

**ASSESSMENT OF CRITICAL SOFT SKILLS OF
MANAGEMENT GRADUATES: DEVELOPMENT AND
STANDARDISATION OF A PSYCHOMETRIC TOOL**

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for the award of the degree of
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Under the Faculty of Social Sciences*

by
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Under The Guidance of
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**ASSESSMENT OF CRITICAL SOFT SKILLS OF MANAGEMENT
GRADUATES: DEVELOPMENT AND STANDARDISATION OF
A PSYCHOMETRIC TOOL**

PhD Thesis in School of Management Studies under the Faculty of Social Sciences

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Certificate

This is to certified that this thesis entitled **“ASSESSMENT OF CRITICAL SOFT SKILLS OF MANAGEMENT GRADUATES: DEVELOPMENT AND STANDARDISATION OF A PSYCHOMETRIC TOOL”** is the record of the bona fide research done by Ms. Chandra Vadhana R. under my supervision and guidance at School of Management Studies, in partial fulfilment of the requirements for the Degree of Doctor of Philosophy under the faculty of Social sciences Cochin University of Science and Technology Kochi-22. It is also certified that all the relevant corrections and modifications suggested by the audience during the pre-synopsis seminar and recommended by the doctoral committee of the candidate have been incorporated in the thesis.

Kochi
01-October 2019

Prof.(Dr.) Zakkariya K.A.
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Declaration

I, Chandra Vadhana R, hereby declare that the thesis titled, **“ASSESSMENT OF CRITICAL SOFT SKILLS OF MANAGEMENT GRADUATES: DEVELOPMENT AND STANDARDISATION OF A PSYCHOMETRIC TOOL”** submitted to the Cochin University of Science and Technology, for award of PhD degree under the Faculty of Social Sciences, is the outcome of original research work done by me under the supervision and guidance of Dr.Zakkariya K.A., Professor, School of Management Studies, Cochin University of Science and Technology. I also declare that this work did not form part of any dissertation submitted for the award of any Degree, Diploma, Associateship, Fellowship or other similar title or recognition from this or any other institution.

Kochi - 682 016
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Chandra Vadhana R.

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It is said that a work of art is the culmination of several forces of nature that uses the artist to evolve itself. Though a PhD Theses is not a work of art by description, my research journey did pass through all phases of pains and evolution that is meant for in the production of a piece of art. When I started the work, I was over ambitious and during the middle, I lost faith and at the verge of quitting and in the end, I came to the reality of my vulnerabilities and the vast ocean of knowledge where I have just dipped my toes.

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INTRODUCTION AND CONTEXT SETTING

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- 1.1 *Research introduction*
- 1.2 *Research gap*
- 1.3 *Objective and research questions*
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- ★ 1.8 *Summary of the methods*
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- 1.10 *Chapter conclusion*

This chapter gives the entire context and the plan for the research work, the research scope, the theoretical significance and practical significance of the study. This chapter also presents the chapterisation plan and acts as an introduction to the remaining portion of the thesis.

1.1 RESEARCH INTRODUCTION

Hiring and retaining the right talent is a matter of concern for any organisation. However, understanding the candidate's competencies and screening them for alignment with organisational goals is still a worry for any hiring manager. Employers and recruiters have clearly and consistently established that they value "soft skills" of an employee / potential employee during hiring and retention strategies. (Luse, 1999; Pittenger, Miller & Mott, 2004; Wardrobe, 2002).

Organizations today believe that "soft skills" are the most important ones in an employee /potential employee and all the technical skills can be trained as per requirement. Employers and recruiters have clearly and consistently established that they value these skills highly (Luse, 1999; Pittenger, Miller & Mott, 2004; Wardrobe, 2002). For eg: the recruitment process of IT majors like Infosys ,TCS etc consists mostly of Soft skills testing and only a preliminary testing of technical skills. Infosys, for example, has vast resources and an entire campus in Mysore, dedicated to training 25000+ fresh recruits for 3-6 months every year.

In a broad manner, we can say that "Soft skills" consists of every other skill than the technical skill of a person. Although the soft skills required for various job profiles vary to some degree, there are certain basic soft skills that are considered essential for today's business environment. Again, there are a lot of differences of opinion with regard to what makes up "soft skills" of managers and management graduates. The importance of these soft skills and the role of management institutes played in the development of these soft skills for future managers is pertinent considering

the fact that a manager's role is more connected to the 'softer' sides of a person.

However, despite the importance and relevance of soft skills, we are yet to arrive at a proper soft skills training curriculum in most of the Management degree programs. Developing soft skills through passive or rote learning methods is also not possible. Passive learning experiences (such as traditional e-learning solutions) rarely provide genuine opportunities to practice skills such as communication, teamwork, or critical thinking in the same way that active learning experiences such as serious games can practice (Martinovic et al., 2014). It is also important to note that there is considerable overlap between soft skills; leadership requires teamwork and task/time management skills, and virtually all skills require communication skills. Soft skills do not exist in a vacuum – they are developed together. It is unlikely that someone would have strong teamwork skills but poor communication. All soft skills are essential together for good employee performance. There is much evidence that soft skills can be actively developed, but the most effective teaching solutions are those that give learners the opportunity to practice (Martinovic et al., 2014). This overlapping also makes the training and assessment of the same much more difficult. Hence it is imperative that suitable training methodologies and curriculum is built for development of soft skills in management graduates, for which a clear framework based on employer's perspective is collected. This study contributes towards literature in this direction where employers' perspective on critical soft skills are collected and presented. This critical soft skills framework can be used as a model for development of a soft skills curriculum in future.

