[116]. The use of a competency method as the basis for human resource management has gained a strong foothold in international HR practice (Athey and Orth, 1999)[6]. Ranging from selection, retention, and development to organizational strategic planning,

competencies are used today in a wide range of functions within human resources (Rodriguez et al., 2002) [97]. When organizations select, develop, reward, and promote employees on the same set of competencies, the consistency unambiguously communicates to employees the strategic importance of these competencies. This creates a strong organizational climate that contributes to the establishment of high performance work systems (Bowen and Ostroff, 2004) [13].

Different research emphasize that Top companies have integrated competencies in its functioning leading to success. For example, in the 1990's the LBA (Lance A. Berger and Associates, Ltd.) Consulting Group conducted a study that focused on identifying the factors that most contributed to the creation and sustenance of organizational excellence. The study examined organizations that had survived and prospered, and those that had failed, over a 25-year period. The results of the study suggested that six human resource conditions have to be met. One of the conditions found was use of institutional competencies (success factors) in employee selection and performance evaluation processes (Berger and Berger, 2004)[10]. In 2005, Hewitt Associates [50] studied leadership development among 373 U.S. companies, 20 of which were labeled "Top 20 Companies for Leaders." It was found that 100% of the Top 20 Companies and 73% of other companies have leadership competencies, the Top 20 Companies were significantly better at integrating these into leadership processes. It was found that the standout companies for leaders not only have leadership competencies in place, but successfully integrated the competencies into succession planning, pay formulas, and performance management. In 2012, research done by Fortune and Aon- Hewitt[3], showed that over 74% of responding companies indicated they had a defined competency model that described a unified theory of what leaders should be, know, and do (and a full 100% of companies that made the global Top Companies list do). They suggested that competency models can be used to drive organization and individual results. It was found that Top Companies include and integrate foundational competencies more as compared to other companies.

3. Need of the Study

Management education in India is not adding much to student knowledge as other academic disciplines. The major features that distinguish top and ordinary business schools are "what they teach" and "how they teach". Considerable attention should be given to themes, contents and pedagogy for which onus lies on the teacher [14]. All committees and commissions on education have also emphasized the importance of the role of the teacher in education. According to the Commonwealth Report (1974) [23] the teacher has major role in educational development.

A number of committees have looked into management education in India in the past. Committees like Nanda Committee, Kurien Committee, Ishwar Dayal Committee, and Management Education Review Committee have unequivocally laid emphasis on teaching materials, research and teaching methodology. Also the Education Commission (1964-66) [78] in India has emphasized the importance of the role of a teacher. AACSB(Association to Advance Collegiate Schools of Business) on basis of a series of outcome assessment studies in 1978 showed that the teacher is effective in producing significant student improvement with regard to some abilities (Boyatzis and Sokol, 1982; Development Dimensions International [DDI], 1985) [15][28].

B-Schools are currently ranked/ rated every year by different agencies, which include newspapers, business magazines, market research companies, and independent consultants. It was found in general that parameters on which institutes were assessed were Intellectual Capital, Admission Procedure, Placement, Industry Interface and Infrastructure. The Intellectual Capital factor however was found the

most important factor. The Intellectual Capital factor emphasizes on the quality of teachers in business schools. Researchers like Liebowitz (2003) [67] claims that research plays a vital role in the rankings of Business-Schools. Srinivas (2011) [108] pointed out that learning experience as one of the most important factor for excellence in management education. According to Doctor (2007)[30] intellectual capital is important and unavoidable for business schools who want to be part of the rankings. Many surveys like ones conducted by Business India and Outlook Magazine intellectual capital parameter is given the highest weight-age.

Literature and business school ranking practices exclusively suggest that teachers play an integral role in management institutions to produce effective management professionals. Teachers need to react to the changing scenario and equip themselves to meet the need of the changing business environment. Hence the research will identify competencies required for effective teaching in B-Schools according to the changing scenario.

4. Rationale of the Study

Competency-based practices are widely used by companies as an integral tool for talent selection, retention, and development leading to organizations success. Nowadays, there is less emphasis given to jobs as the building blocks of an organization; instead increased attention and focus is on employee competence. In a B-School teacher plays the most important role as emphasized by different researchers, committees and commissions. So teacher's competence becomes crucial for effectiveness of the B-School. Hence there is a requirement for a Competency framework for teachers of Management Institutes to produce effective management professionals.

5. Objectives of the Study

The objectives of the study are as follows:
1. To identify the competencies required for effective management teaching.
2. To find the importance of effective management teaching competencies as perceived by teachers and academic administrators.
3. To determine the teacher competence level and investigate the influence of personal and professional characteristic on teaching competency.
4. To develop a framework for effective teaching in management education.

The following hypotheses were also formulated:
1. There is no significant difference between the average perceived importance value of dimensions of management teaching competencies between teachers and academic administrators.
2. There exists no significant influence of B-School category on teaching competency level.
3. There exists no significant influence of experience on teaching competency level.
4. There exists no significant influence of position on teaching competency level.
5. There exists no significant influence of demographic variables on teaching competency level.
(a) There exists no significant influence of age on teaching competency level.
(b) There exists no significant influence of gender on teaching competency level.
(c) There exists no significant influence of qualification on teaching competency level.

6. Literature Review

History of competency can be traced to the early 1970s when industrial psychologists and human resource managers were seeking ways to predict job performance. Competency comprises the specification of knowledge and skills, and the application of knowledge and skills to the standard of performance required to complete a task and has been well defined by different researchers[18] [32] [51] [52] [53] [56] [57] [58] [64] [66] [75] [88] [105] [107] [109] [112] [114]. The rush to initiate competency testing of teachers came out of the growing concern about achievement in schools during the 1970s and early '80s. The decline in students' test scores prompted many to place the burden of blame on the nation's teachers. Thereafter many researchers defined teaching competency[2] [11] [12] [21] [24] [25] [26] [36] [40] [49] [54] [70] [76] [77] [82] [113]. The following section briefly describes literature on characteristic of effective teachers, and literature on impact of certain personal and professional characteristics of a teacher on teaching competency.

6.1. Literature on Characteristic of Effective Teachers

There have been a number of studies on determining the main attributes of an effective teacher. Some of the important studies have been discussed below. Teaching quality is the most significant factor in students learning (Goldhaber and Anthony, 2004[39]; Rivkin et al., 2005 [96]). An achievement gap in student's performance suggests a performance gap in teachers practice (Berg, 2010[9]). Attempts to define teacher behaviors blossomed into a movement known as Competency-based teacher education. The State of Florida has been a leader in identification of generic teaching competencies and in the movement of competency-based teacher education. In 1975 the Council on Teacher Education (COTE) identified 23 generic competencies which were grouped into five major categories namely communication skills, basic knowledge, technical skills, administrative skills and interpersonal skills [83].George (1975) [37] enumerated teaching competencies as, gaining pupils attention, explaining and narrating, giving directions, asking and adapting questions to pupils, recognizing pupils difficulties of understanding, quality of voice and speech habits, use of non-verbal cues, holding pupils' attention, gaining pupils' participation, controlling pupils and use of aids (blackboards and illustrating material).

Passi and Lalitha (1976) [90] identified twenty- one teaching competencies required in Indian situation. These twenty-one teaching competencies were grouped under the following major headings: Planning skills, Presentation skills, Managerial skills, Closure skills, and Evaluation skills. Gray and Gerrard (1977) [43] in a survey of 264 teachers, suggested 16 teaching competencies. These competencies were Relationship with class (good rapport), Willingness to be flexible, Effectiveness in controlling his class, Capacity to perceive the words from the students' point of view, Personal adjustment and character, Influence on students' behavior, Knowledge of subject matter and related area, Ability to personalize his teaching, Extent to which his verbal behavior in classroom is student centered, Extent to which he uses inductive methods, Amount his students learn, General knowledge and understanding of educational facts, Civic responsibility, Performance in student teaching, Participation in community and professional activities, and Years of teaching experience.