The next aspect related to soft skills is connected to its assessment. In the report “The Importance of Soft Skills in Entry-Level Employment and Postsecondary Success: Perspectives from Employers and Community Colleges” by Seattle Jobs Initiative (2013), it was found that most employers surveyed, 88%, assessed the soft skills of job applicants by how they conduct themselves in interviews. The next most widely used assessment was references (67%), followed by scenario questions (65%). Rosenbaum (2001), agrees that references often provide an accurate assessment of strengths and weaknesses in soft skills. But she disagrees with employers placing such a large emphasis on how candidates conduct themselves in interviews. As we know, interviewing is the most common selection method, but on its own it may not be a reliable indicator of job performance. Rosenbaum (2001) also recommends that employers should also look at high school transcripts, especially for applicants that do not have college credits, for a more accurate portrayal of soft skills abilities. Her research finds that high school grades have strong positive correlations with soft skills such as: sociability, leadership, attendance, and discipline.

A valid and reliable tool for assessing soft skills could act as a better pointer towards future employee performance. However, personality tests or psychometric tests needs qualified professionals to administer and interpret. Daniel & Benjamin (2010) suggest that practitioners maintain their awareness of Psychometric principles and a basic understanding of validity at a minimum before they use any measure for developmental or personnel selection purposes. With the use of psychometrically valid tools, the teacher is better able to model behavior and the student is better able to meet the challenges of their work by knowing where they stand.

This study aims to fill the gap of assessment of soft skills of management graduates and thereby enabling a better outcome for management education and in the employability of management graduates.

1.2 RESEARCH GAP

Despite the importance placed on the soft skills for managerial graduates, there is no specific measures as identified in the literature review to assess the same and to plan interventions based on such assessments. Due to the intangible nature of “soft skills” and the difficulty in the variations of the same, it has been difficult to assess or benchmark the same. Benchmarking on soft skills could enable better employability of fresh management graduates. Therefore, it is imperative that a validated assessment tool based on psychometric principles could enable the assessment of soft skills by a faculty / trained practitioner. However, some of the main challenges in this are the following.

- Lack of Clarity with regard to what are the skills which fall under “soft skills” –in particular managerial soft skills.
- Absence of soft skill measurement tools at various stages of management education and thus leading to “one size fits all” training programs adopted by business schools
- Non availability of an easy to use objective method for assessing managerial soft skills.

The study when commenced in 2012, did not have sufficient literature to aid better understanding of the above aspects. However, in due course, several studies have been conducted in similar lines in subsequent years and the same have added inputs to this study. There are a few empirical studies

providing insights on employer's perception of what "soft skills" are (which are presented under the literature review chapter of this thesis) but there is not any study which the researcher is aware of in the construction of a psychometric tool for the assessment of the soft skills of management graduates as a whole or in partial.

This study thus aims to fulfill the research gaps in understanding the critical soft skills for management graduates and further develop a validated psychometric tool to assess the same.

1.3 OBJECTIVE

Based on the preliminary understanding and research interests of the researcher, the following research objectives is set

- To identify and arrive at a set of "Critical Soft skills" which are necessary for an entry level management graduate.
- To develop a psychometric tool for assessment of the identified "Critical soft skills" and conduct primary validation in the Indian context.

With the above two objectives, this study was structured to develop an instrument to measure the various dimensions of Critical Soft skills of managerial graduates and to theoretically and empirically validate the instrument.

1.4 SCOPE OF THE STUDY

The Scope of this study is limited to understanding and identifying the **critical soft skills of management graduates** as expected by employers and also to develop a tool / inventory to assess the same. Hence the study

was conducted among management graduates /professionals from various parts of India. There may be other attributes like social, economic, cultural and regional aspects associated with the chosen population which is not part of the scope of this study. The Scope of the research work is to identify the major soft skills that as expected by employers/ recruiters in fresh management graduates only. The expectations from other graduates is not part of this study and may need to be studied in future researches.

1.5 LIMITATIONS OF THE STUDY

One of the major limitations of this study is the time gap between the phase one study and the phase two study. The phase one study was conducted in 2014 to 2015 and the phase two and three was conducted during 2016- 2017. The data collection period was extended to over one year for each study due to lack of sufficient responses due to length of questionnaire and delay in responses. This time delay could have affected the results in some manner. Other limitations include the possible errors that could have crept in during data collection and analysis.

1.6 THEORETICAL SIGNIFICANCE

This study makes a contribution to the contemporary soft skills and management education literature by extracting the dimensions of the critical soft skills of management graduates. Further, this is the first instrument to measure the construct of soft skills for entry level management graduates in a theoretical landscape where there are no instruments that measure the same. Empirical data from the target population collected in the study as well as the norms arrived at will also provide future direction for research in the various dimensions of the soft skills assessment. The study also

contributes to literature on employers' perception of soft skills of management graduates in the Indian context and creates a conceptual framework of critical soft skills based on empirical derivation. Thus, this research has high significance in the understanding and development of soft skills models and curriculum design in management education. The study contributes by the development of the psychometric tool which will enable the benchmarking of assessment of soft skills in due course. Future research studies could be conducted on various other samples for better validation of the construct.