Mathew (1980) [73] through factor analysis found twelve factors, which included competency of teacher's concern for students, using audio-visual aids, professional perception, giving assignments, illustrating with example, introducing logical exposition, classroom management, use of questions, initiating pupil participation, use of blackboard, achieving a closure and recognizing attending behavior of students. Whitty (1996) [117] identified professional competence, which includes knowledge and understanding of children and their learning, subject knowledge, curriculum, the

education system and the teacher's role. Ovando (1996) [85] found that teachers with leadership competency are more innovative and exude positive effect in the classroom. For Edward et al. (1996) [31] core competencies of teacher include abstract thinking, problem solving ability, encouraging team work and above all effective communication.

Government of the Punjab (1999) [41] conducted a study to identify the required competencies of elementary teachers, secondary teachers and teacher's trainers. They found that indispensable personal and professional competencies of secondary school teachers and teacher trainers. Karacaoglu (2008) [63] aimed to determine the teacher's competencies Turkey needs in the European Union harmonization process. The research used Delphi technique to determine the teacher's competencies. 137 competency items were obtained. The competencies were divided into four competency categories, which were as follows: Competencies regarding Professional Knowledge, Competencies Regarding Field Knowledge, Competencies Regarding Improving Oneself, and Competencies Regarding National and International Values.

Hamdan et al. (2010) [47]studied the teaching competency and dominant characteristics of 309 teachers from different secondary / primary schools in Johor Bahru. Factor analysis of the instrument with various samples revealed 19 stable subscales under four major scales: Skills Scales, Concern for School Scales, Scales on Concern for Student, and Concern for Self Scales. The most dominant competency of the teachers was in Concern for School Scales followed by Skills, Concern for Self, and Concern for Students.

There have been limited studies on Management teachers, some of the studies have been given briefly. Management professors should have a solid base of knowledge about dimensions of effective management teaching since their teaching context and the subjects they teach are unique (Frost and Fukami, 1997) [35]. Ezenwafor (2008)[33] identified major competencies required of business teachers to include are mastery of the teaching subjects, interest and enthusiasm in the field, skills in utilizing information and communication technology facilities, effective communication skills, proper use of suitable teaching methods and instructional materials. Simendinger et al. (2009) [104]have identified 29 attributes of a business school teacher and worked out ranking for each attribute in four different universities. Guntuku and Meesala (2013) [44] in their research identified qualities and behaviors of a competent management teacher and developed a research scale to measure his competency. The scale consisted of 36 items with five subscales. The subscales were teacher career development, student domain capability development, teacher personality development, student personality development and teacher's delivery. This scale can be used for any further research concerning the competency of management teachers, particularly in India.

6.2. Literature on Impact of certain personal and professional characteristics of teacher on teaching competency

There have been a number of studies on impact of age, gender, qualification, B-School category, position, experience and other factors on teaching competency. In the following section impact of certain factors on teaching competency as identified by different researchers has been discussed.

Impact of B-School category on teaching competency has been investigated by some researchers. Sheik (1999) [103]in his study concluded that type of institution act as influencing factors for a teacher to possess more professional competency. On the contrary, Shanavaz (2007)[111] in her study concluded that teachers competency is not influenced by locality and type of management of school.

There have been several researchers who investigated the influence of experience on teaching competency. Researchers like Joyamma (1962)[59], Saxena (1968)[99], Idrisi (1987) [55], and O'Conner (1998)[81] have highlighted a positive relationship between teacher effectiveness and span of teaching experience. Whereas Gupta (1982)[45] found that there exists a negative relationship between teaching experience and teacher effectiveness. Prasad (1970) [62] found that job experience of a teacher had significant relationship with their professional efficiency. On the other hand Mann (1980)[72], Subbrayan (1985)[110], Rosenhotlz (1986)[98], Smith (2000)[106], and Onderi and Crolll (2009)[84] have reported that there is no significant relationship between teaching experience and effective teaching. Researchers like Koundinya (1999)[65], McBer (2000) [74], Shanavaz (2007)[111] and Hamdan et al. (2010)[47] found variables like teaching experience do not influence professional competency.

Researchers like Padmanabhaiah (1986)[86], Bella (1999)[8], Koundinya (1999)[65] have reported that position showed a great influence on teaching effectiveness. On the contrary Subbrayan (1985)[110] reported that position do no influence teaching effectiveness.

Many researchers have investigated the influence of gender on teaching competency, according to Nair (1974) [80], Passi and Sharma (1982)[89], Subbarayan (1985)[110], Prakasham (1986)[92], Goyal et al. (1987)[42], Rao and Savarna (1990)[94], Pradhan et al. (1997)[91], Bella (1999)[8], Sheik (1999)[103], Onderi and Croll (2009)[84], Kanakala (2010)[61], and Chowdhury (2014)[20] gender of a teacher do not influence professional competency. Whereas, on the contrary researchers like Chayya (1974) [17], Dixit (1977)[29], Mohapatra (1987)[79], Koundinya (1999)[65], Prasad (2007)[62], and Shanavaz (2007)[111] found that gender of a teacher has a significant relationship with the effectiveness of teaching.

There have been studies investigating impact of qualification on teaching competency. Researchers like Prasad (1970)[62], Haddad (1985)[46], Chowdhary(1985)[19], Bella (1999)[8], Sheik (1999)[103], and Koundinya (1999)[65] reported that there is no significant influence of qualification on teaching competency. On the contrary, according to researchers Sharma (1984)[102], Idrisi (1987) [55], McBer (2000)[74], Prasad (2007) [62], Hamdan et al.(2010)[47], Kalita (2012)[61], and Chowdhury (2014)[20] there is a significant influence of qualification on teaching competency.

Researchers like Debnath (1971) [27], Chayya (1974) [17], Nair (1974) [80], Arora (1978)[4], Padmanabhaiah (1986) [86], and Bella (1999)[8] found that age was one of the significant determinants of teaching competency. Anbuthasan and Balakrishnan(2013)[1] in their study concluded that there is significant difference between 25-35 of age and above 35 years of age. The teachers above 35 years of age are better than teachers having 25-35 years of age. On the contrary, some researchers like Sheik (1999)[103], Koundinya (1999)[65], McBer (2000)[74], Onderi and Croll (2009)[84], Kanakala (2010)[61], and Chowdhury (2014)[20] found age do not influence teaching effectiveness.

Operational Definition:

From various studies the following operational definition of Teaching competency has been derived and considered for the research work: *"Teaching competencies are integrated set of knowledge, skills, and attitude that enables a teacher to perform teaching-learning job effectively".*

7. Research Methodology

7.1 Research Design

The present study adopted exploratory research followed by descriptive research. Prior to the development of questionnaires, literature on effective teaching was explored to identify competencies required for effective teaching. The competencies required for effective management teaching was initially explored through literature and then their importance level was explored by teachers and academic administrators. This was followed by descriptive research to investigate the influence of teacher's gender, age, qualification, experience, position level, and B-School category on teaching competency.

7.2 Questionnaire

There were 4 Questionnaire developed for the study. Questionnaire-1 consisted of competencies identified from literature review with a Yes/No response against each competency. The questionnaire was used for validation of the identified list of expected competencies. The experts had to state Yes/No that whether the identified competencies are required for effective teaching in B-Schools. Questionnaire-2 consisted of competencies left after validation and was used for pilot testing. The data collected from pilot test was subjected to factor analysis. Finally Questionnaire-3 and Questionnaire-4 were developed for the final survey, one for teachers and another for academic administrators. The instrument for teachers had two sections. Part I dealt with personal and professional information of the respondents such as Age, Gender, Years of Experience-Industry and Teaching, Academic Qualification, Type of Organization, and Designation. Part II consisted of competencies identified to assess the competence characteristics of a teacher. Similar instrument was administered on Academic Administrators as well. The Academic Administrators had to indicate the importance for each competency for three levels of teaching L1 (Lecturer, Sr Lecturer, Assistant Professor), L2 (Associate Professor), and L3 (Professor).

7.3 Sampling Frame

The B-Schools are categorized under MHRD (Ministry of Human Resource Development) as follows: University level Institutes from Central, State, Private, and Deemed Universities, AICTE (All India Council for Technical Education) approved institutes and MHRD technical Institutes. The study was limited to B-Schools of NCR (National Capital Region). AICTE affiliated Institutions were 197 in number and as the study focused on competencies for effective management teaching, the study was delimited to AICTE NBA(National Board of Accreditation) Accredited management institutes only, which were 20 in number. The number of institutes in NCR under each category is given in the table as follows:

Type	Sub-Type	Total Number	No of Institutes
AICTE	NBA Accredited	20	20
UGC	Central Universities	4	4
	State Universities	5	134
	Private Universities	6	6
	Deemed Universities	6	6
			170

MHRD technical institutes were not included in the sample as there are only two institutes in NCR under this category, due to small sample size it was not possible to compare this category with institutes of other category. The sampling plan used for pilot survey and for the final survey was to take at least 8-10 responses from each institute selected.