1.7 PRACTICAL SIGNIFICANCE

This instrument measures the critical soft skills for the entry level management graduates and will provide organizations with a readymade tool to assess the critical soft skills of entry level management graduates and to further assess their training needs. The tool could thus help in the employability assessment or in the employment screening process. The tool could also be used for pre-training assessment of soft skills in B-Schools and in setting up benchmarks in the expected levels.

1.8 RESEARCH METHODS

This study is based on Grounded Theory and mixed methods where exploration of the constructs are conducted in different ways like qualitative studies, experts opinions (face to face interaction with experts and telephonic interaction) and content analysis to arrive at preliminary list of soft skills. Triangulation is conducted to ensure that there is methodological perfection. The result of the content analysis was converted to a quantitative survey to arrive at a comprehensive list of soft skills. However, in order to

derive the critical soft skills, a next level of screening by experts was conducted. The resultant parsimonious list was named “Critical Soft skills”.

In the next phase, scale construction and scale validation was conducted as per psychometric tool validation processes. The survey design and scale validation methods used in this study were based on a post positivistic paradigm (Phillips & Burbules, 2000) that asserts that knowledge is “based on careful observation and measurement of the objective reality that exists ‘out there’ in the world (Creswell, 2009, p. 7) and considers surveys as logical, deterministic, general, parsimonious, and specific (Babbie, 1990) data collection tools that enable statistical analysis with scientific rigor (Creswell, 2005; 2009). Statistical Tools such as SPSS and AMOS were used to ascertain the psychometric properties of the scale.

A Brief on Psychometric Theory and Scale Development Methods

Psychometric theory has been applied in the measurement of personality, attitudes, and beliefs, and academic achievement. Measurement of these unobservable phenomena is difficult, and much of the research and accumulated science in this discipline has been developed in an attempt to properly define and quantify such phenomena. The usage of psychometric tools in human resource management has been increasing in the past decade.

The American Psychological Association (1985, as quoted in Hinkin, 1995) established that sound measures must demonstrate content-validity, criterion-related validity, construct validity, and internal consistency. These criteria determine the psychometric validation of behavioral measures. It is essential that every psychometric tool possess these psychometric properties

in order to be standardized. Standardisation is a process of ascertaining these psychometric properties by way of collecting necessary data from target samples and arriving at norm values for the same.

Basically the psychometric properties of an instrument can be evaluated in terms of the validity and the reliability of the instrument.

Reliability

Reliability is the measure of consistency of a particular instrument. This refers to the capability of the instrument in producing consistent results if it were to be repeatedly administered to a homogenous group of respondents. In this study, the internal-consistency was used to evaluate the consistency of the responses for each item within the instrument.

This is reported in terms of coefficient of Cronbach alpha where the values ranges from zero to one. According to some psychometricians, the alpha value of 0.7 to 0.8 is considered satisfactory for social science research (Bland and Altman, 1997).

Item Analysis

According to Salkind, 2010 , Item analysis is the set of qualitative and quantitative techniques and procedures used to evaluate the characteristics of items of the test before and after the test development and construction. An item is a basic building block of a test, and its analysis provides information about its performance. Item analysis allows selecting or omitting items from the test, but more important, item analysis is a tool to help the item writer improve an item.

Confirmatory Factory Analysis using SEM is used as a tool for item analysis in this study and in the final elimination of those items with weak scores

Validity

The validity of the instrument used in the survey refers to whether or not it measures what it purports to measure. It is an important issue to be addressed since the validity of the study very much depends on the validity of the instrument used. Broadly, validity can be termed as a measure of how “truly” a particular concept is represented by its construct, that is “the extent to which the research findings accurately represent what is happening in the actual situation” (Hussey and Hussey, 1997). In other words, it refers to how accurately a particular construct is translated into measurable behaviours. This is widely known as “construct validity”. The construct validity can be further classified into “translation validity” and “criterion-related validity”. The translation validity focuses on the accuracy of the items reflecting the construct while the criterion-related validity examines whether the respondents responded to the items in the way they should (Trochim, 2002). Under the category of translation validity are “face validity” and “content validity” while criterion related validity consists of “predictive validity”, “concurrent validity”, “convergent validity”, and “discriminant validity” (Trochim, 2002).

Face validity and content validity.

According to Churchill (1979), clearly specifying the domain of the construct, generating items that exhaust the domain, and purifying the

resulting scale should produce a measure which is content or face valid and reliable (Churchill, 1979, p. 70).

According to Prof. Guilford, the author of *Psychometric methods*, the various stages in a psychometric tool development includes item generation , pilot administration , item analysis, item reduction , statistical analysis to ensure reliability and validity and finally arriving at norm values . Hinkin (1995), proposed a slightly different model in the stages of scale development as domain and item generation, content expert validation, and pilot test. Content validity must be built into the measure through the development of items. It is often viewed as the minimum psychometric requirement for measurement adequacy and is the first step in construct validation of a new measure (Schriesheim, Powers, Scandura, Gardiner, & Lankau, 1993). An inductive approach also called “grouping” or “classification from below” (Hunt, 1992) can be used when, there is little theory involved at the outset as we try to identify constructs and generate a measure from individual responses.