7.3.1 Sampling Technique

Judgment sampling technique was used to select institutes for pilot survey and final survey. The institutes were selected on basis of ranking and reputation of the institute.

7.3.2 Sample for Pilot Survey

For pilot testing, 2 institutes were selected from Central Universities, 4 institutes were selected from Private Universities, 4 institutes from Deemed Universities, 5 institutes were selected from State Universities, and 5 institutes were selected from 20 AICTE (All India Council for Technical Education) NBA (National Board of Accreditation) Accredited institutes. There were 48 responses from AICTE NBA Accredited institutes, 19 responses from Central Universities, 47 responses from State Universities, 38 responses from Private Universities, and 39 responses from Deemed Universities. In total there were 191 Reponses.

7.3.3 Sample for Actual Survey

The final study covered all institutes from Central, Private and Deemed Universities of NCR; in addition 10 institutes each were selected from State Universities and AICTE NBA Accredited Institutes. There were 88 responses from AICTE NBA Accredited institutes, 41 responses from Central Universities, 92 responses from State Universities, 52 responses from Private Universities, and 47 responses from Deemed Universities. Hence in total there were 320 responses from the teachers. In addition to it there were 42 responses from the academic administrators of the institutes selected. The academic administrators were the HODs (Head of Department) /Directors of Management department of the institutes selected. They had to fill questionnaire as an administrator, stating the importance level of each competency for different levels (L1, L2, and L3) of teaching.

8. Analysis and Discussion

8.1 Analysis of Pilot Survey

A comprehensive list of competencies for effective teaching were explored and identified through literature review. The competencies were 69 in number, 38 of which were professional competencies and the remaining 31 were personal competencies. The instrument before pilot survey was validated by experts and the competencies for which the percentage of yes responses by experts fell below 70% were removed from the list. There were 6 competencies removed from the list and 63 competencies were finally left. The competencies removed were Conflict Management, Cultural Competence, Entrepreneurship Skill, Life-Satisfaction, Negotiation Skill, and Self-Efficacy. Structured questionnaire for pilot test was developed using the 63 competencies and data was collected. The data was then subjected to necessary tests of sample size adequacy and population matrix before factor analysis was conducted. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy recorded substantial value of 0.794 as given in Appendix 3. The Bartlett's test of sphericity was also significant suggesting that the population was not an identity matrix. The communalities involved were also

established. Seven Competencies did not fit well with the factor solution, and were dropped from the analysis. Sixteen factors in the initial solution were extracted having eigenvalues greater than 1 as seen in Appendix 4. Together, they accounted for almost 70.76% of the variability in the original variables as given in Appendix 5. Sixteenth factor was dropped from the analysis, as it had only two items with no relation with each other. 54 competencies were finally identified from the analysis. Cronbach's reliability test was conducted and the test results of Cronbach's alpha achieved an overall high of 0.86 suggesting overall reliability of the research instrument. To further validate the study competencies identified were also verified with the sub-points of Intellectual Capital parameter which was found most important Business School Ranking parameter. Fifteen factors were ultimately extracted having loadings more than 0.4 as given in Appendix 6 and have been referred to as dimensions of management teaching competency. The names for the dimensions were derived based on their interrelated characteristics and combination of variables and the names given were: Analytical and Problem Solving, Conceptual Thinking, Mental Skills, Communication Skills, Knowledge and information orientation, Emotion Handling and Persistence, Self Dependence and Confidence, Adaptability, Concern For Standard and Achievement, Being open and receptive, Panning and Organizing, Interpersonal Management, Impact and influence, Discipline And Delegation, and Occupational Attachment and Organizational Setting.

8.2 Importance level of Management Teaching Competencies

The importance level of each dimension of management teaching competency as perceived by teachers and academic administrators was determined using mean and standard deviation as statistical tools. Differences in means were tested for statistical significance using one-tailed t-tests (at $p < .05$ and .01). Teachers and Academic Administrators from B-Schools of NCR completed the questionnaire in which they ranked the relative importance of the 54 competencies identified. The analysis was done on basis of three levels of teaching such as Level 1: (Lecturer, Sr Lecturer, Assistant Professor), Level 2: (Associate Professor), and Level 3: (Professor). The analysis resulted in identification of most important competency dimensions for every level of teaching. The ranking given to each competency by the teachers and academic administrators was based on comparisons of average mean values obtained from analysis. These means were ranked from highest to lowest importance, for both groups. The mean for each competency listed was determined by taking the average of the ratings for that competency by each respondent and dividing this by the number of respondents. The mean importance for each category was determined by averaging the mean importance of each competency within that category and dividing this by the number of competencies for each category.

For Level 1 teaching on basis of overall mean importance given by teachers and academic administrators as seen in Appendix 9 the five most important management teaching competency dimensions found were *Emotion Handling and Persistence, Knowledge and Information Orientation, Communication Skills, Concern for Standard and Achievement, and Mental Skills*. The least important management teaching competency dimensions found were *Discipline And Delegation, Analytical and Problem Solving, Being Open And Receptive, Conceptual Thinking And Adaptability.* Four of the 15 dimensions of management teaching competency showed significant difference at 0.05 level and 0.01 level. These dimensions were Emotion Handling and Persistence, Self Dependence and Confidence, Being Open and Receptive, and Impact and Influence.

For Level 2 teaching on basis of overall mean importance given by teachers and academic administrators as seen in Appendix 10 the five most important management teaching competency dimensions found were *Knowledge and Information Orientation, Communication Skills, Interpersonal*

Management, Planning and Organizing, and Occupational Attachment and Organizational Setting. The least important Management teaching competency dimensions found were *Self Dependence and Confidence, Mental Skills, Being Open and Receptive, Conceptual Thinking, and Adaptability.* Three of the 15 dimensions of management teaching competency showed significant difference at 0.05 level and 0.01 level. These dimensions were Analytical and Problem Solving, Self Dependence and Confidence, and Being Open and Receptive.

For Level 3 teaching on basis of overall mean importance given by teachers and academic administrators as seen in Appendix 11 the five most important management teaching competency dimensions found were *Occupational Attachment and Organizational Setting, Impact and Influence, Knowledge and Information Orientation, Communication Skill, and Discipline and Delegation.* The least important management teaching competency dimensions found were *Analytical and Problem Solving, Self Dependence and Confidence, Emotion Handling and Persistence, Adaptability, and Being Open And Receptive.* Three of the 15 dimensions of Management teaching competency showed significant difference at 0.05 level and 0.01 level. These dimensions were Conceptual Thinking, Concern for Standard and Achievement, and Being Open and Receptive.

8.3 Influence of personal and professional characteristic on teaching Competency.

Relationship between B-School category and teaching competence level was analyzed through Analysis of Variance as given in Appendix 12. It was found that there is a significant influence of B-School category on Overall teaching competence level and on the following dimensions of teaching competency: Conceptual Thinking, Mental Skills, Communication Skills, Knowledge and Information Orientation, and Concern for Standard and Achievement, Planning and Organizing, Impact and Influence and Occupational Attachment and Organizational Setting. Duncan's Mean Test was applied to compare overall teaching competency level and the dimensions of teaching competency found significant among different categories of B-Schools.

Relationship between experience type and teaching competence level was analyzed through t test as given in Appendix 13. It was found that there is a significant difference between teachers having only teaching experience and teachers having both teaching and industry experience in respect of overall teaching competency. The mean of teachers having both teaching and industry experience was found to be more than teachers having only teaching experience. Besides testing overall teaching competency, it was further tested whether there is influence of type of experience on the dimensions of teaching competency. The "t" statistics between teachers having both teaching and industry experience and teachers having only teaching experience was found significant in couple of dimensions of management teaching competency like Conceptual Thinking, Knowledge and Information Orientation, Self Dependence and Confidence, Being Open and Receptive, Interpersonal Management and Discipline and Delegation.