In a white paper, “The definitive guide for Pre- Employment Testing”, CriteriaCorp (2016), it is mentioned that “ Predictive validity studies take a long time to complete and require fairly large sample sizes in order to acquire meaningful aggregate data. For this reason, many employers rely on validity generalization to establish predictive validity, by which the validity of a particular test can be generalized to other related jobs and positions based on the testing provider’s pre-established data sets. Alternatively, employers can also perform concurrent validity studies to measure criterion validity; these are done by administering tests to existing employees and

comparing results to job performance. Concurrent validity studies are generally much quicker and easier to conduct than predictive validity studies, and they generally do not have the time-range restriction problems often associated with predictive validity studies”.

Statistical tools like IBM SPSS, AMOS are useful to derive the psychometric properties by using Principal component analysis, factor analysis and confirmatory factor analysis. A Structural Equational Modeling (SEM) using AMOS also helps in confirming the items and removing the ones that doesn't confirm the validity and reliability of the instrument.

The instrument development was conducted through an iterative process in a series of stages which happens one after another. It has to be noted that the results from each phase determines the further research path. Each of the phase is detailed to encapsulate the work done as well as to provide other relevant insights from the studies. Figure 1.1 shows the various stages in the study (shown in the next page).

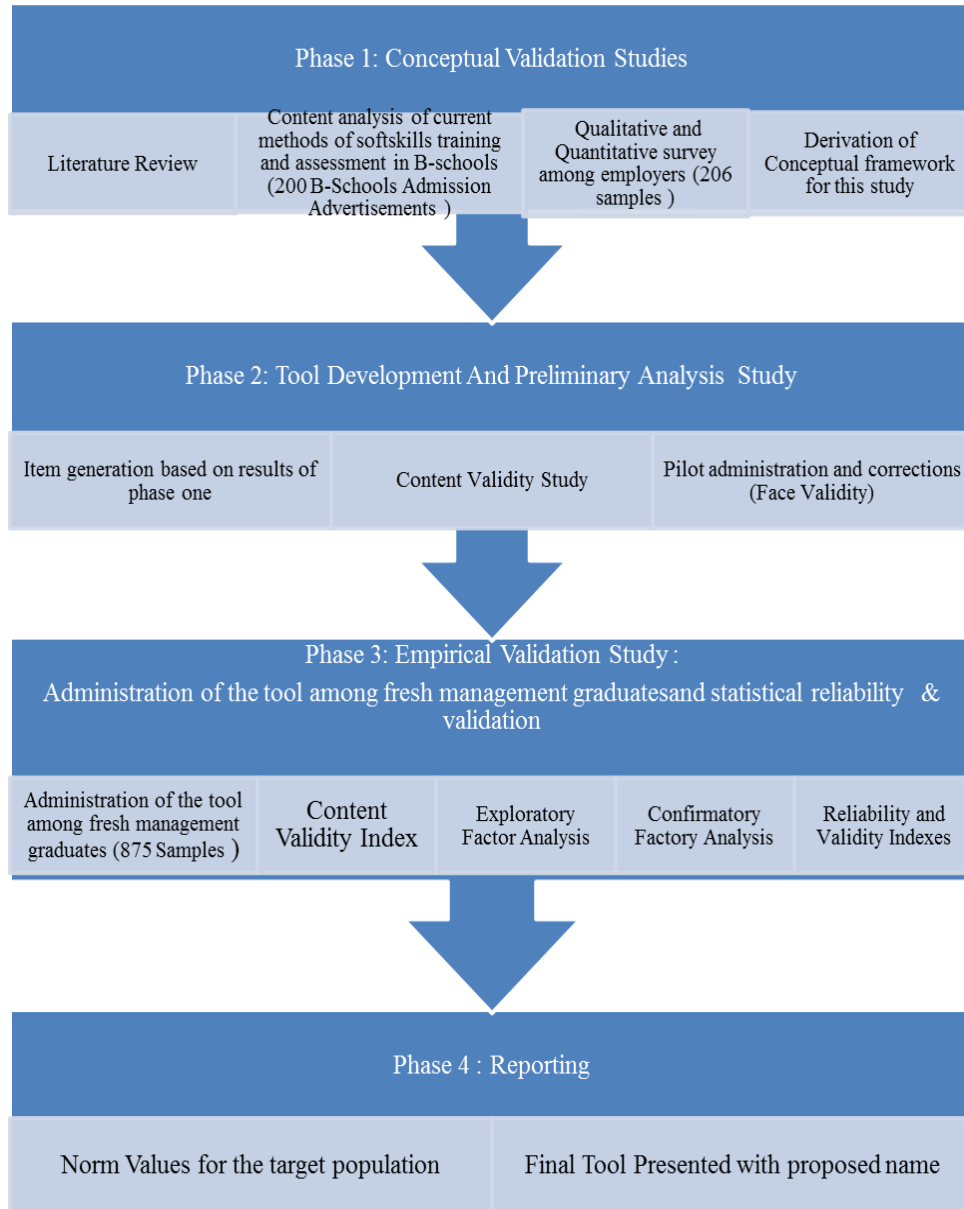


Figure 1.1: Stages of Tool Construction and Validation

1.9 ORGANISATION OF THESIS AND CHAPTER PLAN

This thesis is prepared on the basis on original research work conducted in the construction of a psychometric tool for assessment of managerial soft skills. The purpose of this study is to identify the major soft skills that is expected from a fresh management graduate and further develop an assessment tool to assess the same. The chapters are organized in the following manner

In Chapter Two the literature review relevant to this study is presented. Literature on Management Education, The Indian B-School Scenario, Literature on Managerial soft skills, and literature on skills assessment as well as employers perspective on soft skills is elaborated.