Relationship between position level and teaching competence level was analyzed through Analysis of Variance as given in Appendix 14. It was found that there is a significant influence of position on overall teaching competency level and on the following dimensions of teaching competency: Conceptual Thinking, Mental Skills, Knowledge and Information Orientation, Self Dependence and Confidence, Planning and Organizing, Interpersonal Management, and Discipline and Delegation. Duncan's Mean Test was applied to compare overall teaching competency level and the dimensions of teaching competency found significant among different positions.

Relationship between gender and teaching competency level was analyzed through t test as given in Appendix 15. It was found that there is no significant difference between Male and Female teachers in respect of overall teaching competency. The "t" statistics between Male and Female teachers was found significant in couple of dimensions of management teaching competency like Mental Skills, Communication Skills, Emotion Handling and Persistence, Adaptability, Being Open and Receptive, and Interpersonal Management.

Relationship between qualification and teaching competency level was analyzed through t test as given in Appendix 16. It was found that there is a significant difference between teachers holding Masters Degree and teachers holding PhD Degree in respect of overall teaching competency. The mean of teachers holding PhD Degree was found more than teachers holding Masters Degree. Besides testing this hypothesis it was further tested whether there is influence of qualification on the dimensions of teaching competency. The "t" statistics between teachers holding PhD Degree and teachers holding Masters Degree was found significant in couple of dimensions of management teaching competency like Analytical and Problem Solving, Conceptual Thinking, Knowledge and Information Orientation, Emotion Handling and Persistence, Self Dependence and Confidence, Concern for Standard and Achievement, Planning and Organizing, Impact and Influence, and Occupational Attachment and Organizational Setting.

Relationship between age groups and teaching competency level was analyzed through Analysis of Variance as given in Appendix 17. It was found that there is no significant influence of age on overall teaching competency. In addition it was also found that there is a significant influence of age on the following dimensions of teaching competency like Mental Skills, Emotion Handling and Persistence, Being Open and Receptive, and Discipline and Delegation. Duncan's Mean Test was applied to compare overall teaching competency level and the dimensions of teaching competency found significant among different age groups.

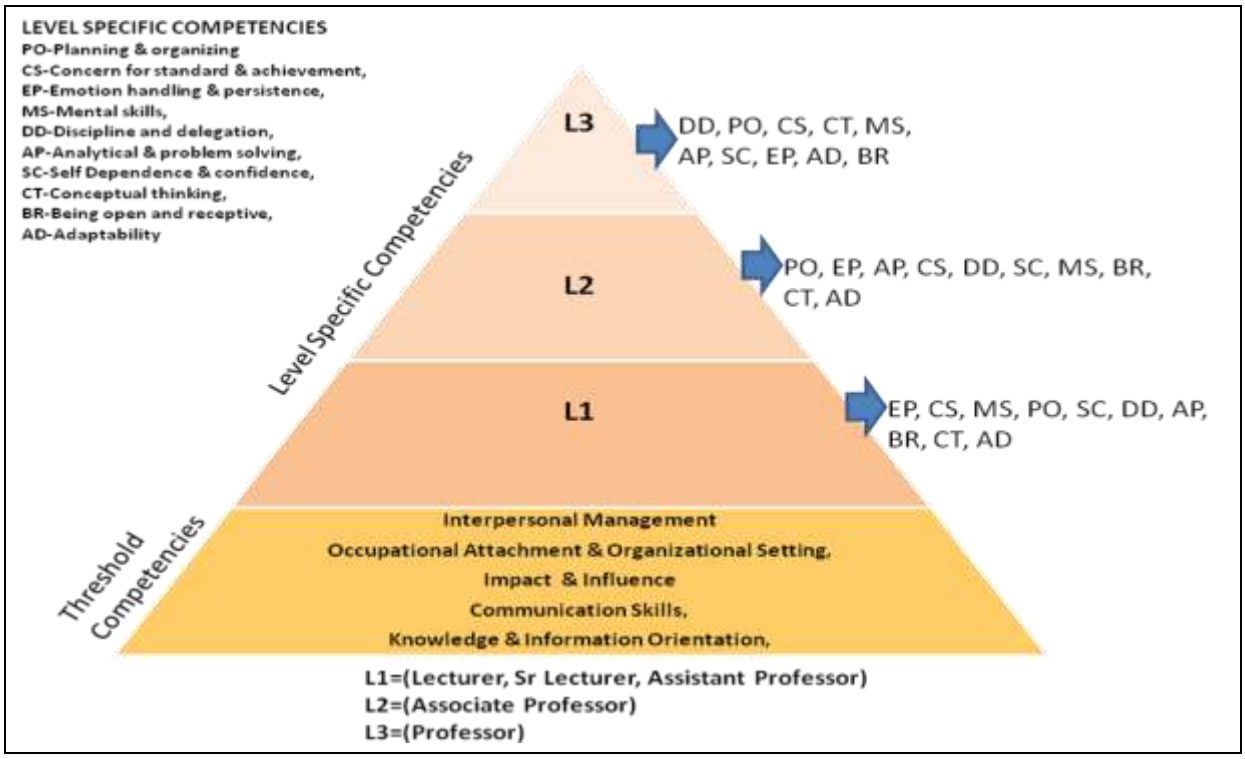
8.4 Inter-correlation among the Competencies

Pearson product-moment correlation coefficient of the competency dimensions was conducted, from analysis dimensions having significant correlation and associations with each other were identified. Analytical and Problem Solving, Conceptual Thinking, and Mental Skills dimensions were found to have significant correlation with each other. These competencies can be clubbed together under a broad group namely Cognitive Competencies. Communication Skills, Knowledge and Information Orientation, Concern for Standard and Achievement, Planning and Organizing, and Occupational Attachment and Organizational Setting dimensions were found to have significant correlation with each other. These competencies can be clubbed together under a broad group namely Job Related Competencies. Emotion Handling and Persistence, Self Dependence and Confidence, and Adaptability dimensions were found to have significant correlation with each other. These competencies can be clubbed together under a broad group namely Personal Competencies. Interpersonal Management, Impact and Influence, Discipline and Delegation, and Being Open and Receptive dimensions were found to have significant correlation with each other. These competencies can be clubbed together under a broad group namely Interpersonal Competencies. Hence the competencies identified for effective teaching in B-Schools can be grouped under four major categories namely Cognitive Competencies, Job Related Competencies, Personal Competencies, and Interpersonal Competencies.

8.5 Competency framework for Management Teachers

The fourth objective was achieved by summarizing the analysis done earlier. On basis of analysis a framework has been proposed which requires testing and validation. The competencies found important across all levels of management teaching were named as Threshold competencies. Rest of the competencies were named Level Specific competencies whose importance change according to the level of teaching though all competencies are important for teaching. Threshold Competencies are the competencies which are important for teaching irrespective of the position a teacher holds. The Threshold Competencies identified from analysis were Interpersonal Management, Occupational Attachment and Organizational Setting, Impact and Influence, Communication Skills, and Knowledge and Information Orientation. For Level 1 teaching the order of Level Specific competencies according to importance level is Emotion Handling and Persistence, Concern for Standard and Achievement, Mental Skills, Planning and Organizing, Self Dependence and Confidence, Discipline and Delegation, Analytical and Problem Solving, Being Open and Receptive, Conceptual Thinking, and Adaptability. For Level 2 teaching the order of Level Specific competencies according to importance level is Planning and Organizing, Emotion Handling and Persistence, Analytical and Problem Solving, Concern for Standard and Achievement, Discipline and Delegation, Self Dependence and Confidence, Mental Skills, Being Open and Receptive, Conceptual Thinking, and Adaptability. For Level 3 teaching the order of Level Specific competencies according to importance level is Discipline and Delegation, Planning and Organizing, Concern for Standard and Achievement, Conceptual Thinking, Mental Skills, Analytical and Problem Solving, Self Dependence and Confidence, Emotion Handling and Persistence, Adaptability, and Being Open and Receptive.

Competency Framework for Management Teachers



9. Conclusion

The study identified competencies required for effective teaching in Business–Schools, which can also be verified with the Intellectual Capital parameter, which was found the most important Business School ranking parameter. Through factor analysis it was found that these competencies can be grouped into 15 dimensions. Further through inter-correlation analysis it was found that these competencies can be further grouped under four major categories namely Cognitive Competencies, Job Related Competencies, Personal Competencies, and Interpersonal Competencies. The competencies found important across all levels of management teaching were named as Threshold competencies. Rest of the competencies were named Level Specific competencies whose importance change according to the level of teaching though all competencies are important for teaching. The importance of each competency as perceived by teachers and academic administrators was also identified and on basis of which importance level for every competency dimension was identified. Perception of teachers and academic administrators was found quite different when ranks were calculated on basis of average mean score. Also, it was found that there was a significant difference in teachers and academic administrator's perception for a couple of management teaching competency dimensions. The study also found that B-School category, Experience Type, Position, and Qualification influences overall teaching competency level and some of the dimensions. While Gender and Age do not influence Overall teaching competency level but influences some of the dimensions.

10. Implications of the Study

The framework developed can be used during recruitment, training, and performance appraisal and can be used as a mean for compensation of a teacher. The underlying premise is "the better the fit between the requirements of a job and competencies of a person, the higher the person's job performance and job satisfaction will be." The framework will make the teachers more equipped and ready for the changing business environment. It will give them further insight to retrospect on what is required and is missing in effective teaching. In a B-School teacher plays the most important role as emphasized by different researchers, committees, commissions and business school ranking agencies, hence a more equipped teacher will increase the effectiveness of the institute in accordance to the changes and requirement of the society. This will lead to better prepared management students who will join corporate world as professional equipped with all the required expertise and knowledge.

11. Limitations of the Study

Due to time and resources constraint few limitations prevent conclusions that are more formal. The study was limited to National Capital Region (NCR) of India. A larger randomized sample of institutions should be surveyed to enhance the data collection and for generalization of result. Secondly, the framework proposed in the study needs to be validated and tested in Business Schools. Pursuing further studies along the lines described above will help to integrate results with previous studies, as well as provide additional insights into teaching development. It will help shape better teachers for business world and more equipped students.

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LIST OF APPENDICES

Appendix 1: Initial list of Competencies for Scale Development

S.No	Competencies	S.No	Competencies
1	Ability for detailing	35	Life-Satisfaction
2	Ability to Change and adapt	36	Listening skills
3	Ability to Generate Theories	37	Motivating others
4	Ability to stimulate	38	Negotiation Skill
5	Analyzing and Solving Problems	39	Networking and Sociability
6	Approachability	40	Non verbal cues
7	Assertiveness	41	Occupational Preference
8	Being enthusiastic and energetic	42	Organizational Awareness
9	Being not easily provoked	43	Patience
10	Being Open Minded	44	Persistence
11	Being Supportive	45	Personal Disclosure
12	Collaborative Influence	46	Planning & Organizing
13	Command over subject	47	Political Astuteness
14	Complaisant	48	Practical Intelligence
15	Composure	49	Precision in verbal communication
16	Concern for standard	50	Precision in written communication
17	Conflict Management	51	Presentation skills
18	Creativity	52	Priority Setting
19	Cultural Competence	53	Proactiveness
20	Dealing with Complexity comfortably	54	Reflective thinking for others
21	Delegation	55	Relationship Management
22	Entrepreneurship Skill	56	Resilience
23	Expertise in Technology	57	Resistance to Stress
24	Firmness for Self and Others Discipline	58	Result Orientation/ Target Orientation
25	Grasping ability	59	Risk Taking ability
26	Humor	60	Self Knowledge
27	Impression Management	61	Self-Efficacy
28	Independence	62	Self-satisfied
29	Information Seeking	63	Sensitivity to Others
30	Initiativeness	64	Strong Self-Concept
31	Insight	65	Team Player
32	Inspirational Leadership	66	Time Management
33	Judgment making skill	67	Using of Concepts in analyzing situation
34	Learning orientation	68	Value system-Integrity and ethical conduct
		69	Willingness to take responsibility

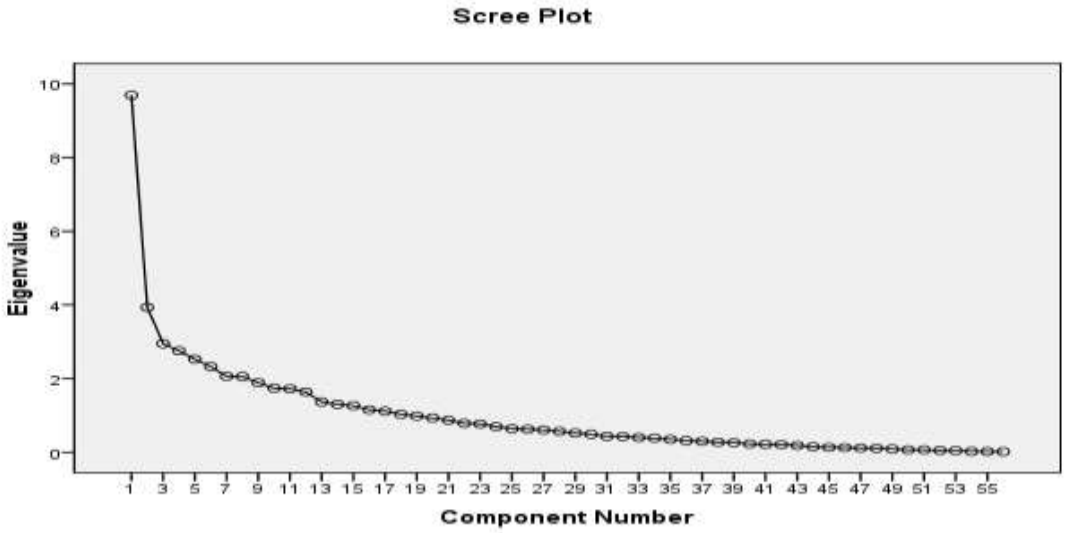
Appendix 2: Sub-points contributing to Intellectual Capital factor

S.No	Sub-points of Intellectual Capital factor
1	List of seminars attended by faculty
2	List of Books, Cases and Research Papers authored by your existing permanent full time faculty
3	Industry experience of faculty
4	Conference and workshop organized by faculty
5	International seminars conducted
6	Papers presented by faculty in global, national seminars
7	Detailed course structure
8	Unique learning methodology
9	Diversity of electives and pattern of offering (latest course offerings), courses other than MBA programs, pedagogy
10	Faculty strength and Experience
11	Teaching Aid
12	Research hours put in by faculty
13	Consulting hours quota
14	Student feedback and feedback mechanism

Appendix 3: KMO and Bartlett's Test Value

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.794
Bartlett's Test of Sphericity	Approx. Chi-Square	2275.387
	Df	1540.000
	Sig.	.000

Appendix 4: Screeplot of the components extracted from factor analysis



Appendix 5: Table of eigenvalues of the factors

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1.00	9.69	17.31	17.31	9.69	17.31	17.31	4.81	8.59	8.59
2.00	3.93	7.02	24.33	3.93	7.02	24.33	4.40	7.86	16.45
3.00	2.95	5.27	29.60	2.95	5.27	29.60	3.51	6.27	22.73
4.00	2.75	4.92	34.51	2.75	4.92	34.51	3.31	5.91	28.64
5.00	2.53	4.51	39.02	2.53	4.51	39.02	3.21	5.74	34.38
6.00	2.33	4.16	43.18	2.33	4.16	43.18	3.00	5.36	39.74
7.00	2.06	3.68	46.86	2.06	3.68	46.86	2.62	4.67	44.41
8.00	2.06	3.67	50.53	2.06	3.67	50.53	2.42	4.33	48.74
9.00	1.89	3.37	53.91	1.89	3.37	53.91	2.32	4.14	52.87
10.00	1.74	3.11	57.01	1.74	3.11	57.01	2.01	3.59	56.47
11.00	1.72	3.08	60.09	1.72	3.08	60.09	1.73	3.10	59.56
12.00	1.64	2.93	63.02	1.37	2.44	62.53	1.51	2.70	62.27
13.00	1.37	2.44	65.46	1.30	2.32	64.86	1.42	2.54	64.81
14.00	1.30	2.32	67.78	1.15	2.06	66.92	1.22	2.18	66.99
15.00	1.26	2.26	70.04	1.12	1.99	68.91	1.11	1.98	68.97
16.00	1.15	2.06	72.10	1.03	1.85	70.76	1.00	1.79	70.76
17.00	1.12	1.99	74.09						
18.00	1.03	1.85	75.94						
19.00	0.98	1.76	77.70						
20.00	0.93	1.67	79.36						
21.00	0.87	1.55	80.92						
22.00	0.79	1.40	82.32						
23.00	0.77	1.37	83.69						
24.00	0.70	1.24	84.93						
25.00	0.64	1.15	86.08						
26.00	0.63	1.12	87.20						
27.00	0.61	1.08	88.28						
28.00	0.57	1.01	89.29						
29.00	0.52	0.93	90.22						
30.00	0.49	0.87	91.10						
31.00	0.43	0.77	91.87						
32.00	0.43	0.76	92.63						
33.00	0.40	0.72	93.35						
34.00	0.38	0.69	94.03						
35.00	0.35	0.63	94.66						
36.00	0.32	0.56	95.22						
37.00	0.30	0.54	95.76						
38.00	0.27	0.48	96.24						
39.00	0.26	0.47	96.71						