In Chapter three, the results of various conceptual validation studies is presented. This include Soft skills training and assessment – Content analysis study of B-Schools Advertisements, Qualitative study among employers, Quantitative survey among employers and finally derivation of Conceptual Framework for the next phase of the study.

In Chapter Four, the results of the tool construction and preliminary exploration study is presented. The results of Item Generation based on phase one, Content Validity Study, Pilot administration & correction and face validity is presented here.

In Chapter Five, the results of the Empirical Validation is presented. Administration of the tool among fresh management graduates (975 Samples in two sets) Exploratory Factor Analysis, Confirmatory Factory Analysis and Reliability and Validity Indexes is presented.

Chapter Six reports the Psychometric property of the newly developed tool. This chapter also gives name for the tool and presents the tool in its final form. This chapter also presents the summary and conclusion of the study along with the necessary appendices and references

1.10 CHAPTER CONCLUSION

The Chapter one presented the context and premises under which this research work is completed. It also presented the organization of the chapter in this thesis.



- 2.1 *Literature of management education*
- 2.2 *The Indian b-school scenario*
- 2.3 *Literature on managerial soft skills*
- 2.4 *Employer's perspective of soft skills of managers*
- 2.5 *Literature on skills assessment*
- 2.6 *Literature review conclusion*

As discussed in Chapter one, the objective of Literature Review is to identify the need for assessment tools in management education, the Indian context in management education, the role of soft skills in employability skills, employer's perspective of soft skills of managers and identify any existing tools used in assessment of managerial soft skills as well as establish the study purpose.

2.1. LITERATURE ON MANAGEMENT EDUCATION

It was in the early twentieth century that the Tuck School of Business in United States started its Graduate program and there after it was the beginning of the era of management education. In 1908, Harvard University started Masters in Business Administration (MBA) program and initially focused on book and accounts keeping. Post-world war, the focus of the program was shifted to managing the organization, organization restructuring, merger and acquisition etc. With the passage of time, the program has underwent tremendous transformation in terms of curriculum design, applications of the studies, depth of studies, types of programs i.e. full time/ part time/accelerated/executives/distance learning and various specialization like marketing, finance, operations etc. Even courses with dual specialization are now offered by many B-schools.

In the past decade, an increasing focus on skill development in undergraduate and graduate business curricula has also emerged (e.g., Bigelow, 1995; Bigelow, Seltzer, van Buskirk, Hall, Schor, Garcia, & Leleman, 1999; Boyatzis, Stubbs, & Taylor, 2002).

However, the needs and demands of the ever changing and evolving world of business, the question of curriculum updation and a “lack in management education” are discussed in literature since the past few decades. For example, in a meta-analysis study on management education, Dean Elmuti, (2004), it is said that the present day management education lacks in some areas, most noticeably in soft skills and practical education. He analysed the present day management education based on the Five dimensions model. The five dimensions of the model are:

- Managing self;
- Managing relationships;
- Managing organizations;
- Managing context; and
- Managing change.

All the five dimensions represent managerial skills based on different areas. Based on the analysis he found that

“..there is always a gap between what is taught and what is learned by the student. Perhaps more importantly, there is always a gap between what is taught in formal education and what the working world wants. Sometimes this gap can be attributed to the natural gap between practice and theory.....Other times this gap between the needs of companies and what management education is teaching managers is attributed to outdated methods in business schools”

Elmuti (2004) also quotes the studies by Monks and Walsh(2001) who suggest three different restrictions to management education.

“...One is that the increasing number of people seeking management education and the above noted interest in process is only making the problem of giving a quality education harder. Second is the fact that courses are taught as separate, distinct subject areas (Monks and Walsh, 2001). Real world problems are almost always more complicated than to be classified into one area. Finally, they suggest that assessment of knowledge has its boundaries. Oftentimes

management students' casework is assessed as having either right or wrong answers, yet in the working world there will very rarely be just one neat, tidy answer”

A study was conducted by Nick Wilton (2008) among 1999 Business and Management Graduates in UK, regarding what they ranked as most important managerial skill in their first job and what they were taught as important in their Business education. It was found that among the list of employability skills surveyed, communication skills, management skills, ability to work in teams and leadership skills were the first four most important skills which they used mostly in their first job; whereas their business education focused on written communication, research skills, ability to work in teams and basic computer skills as the first four. Based on this, Wilton comments that students who intend to pursue managerial careers are not best served by programmes of study that place as much emphasis on the development of academic skills, such as research and written communication, as skills that are evidently more useful in the workplace, such as spoken communication and management skills.

Datar et al (2010) outlined similar argument by using a framework that was originally developed at West Point to describe the essential components of business school education: knowing (or knowledge), doing (or skills), and being (or a sense of purpose and identity). Their book, “Rethinking the Business Education” argues that business schools need to reassess the facts, frameworks, and theories that they teach (the “knowing” component), while at the same time rebalancing their curricula so that more attention is paid to developing the skills, capabilities, and techniques that lie

at the heart of the practice of management (the “doing” component), and the values, attitudes, and beliefs that form managers’ world views and professional identities (the “being” component).