40.00	0.23	0.41	97.12						
41.00	0.22	0.39	97.50						
42.00	0.21	0.37	97.88						
43.00	0.18	0.33	98.20						
44.00	0.15	0.27	98.47						
45.00	0.14	0.24	98.71						
46.00	0.13	0.23	98.94						
47.00	0.11	0.20	99.14						
48.00	0.11	0.19	99.33						
49.00	0.09	0.16	99.49						
50.00	0.07	0.12	99.61						
51.00	0.07	0.12	99.72						
52.00	0.05	0.09	99.81						
53.00	0.04	0.08	99.89						
54.00	0.02	0.04	99.94						
55.00	0.02	0.04	99.97						
56.00	0.02	0.03	100.00						

Appendix 6: Dimensions of Management Teaching Competency extracted from factor analysis

Factor	Item	Loading	Factor Name
1	• Analyzing and Solving Problems • Dealing with Complexity comfortably • Practical Intelligence	0.811 0.798 0.552	Analytical and Problem Solving
2	• Ability to Generate Theories • Insight • Using of Concepts in analyzing situation	0.853 0.635 0.592	Conceptual Thinking
3	• Creativity • Grasping ability • Judgment making skill • Self Knowledge	0.833 0.747 0.721 0.683	Mental Skills
4	• Listening skills • Precision in verbal communication • Precision in written communication • Presentation skills	0.834 0.821 0.765 0.701	Communication Skills
5	• Command over subject • Expertise in Technology • Information Seeking • Learning orientation	0.761 0.685 0.621 0.525	Knowledge and information orientation
6	• Being not easily provoked • Persistence • Resistance to Stress	0.765 0.643 0.542	Emotion Handling and Persistence
7	• Independence • Initiativeness • Strong Self-Concept • Willingness to take responsibility	0.858 0.725 0.615 0.521	Self Dependence and Confidence
8	• Ability to Change and adapt • Complaisant • Resilience	0.792 0.692 0.688	Adaptability

9	• Concern for standard • Result Orientation/ Target Orientation • Risk Taking ability	0.853 0.762 0.567	Concern For Standard and Achievement
10	• Composure • Humor • Patience • Personal Disclosure	0.677 0.661 0.567 0.523	Being open and receptive
11	• Planning and Organizing • Priority Setting • Proactiveness • Time Management	0.852 0.729 0.697 0.532	Panning and Organizing
12	• Approachability • Networking and Sociability • Relationship Management • Sensitivity to Others	0.728 0.628 0.541 0.432	Interpersonal Management
13	• Collaborative Influence • Impression Management • Inspirational Leadership • Motivating others	0.692 0.683 0.642 0.529	Impact and influence
14	• Assertiveness • Delegation • Firmness for Self and Others Discipline	0.732 0.516 0.437	Discipline And Delegation
15	• Occupational Preference • Organizational Awareness • Political Astuteness • Integrity and ethical conduct	0.753 0.724 0.689 0.631	Occupational Attachment and Organizational Setting

Appendix 7: Cronbach's Alpha values of Dimensions of Management Teaching Competency Scale

S.No	Dimensions	No of Items	Cronbach Alpha
1	Analytical and Problem Solving	3	0.85
2	Conceptual Thinking	3	0.79
3	Mental Skills	4	0.85
4	Communication Skills	4	0.81
5	Knowledge and information orientation	4	0.86
6	Emotion Handling and Persistence	3	0.78
7	Self Dependence and Confidence	4	0.91
8	Adaptability	3	0.82
9	Concern For Standard and Achievement	3	0.85
10	Being open and receptive	4	0.86
11	Panning and Organizing	4	0.91
12	Interpersonal Management	4	0.82
13	Impact and influence	4	0.90
14	Discipline And Delegation	3	0.85
15	Occupational Attachment and Organizational Setting	4	0.87

Appendix 8: Mean importance of each teaching dimension as perceived by Teachers and Administrators for L1, L2 and L3 level

	TEACHERS PERCEPTION (n=320)			ADMINISTRATORS PERCEPTION (n=42)					
	L1 Imp (n=148)	L2 Imp (n=105)	L3 Imp (n=67)	L1 Imp (n=42)	L2 Imp (n=42)	L3 Imp (n=42)			
Dimensions of Teaching Competency	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**L1 p-value**	**L2 p-value**	**L3 p-value**
Analytical & Problem Solving	3.58	3.9	3.59	3.95	4.67	4.82	0.12	0.035*	0.32
Conceptual Thinking	3.66	3.95	3.88	3.55	4.09	4.68	0.78	0.72	0.0037**
Mental Skills	3.85	4.07	3.69	4.39	4.35	4.74	0.31	0.63	0.45
Communication Skills	3.96	4.24	4.08	4.34	4.63	4.89	0.66	0.42	0.32
Knowledge & Information Orientation	3.91	4.34	4.3	4.58	4.68	4.72	0.42	0.67	0.52
Emotion Handling & Persistence	3.86	4.07	3.81	4.66	4.61	4.37	0.011*	0.35	0.45
Self Dependence & Confidence	3.54	3.88	3.61	4.2	4.55	4.73	0.002**	0.007**	0.32
Adaptability	3.76	3.72	3.69	2.81	3.49	4.21	0.12	0.31	0.22
Concern for Standard & Achievement	3.92	3.94	3.7	4.35	4.61	4.89	0.51	0.47	0.011*
Being Open and Receptive	3.94	4.31	3.87	3.59	3.98	3.76	0.017*	0.0003**	0.022*
Planning & Organizing	3.69	4.09	3.86	4.27	4.63	4.89	0.62	0.12	0.31
Interpersonal Management	3.84	4.12	3.85	4.11	4.64	4.89	0.81	0.58	0.73
Impact and Influence	4.19	4.33	4.36	3.69	4.23	4.77	0.022*	0.35	0.49
Discipline and Delegation	4.05	4.19	3.97	3.6	4.34	4.89	0.22	0.41	0.35
Occupational Attachment & Organizational Setting	4.03	4.31	4.27	3.67	4.37	4.92	0.17	0.25	0.52

Level 1(L1): Lecturer, Sr Lecturer, Assistant Professor, Level 2(L2): Associate Professor, Level 3(L3): Professor
*****Statistically significant at p<0.05, **Statistically significant at p<0.01

Appendix 9: Level 1 Mean Importance and Rank as perceived by Teachers and Administrators

Dimensions of Teaching Competency	**Teachers Perception Mean (n=148)**	**Administrators Perception (n=42)**	**Overall Mean**	**L1 p-value (t)**	**Teacher Rank**	**Administrator Rank**	**Overall**
Emotion Handling and Persistence	3.86	4.66	4.26	0.011*	8	1	1
Knowledge and Information Orientation	3.91	4.58	4.245	0.42	7	2	2
Communication Skills	3.96	4.34	4.15	0.66	4	5	3
Concern for Standard and Achievement	3.92	4.35	4.135	0.51	6	4	4
Mental Skills	3.85	4.39	4.12	0.31	9	3	5
Planning and Organizing	3.69	4.27	3.98	0.62	12	6	6
Interpersonal Management	3.84	4.11	3.975	0.81	10	8	7
Impact and Influence	4.19	3.69	3.94	0.022*	1	10	8
Self Dependence and Confidence	3.54	4.2	3.87	0.002**	15	7	9
Occupational Attachment and Organizational Setting	4.03	3.67	3.85	0.17	3	11	10
Discipline and Delegation	4.05	3.6	3.825	0.22	2	12	11
Analytical and Problem solving	3.58	3.95	3.765	0.12	14	9	12
Being Open and Receptive	3.94	3.59	3.765	0.017*	5	13	13
Conceptual Thinking	3.66	3.55	3.605	0.78	13	14	14
Adaptability	3.76	2.81	3.285	0.12	11	15	15

Level 1(L1): Lecturer, Sr Lecturer, Assistant Professor, *****Statistically significant at p<0.05, **Statistically significant at p<0.01

Appendix 10: Level 2 Mean Importance and Rank as perceived by Teachers and Administrators

Dimensions of Teaching Competency	Teacher perception mean (n=105)	Administrators perception mean (n=42)	Overall mean	L2 p-value (t)	Teacher rank	Administrators rank	Overall rank
Knowledge and Information Orientation	4.34	4.68	4.51	0.67	1	1	1
Communication skills	4.24	4.63	4.435	0.42	5	5	2
Interpersonal Management	4.12	4.64	4.38	0.58	7	3	3
Planning and Organizing	4.09	4.63	4.36	0.12	8	4	4
Emotion Handling and Persistence	4.07	4.61	4.34	0.35	9	7	5
Occupational Attachment and Organizational Setting	4.31	4.37	4.34	0.25	4	9	6
Analytical and Problem Solving	3.9	4.67	4.285	0.035*	13	2	7
Impact and Influence	4.33	4.23	4.28	0.35	2	12	8
Concern for Standard and Achievement	3.94	4.61	4.275	0.47	12	6	9
Discipline and Delegation	4.19	4.34	4.265	0.41	6	11	10
Self Dependence and Confidence	3.88	4.55	4.215	0.007**	14	8	11
Mental skills	4.07	4.35	4.21	0.63	10	10	12
Being Open and Receptive	4.31	3.98	4.145	0.0003**	3	14	13
Conceptual thinking	3.95	4.09	4.02	0.72	11	13	14
Adaptability	3.72	3.49	3.605	0.31	15	15	15

Level 2(L2): Associate Professor, *****Statistically significant at $p<0.05$, **Statistically significant at $p<0.01$

Appendix 11: Level 3 Mean Importance and Rank as perceived by Teachers and Administrators

Dimensions of Teaching Competency	Teacher perception mean (n=67)	Administrators perception mean (n=42)	Overall Mean	L3 p-value (t)	Teacher Rank	Administrators Rank	Overall
Occupational Attachment and Organizational Setting	4.27	4.92	4.595	0.52	3	1	1
Impact and Influence	4.36	4.77	4.565	0.49	1	8	2
Knowledge and Information Orientation	4.3	4.72	4.51	0.52	2	11	3
Communication skills	4.08	4.89	4.485	0.32	4	2	4
Discipline and Delegation	3.97	4.89	4.43	0.35	5	6	5
Planning and Organizing	3.86	4.89	4.375	0.31	8	4	6
Interpersonal Management	3.85	4.89	4.37	0.73	9	5	7
Concern for Standard and Achievement	3.7	4.89	4.295	0.011*	11	3	8
Conceptual thinking	3.88	4.68	4.28	0.0037**	6	12	9
Mental skills	3.69	4.74	4.215	0.45	13	9	10
Analytical and Problem Solving	3.59	4.82	4.205	0.32	15	7	11
Self Dependence and Confidence	3.61	4.73	4.17	0.32	14	10	12
Emotion Handling and Persistence	3.81	4.37	4.09	0.45	10	13	13
Adaptability	3.69	4.21	3.95	0.22	12	14	14
Being Open and Receptive	3.87	3.76	3.815	0.022*	7	15	15

Level 3(L3): Professor, *****Statistically significant at $p<0.05$, **Statistically significant at $p<0.01$

Appendix12: Comparing of Overall Teaching Competency and its dimensions among different B-School categories (In1=Central University, In2=State University, In3=Private University, In4=Deemed University, In5=NBA Accredited Autonomous Institute)

Dimensions of Teaching Competency	Mean (Standard Deviation)					F	Sig
	In1	In2	In3	In4	In5		
Overall	3.88(0.32)	3.67(0.53)	3.72(0.48)	3.69(0.38)	3.79(0.66)	11.53**	0.0004
Analytical and Problem solving	3.83(0.77)	3.75(0.43)	3.77(0.50)	3.80(0.70)	3.58(0.61)	1.44	0.22
Conceptual Thinking	3.70(0.37)	3.43(0.35)	3.58(0.38)	3.53(0.56)	3.59(0.47)	3.45*	0.02
Mental Skills	3.83(0.38)	3.65(0.50)	3.90(0.65)	3.81(0.54)	4.02(0.58)	10.476**	0.0001
Communication Skills	3.78(0.38)	3.45(0.50)	3.69(0.49)	3.50(0.66)	3.78(0.50)	4.391*	0.011
Knowledge and Information Orientation	4.17(0.53)	3.98(0.44)	4.45(0.47)	4.09(0.52)	4.20(0.31)	4.609**	0.008
Emotion Handling and Persistence	3.56(0.66)	3.67(0.29)	3.90(0.65)	3.90(0.60)	3.81(0.63)	0.5	0.775
Self Dependence and Confidence	4.00(0.72)	3.92(0.38)	3.83(0.52)	3.53(0.87)	3.56(0.52)	1.54	0.186
Adaptability	3.53(0.90)	3.50(0.43)	3.49(0.52)	3.63(0.66)	3.64(0.56)	0.279	0.923
Concern for Standard and Achievement	3.78(0.59)	3.67(0.38)	3.88(0.32)	3.68(0.35)	3.80(0.57)	3.211*	0.025
Being Open and Receptive	3.88(0.44)	3.33(0.63)	3.65(0.44)	3.70(0.48)	3.43(0.55)	1.623	0.164
Planning and Organizing	3.67(0.38)	3.48(0.48)	3.89(0.64)	3.60(0.77)	3.73(0.58)	9.785**	0.001
Interpersonal Management	4.23(0.62)	3.42(0.38)	3.81(0.45)	3.78(0.62)	3.78(0.64)	1.573	0.178
Impact and Influence	4.17(0.38)	3.80(0.50)	3.98(0.57)	3.88(0.70)	4.09(0.50)	3.835*	0.012
Discipline and Delegation	3.68(0.57)	2.67(0.63)	3.56(0.55)	3.38(0.81)	3.30(0.39)	2.419	0.214
Occupational Attachment and Organizational Setting	4.25(0.50)	3.93(0.39)	4.00(0.48)	3.97(0.47)	4.25(0.41)	4.896**	0.007

*Statistically significant at $p<0.05$, **Statistically significant at $p<0.01$

Appendix 13: Showing values of "t" between teachers having only teaching experience and teachers having both teaching and industry experience in respect of various dimensions of Teaching Competency

Dimensions of Teaching Competency	Mean (Standard Deviation)		t	p-value
	Teaching Exp	Industry + Teaching Exp		
Overall	3.68(0.26)	3.71(0.24)	3.15**	0.0016
Analytical and Problem solving	3.73(0.68)	3.71(0.48)	1.141	0.257
Conceptual Thinking	3.85(0.58)	3.57(0.59)	2.11*	0.038
Mental Skills	3.65(0.66)	3.77(0.56)	0.85	0.398
Communication Skills	3.58(0.42)	3.54(0.51)	0.373	0.711
Knowledge and Information Orientation	3.22(0.61)	3.86(0.50)	2.54*	0.011
Emotion Handling and Persistence	3.83(0.54)	3.83(0.62)	0.002	0.998
Self Dependence and Confidence	3.08(0.72)	3.63(0.49)	3.6**	0.003
Adaptability	3.57(0.59)	3.58(0.43)	0.022	0.982
Concern for Standard and Achievement	3.78(0.55)	3.64(0.63)	1.034	0.304
Being Open and Receptive	3.98(0.43)	4.06(0.49)	2.89**	0.003
Planning and Organizing	4.01(0.40)	4.02(0.49)	0.05	0.954
Interpersonal Management	3.77(0.57)	3.85(0.67)	2.83**	0.004
Impact and Influence	3.49(0.59)	3.33(0.52)	1.25	0.215
Discipline and Delegation	3.76(0.51)	3.29(0.44)	2.29*	0.025
Occupational Attachment and Organizational Setting	3.65(0.50)	3.72(0.47)	0.709	0.481