They also found that only a few of the B-schools among the topmost in the world like Stanford and Harvard try to address these issues and provide the students with value added courses like Critical Analytical thinking, Leadership and corporate accountability courses etc. Datar et al (2011) also listed eight unmet needs of the corporate, with regard to the quality of the MBA graduates, which are 1. Gaining a global perspective, 2. Developing leadership skills, 3. Honing integration skills, 4. Understanding the role, responsibilities, and purpose of business;, 5. Recognizing organizational realities and the challenges of implementation, 6. Thinking creatively and innovatively, 7. Thinking critically and communicating clearly: 8. Understanding the limits of models and markets. It can be seen that at least half of these unmet needs fall into what can be called as “Soft skills”. Students need opportunities to practice their managerial skills in realistic situations and receive feedback on those skills (Whetten & Cameron, 1995). Skill assessment is important in identifying current levels of competence and serves as an important catalyst for change. As students practice their developing skills, it is important to provide ongoing feedback. Feedback should be based on objective, accurate and credible measurement of skills. Thus, assessment of managerial soft skills plays a key role in management development.

Rosenberg, Heimler, & Sofia Morote, (2012) states that “first, students need to understand that to be able to obtain employment in a highly competitive workplace they need to be prepared with the skills that

employers desire. Consequently, it is recommended that regardless of the academic discipline faculty should teach the soft skills that industry expects and that students need in order that graduates gain entry level employment.”

2.2. THE INDIAN B-SCHOOL SCENARIO

There were 3882 management institutes in India which are approved by the All India Council for Technical Education (AICTE) (2012-2013) and the status of unapproved private b-schools is not available. Together, they had around 4.4 lakh seats, from which nearly the half the number of management graduates and post graduates pass out every year. However the placement number is just around 1 lakh which is one third of the graduating students. The details are presented in the table below:

Table: 2.0. AICTE Data on Management Institutions

	Total Approved Institutions	Total Intake Capacity	Actual Enrolments	Students Passed	Placement	Placement Ratio of pass outs	Placement ratio of enrolments
2012- 2013	3882	444487	237658	180235	95441	52.9%	40.1%
2013- 2014	3758	452096	235122	186640	103547	55.4%	44.0%
2014- 2015	3609	456427	249063	186969	104778	56.0%	42.06%
2015- 2016	3473	432938	250651	187192	102039	54.5%	40.7%
2016- 2017	3359	413136	235203	184940	106759	57.7%	45.3%
2017- 2018	3265	394843	238803	170420	106450	62.5%	44.5%
2018- 2019	3120	374564	230889	NA	106199	NA	45.9%

Source: AICTE official website accessed on 24th June 2019

The IIMs always have a great reputation among the MBA aspirants across India, as they render quality education, best of the faculty along with great growth opportunities. But these top B-Schools are limited in number and don't have enough seats for all the meritorious students, thereby giving rise to private MBA colleges that also offer the management education at all parts of the country. Today these Non-IIM institutes are working hard to create a positive narrative around their institution.

It is evident from nationwide statistics, as seen from the AICTE official data that a vast majority of the graduates, who pass out from these institutes fail in acquiring a decent placement. This is more relevant in the case of second tier and third tier B-schools, as most of the top B-schools do not find big problems in placing their students. The National Institutional Ranking Framework (NIRF) launched by the MHRD in 2015 ranks the institutions on various parameters as Teaching and Learning resources, research and professional practice, graduation outcome, outreach and inclusivity and perception. One of the key parameters in this ranking is the graduation outcome where the percentage of students entering placement / entrepreneurship / higher studies after their graduation is assessed. In the 2019 ranking of NIRF, out of the 555 institutions which participated in the study, the top 75 had marked difference in their scores – the 1st rank scored at 81.34 (IIM Bangalore) and the 75th rank scored at 39.20 (Chitkara University, Punjab) (as collected from the website of NIRF Ranking of Management Institutes, 2019). It is quite evident that the vast majority of the remaining B-Schools are way below the lowest score clearly pointing to the lack of quality in the above crucial parameters.

In most of the top B-schools like the IIMs, majority of the students get more than one job offer, whereas students from tier-two and three B-schools struggle to get a decent job even after one year of their graduation. When there was fierce competition, many B-schools portrayed themselves in top position by disclosing partial facts such as average package and communicating in all possible way to candidates with help of SMS, social networking, newspaper. Even though mandatory disclosures give some extra information about the college, they are not a means known to all and only available for colleges which are approved by AICTE (Thawani, 2011). One of the reasons behind this low quality phenomenon could be the lack of focus of these institutes in developing the soft skills of these graduates and there are several newspaper reports of recruiters' comments in this regard.

2.3. LITERATURE ON MANAGERIAL SOFT SKILLS

Managerial soft skills have assumed prime importance ever since business organizations started adopting professional managers in their business. Several studies has been conducted in this area, especially to reiterate the necessity of these soft skills as an important part of managerial role.

Boyatzis (1982) was among the first to comprehensively describe and study the topic of managerial skills. Using multiple methods to study competencies, including projective tests, job element analysis, and critical incident interviewing, Boyatzis found evidence for 6 clusters which include goal and action management, leadership, human resource management, directing subordinates, focus on others, and specialized knowledge. These basic functions of management jobs can be described in terms of planning,

organizing, controlling, motivating, and coordinating. It is very evident that these 6 clusters focus more on the “Soft skills” of managers.