*Statistically significant at $p<0.05$, **Statistically significant at $p<0.01$

Appendix 14: Comparing of Overall Teaching Competency and its dimensions among three position levels (L1=Lecturer, Sr Lecturer, Assistant Professor, L2=Associate Professor, L3=Professor) of teachers

Dimensions of Teaching Competency	Mean (Standard Deviation)			F	Sig
	L1	L2	L3		
Overall	3.63(0.55)	3.87(0.36)	4.01(0.72)	25.237**	0
Analytical and Problem solving	3.60(0.59)	3.92(0.66)	3.81(0.56)	1.785	0.141
Conceptual Thinking	3.42(0.48)	3.68(0.47)	3.88(0.29)	14.38**	0.002
Mental Skills	4.23(0.44)	3.97(0.44)	3.67(0.57)	15.021**	0.0001
Communication Skills	3.60(0.49)	3.77(0.47)	3.92(0.46)	2.246	0.072
Knowledge and Information Orientation	4.35(0.30)	4.41(0.27)	3.94(0.52)	4.633*	0.022
Emotion Handling and Persistence	3.67(0.61)	4.16(0.54)	3.90(0.63)	2.104	0.089
Self Dependence and Confidence	3.55(0.59)	3.90(0.48)	4.02(0.62)	3.554*	0.01
Adaptability	3.53(0.54)	3.75(0.72)	3.55(0.67)	0.53	0.714
Concern for Standard and Achievement	3.77(0.55)	3.78(0.54)	3.84(0.38)	1.012	0.407
Being Open and Receptive	3.45(0.52)	3.83(0.36)	3.75(0.52)	2.394	0.058
Planning and Organizing	3.73(0.54)	4.09(0.50)	3.61(0.62)	3.065*	0.021
Interpersonal Management	4.19(0.54)	3.98(0.46)	3.67(0.58)	3.158*	0.019
Impact and Influence	3.74(0.54)	4.23(0.46)	4.03(0.62)	4.927	0.126
Discipline and Delegation	3.29(0.54)	3.52(0.48)	3.67(0.61)	3.007*	0.023
Occupational Attachment and Organizational Setting	3.89(0.46)	4.30(0.40)	4.13(0.38)	4.011	0.23

*****Statistically significant at $p<0.05$, **Statistically significant at $p<0.01$

Appendix 15: Showing values of "t" between Male and Female teachers in respect of various dimensions of Teaching Competency

Dimensions Of Teaching Competency	Mean (Standard Deviation)		t	p-value
	Male	Female		
Overall	3.37(0.24)	3.35(0.232)	0.359	0.721
Analytical and Problem solving	3.78(0.55)	3.64(0.63)	1.034	0.304
Conceptual Thinking	3.58(0.42)	3.54(0.51)	0.373	0.711
Mental Skills	3.86(0.50)	3.22(0.61)	2.54*	0.011
Communication Skills	3.29(0.44)	3.76(0.51)	2.67**	0.007
Knowledge and Information Orientation	4.21(0.40)	4.03(0.53)	1.72	0.089
Emotion Handling and Persistence	3.18(0.65)	3.82(0.60)	3.12**	0.0018
Self Dependence and Confidence	3.66(0.65)	3.73(0.57)	0.501	0.618
Adaptability	3.08(0.72)	3.63(0.49)	3.6**	0.003
Concern for Standard and Achievement	3.70(0.46)	3.83(0.53)	1.11	0.267
Being Open and Receptive	3.12(0.48)	3.55(0.53)	2.9**	0.003
Planning and Organizing	3.65(0.66)	3.77(0.56)	0.85	0.398
Interpersonal Management	3.93(0.63)	3.26(0.54)	3.52**	0.0004
Impact and Influence	3.93(0.54)	3.86(0.59)	0.511	0.611
Discipline and Delegation	3.34(0.51)	3.45(0.58)	0.815	0.417
Occupational Attachment and Organizational Setting	4.01(0.40)	4.02(0.49)	0.05	0.954

*****Statistically significant at $p<0.05$, **Statistically significant at $p<0.01$

Appendix 16: Showing values of "t" between teachers holding Masters Degree and teachers holding PhD Degree in respect of various dimensions of Teaching Competency

Dimensions of Teaching Competency	Mean (Standard Deviation)		t	p-value
	PhD	Masters		
Overall	3.38(0.21)	3.34(0.24)	3.15**	0.0016
Analytical and Problem solving	3.90(0.58)	3.52(0.56)	2.99**	0.004
Conceptual Thinking	3.56(0.46)	3.55(0.49)	3.35**	0.0008
Mental Skills	3.90(0.50)	3.78(0.61)	0.997	0.322
Communication Skills	3.65(0.50)	3.72(0.47)	0.709	0.481
Knowledge and Information Orientation	4.20(0.51)	4.02(0.46)	2.71**	0.006
Emotion Handling and Persistence	3.85(0.67)	3.77(0.57)	2.83**	0.004
Self Dependence and Confidence	3.85(0.58)	3.57(0.59)	2.11*	0.038
Adaptability	3.73(0.68)	3.71(0.48)	1.141	0.257
Concern for Standard and Achievement	3.85(0.51)	3.72(0.50)	2.29*	0.025
Being Open and Receptive	3.57(0.59)	3.58(0.43)	0.022	0.982
Planning and Organizing	3.77(0.51)	3.68(0.68)	2.9**	0.003
Interpersonal Management	3.83(0.54)	3.83(0.62)	0.002	0.998
Impact and Influence	4.00(0.54)	3.79(0.58)	2.95**	0.003
Discipline and Delegation	3.49(0.59)	3.33(0.52)	1.25	0.215
Occupational Attachment and Organizational Setting	4.06(0.49)	3.98(0.43)	2.89**	0.003

*****Statistically significant at $p<0.05$, **Statistically significant at $p<0.01$

Appendix 17: Comparing of Overall Teaching Competency and its dimensions among three age groups (A1=Below36, A2=36-45, A3=46 and above) of teachers.

Dimensions of Teaching Competency	Mean (Standard Deviation)			F	Sig.
	A1 (Below 36)	A2 (36-45)	A3 (Above 45)		
Overall	3.66(0.70)	3.8(0.45)	3.82(0.31)	0.51	0.126
Analytical and Problem solving	3.56(0.54)	3.80(0.67)	3.78(0.55)	0.49	0.2279
Conceptual Thinking	3.49(0.48)	3.55(0.45)	3.72(0.54)	0.83	0.0117
Mental Skills	3.93(0.53)	3.97(0.52)	3.69(0.61)	4.54**	0.002
Communication Skills	3.63(0.70)	3.68(0.50)	3.85(0.43)	0.17	0.114
Knowledge and Information Orientation	3.92(0.55)	4.24(0.45)	4.22(0.31)	0.52	0.317
Emotion Handling and Persistence	3.83(0.66)	4.01(0.70)	3.78(0.56)	3.87*	0.046
Self Dependence and Confidence	3.52(0.42)	3.83(0.75)	3.83(0.51)	0.79	0.325
Adaptability	3.61(0.52)	3.61(0.64)	3.43(0.68)	0.103	0.366
Concern for Standard and Achievement	3.81(0.55)	3.79(0.51)	3.72(0.46)	0.46	0.238
Being Open and Receptive	3.71(0.54)	3.61(0.55)	3.43(0.44)	5.147**	0.001
Planning and Organizing	3.63(0.63)	3.80(0.61)	3.78(0.55)	0.21	0.825
Interpersonal Management	3.76(0.56)	3.82(0.62)	4.02(0.55)	0.49	0.437
Impact and Influence	3.73(0.60)	4.03(0.51)	3.95(0.59)	0.86	0.113
Discipline and Delegation	3.34(0.49)	3.43(0.65)	3.50(0.49)	4.79**	0.001
Occupational Attachment and Organizational Setting	3.98(0.46)	4.02(0.48)	4.08(0.44)	0.1	0.377

A1= (Below 36), A2= (36-45), A3= (Above 45), *****Statistically significant at $p<0.05$, **Statistically significant at $p<0.01$