Reich (1992) identified three broad categories that describe work in the emerging global economy. The first category is routine production work, which requires employees to read, perform simple computations, and follow instructions. The second category is in-person service work, which requires the employee to engage in simple and repetitive tasks and to engage in effective person-to-person encounters. The final category is symbolic-analytic services, which requires the employee to identify and solve problems, manipulate symbols and data, effectively use written and oral communication, and use and understand visual representations. Managers belong to this third category and it can be seen that their roles require higher order thinking and also soft skills.

Soft skills are personal attributes that enhance an individual's interactions, job performance and career prospects. According to Schulz (2008), soft skills are commonly divided into two components: personal attributes and interpersonal abilities. Personal attributes refers to the attributes such as: optimism, common sense, responsibility, a sense of humor, integrity, time-management, and motivation. Interpersonal abilities include empathy, leadership, communication, good manners, and sociability (Schulz, 2008).

According to a research article by Agrawal & Thite (2006),

“In a multi-cultural global environment, soft skills assume immense importance in understanding and gaining the trust and confidence of customers. India was able to ride the crest of the software wave in

the late nineties with its base of technically qualified, English speaking professionals. While Indian software professionals are acknowledged for their technical expertise the world over, it is also recognised that they lack the soft skills, which become much more important as Indian companies move up the value chain in business.”

They further recommend the following

“...Incorporating soft skills as an important measure of selection and performance assessment of project managers;

- Providing necessary training and learning environment to help project managers acquire the soft skills;

- Recognising and rewarding project managers with exceptional soft skills and projecting them as appropriate role models and mentors;

and- Designing and implementing appropriate career management strategies that ensure smooth transition of technical professionals in to leadership roles”

Rosenberg et al (2012) states that students need to understand that to be able to obtain employment in a highly competitive workplace they need to be prepared with the skills that employers desire. Relatedly, faculty needs to be sensitive to this relationship as well. They also recommend that regardless of the academic discipline faculty should teach the soft skills that industry expects and that students need in order that graduates gain entry level employment. The study also states that future studies should investigate the competency levels that employers expect of these soft skills. Obviously, it is not sufficient for students to merely possess the skills that employers desire, but to also display the level of competency that employers expect of these skills.

2.4 EMPLOYER'S PERSPECTIVE OF SOFT SKILLS OF MANAGERS

There are several studies about employability skills as well as the employer's perspective of managerial skills / soft skills. Most of these studies conducted in various parts of the world tried to collect direct data from employers about their expectations or perspectives on soft skills. Some of the major research works in this segment is presented herewith.

Jusoh, Mohd Rizal, & Choy Chong (2007), examined the qualities of fresh graduates in business from the perspectives of employers. Three main research questions are addressed: 1) What are the qualities preferred among fresh business graduates? 2) What ratings do employers give to the qualities of fresh business graduates? 3) Are the employers satisfied with the qualities of fresh business graduates? Data was collected from a questionnaire-based survey done on a sample of 127 human resource managers in Malaysia and found that even though the employers are generally satisfied with the graduates' qualities, the preference-assessment comparison reveals significant gaps in the graduates' skills and abilities.

Andrews & Helen (2008) tried to conceptualize and identify key individual- and business related skills and competencies required by employers of business graduates and holders of other higher level qualifications, and to discover whether higher education business programs are meeting the needs of the European marketplace. Three significant themes emerged out of the research, each one focusing on different components of graduate employability: - Business Specific Issues (Hard

business-related knowledge and skills); - Interpersonal Competencies (Soft business-related skills); - Work Experience and Work-Based Learning.

Khain Wye & Mee Lim (2009) attempted to investigate if the undergraduates' core competencies are able to meet with the requirements set by the employers and to analyse the effectiveness of personal qualities and employability skills development in private university in Malaysia. Results show that the undergraduates skills as critical analysis, planning, problem solving, oral communication, decision making, and negotiating report a slightly higher level of mismatch between employers' and undergraduates' perception on their importance and development in the University.

Sharma (2009) did a survey among several recruiters to rate the top three soft skills and found that while communication skills was rated as the most important by 72%, teamwork followed a close second with 66% and then time management with 60%.

William Hinchliffe & Jolly (2011) presented research in which over 100 employers in East Anglia were asked to record their perceptions of graduates in respect of their employability. The findings suggest a composite and complex graduate identity, depending on employer size and sector. They proposed a four-stranded concept of identity that comprises value, intellect, social engagement and performance. Thus, when assessing the potential of graduates, performance is not the only criteria that employers take into account. Moreover, the four elements of identity are by no means independent of each other but are expected to interpenetrate

producing a composite identity, with different employers emphasizing different facets of this identity.

Daud, Abidin, Sapuan, & Rajadurai (2011) investigated the potential gap between important dimensions of business graduates' attributes and the actual performance of these graduates in their post-graduate employment. Importance - performance analysis was used to evaluate the managers' perceptions of these graduates, passing out from various Malaysian Universities and to determine their actual performance. The results of this study reveal that managers attach different weights to different aspects of graduates' performance.

Azevedoa, Apfelthaler, & Hurst (2012), proposed a conceptual framework and industry-driven approach to measure required competencies of business graduates. Survey results showed that employers were not very confident in the level of capability of business graduates in the eight competencies investigated in this study.

Two hundred and eleven Australian employers were surveyed to produce a set of business graduate competency profiles which accurately reflect the current needs of Australia employers by (Jackson & Chapman, July 2012). They proposed three distinct clusters (or 'types') of graduates as: the 'Manager', 'People Person' and 'Business Analyst'. They provide an overview of the required balance of cognitive and affective competencies important in the modern Australian business graduate.

La Prince (2013) conducted an exploratory qualitative research study and explored management education business school offerings in comparison to employer expectations. The findings of this study reaffirmed

the need for employers, business school administrators, and faculty to increase collaborative efforts to ensure that undergraduate business-school program competencies are aligned with employer expectations. Through the lens of alumni and human-resources personnel participants, the research examined the skills deemed as transferrable to the workplace and competencies that undergraduate-management education alumni lack upon entry into the workplace.

Rao, Saxena, Chand, Narendran, Bharathan, & Jajoo (2014) tried to answer the question, “In the Indian context, what insights can employers offer on the knowing, doing and being dimensions of the formation of an MBA graduate, that management education institutes can use to rebalance their curricula?” and then through a detailed survey and analysis, presented a set of six guidelines that seem to be important from the employers’ perspective as a model for future curricular practice: Introduction of the curriculum through practice; Critical thinking and diagnosis; Integrative thinking; Capability for learning; Focus on a complex made up of Leadership, Team Player, Innovator, and Corporate Citizen; and Apprenticeship before award of the MBA degree.

Sharifah, N. & et.al. (2014) have found in their research paper “21st Century core soft skills research focus for integrated online project based collaborative learning model” that the professional graduates of Malaysia are not getting the job as they lack the soft skills required by their employee at the time of their selection process. The objective of their study is to determine the core soft skills related to 21st Century which will be an Integrated Online Project Base collaborative learning model. Result shows

that communication skills, problem solving and critical thinking skills are the core soft skills related to 21st Century

Kantrowitz (2005) has attempted to derive at a construct validation for Soft skills performance in an organizational context. She has derived 7 clusters which underlie in the soft skills performance of employees within an organization. These are communication/persuasion, leadership /organization, performance management, self-management, interpersonal, political/cultural and counter –productive work skills.

In an elaborate mission of imparting, soft skills curriculum by Malaysian Institutions of higher learning, seven soft skills have been defined as most important for graduates. (Ministry of Higher Education Malaysia, 2006) .They are Communication Skills (CS) , Critical Thinking & Problemsolving (CTPS) , Teamwork Skills (TS), Moral & Professional Ethics (EM), Leadership Skills (LS), Lifelong Learning & Information Management Skills (LI), Entrepreneurial Skills (ES)

Shakir (2009), has suggested the implementation of “Soft finishing schools” in every educational institution and also states that future research should thus focus on the appropriate assessment method to facilitate the effective implementation of soft skills development.

In another study by (Seetha N., 2014), conducted among Malaysian Employers to rate the critical soft skills from fresh graduates, it has been found that they have rated it in the following manner.

Table 2.1. Rating of Softskills of Graduates by Employers in Malaysia

Sl no	Soft Skill	Percentage
1	Communication Skills	28%
2	Positive Attitude	24 %
3	Interpersonal & Social Skills	16%
4	Teamwork	17 %
5	Analytical & Problem Solving	9 %
6	Leadership	6%

Source: N., Seetha. (2014). Are Soft skills Important in the Workplace? – A Preliminary Investigation in Malaysia. *International Journal of Academic Research in Business and Social Sciences* , 4 (4), 44-56

Agrawal (2014), in his PhD thesis has made an attempt to develop an inclusive listing of what people denote by the term “soft skills” as well as a definition of the same by a systems approach. He has also arrived at a definition for soft skills, which is also shown below.

“Soft skills are insights - skills - traits -values and virtues that help to deal with self and others - situations - and communication , work and organization and finally with Technology - and surroundings”

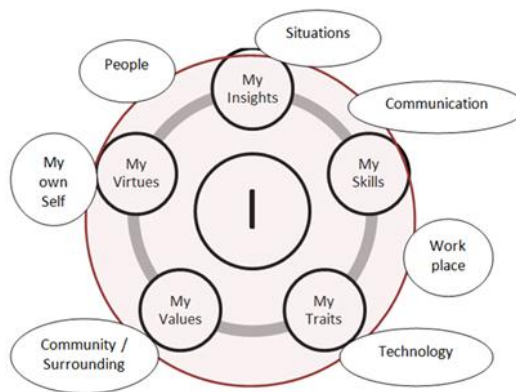


Figure 2.1. Definition of Soft skills by Dr.Agarwal (2014)

The study clearly revealed the importance of Soft skills in the field of management education. However, there seems to be no clear simple definition or a defined curriculum for the incorporation of the same in management education.

2.5 LITERATURE ON SOFT SKILLS ASSESSMENT

Educational assessment is a process of gathering evidence, making judgments and drawing inferences about student achievement and performance (Curtis, 2010). Pellegrino, Chudowsky and Glaser (Pellegrino, Chudowsky, & Glaser, 2001, p. 42) described assessment in the following terms: An assessment is a tool designed to observe students' behavior and produce data that can be used to draw reasonable inferences about what students know.

Although many institutions are beginning to integrate skill-based education, rigorous skills assessment reflective of the skills being taught has been slower to develop (McConnell & Seybolt, 1991; Riggio, Mayes, & Schleicher, 2003) and it may be because of good reasons. In addition, much confusion exists regarding what constitutes managerial skills. For example, many confuse student personality or attitudes with managerial skills. This confusion regarding what constitutes skills often leads to mistakes in assessing those skills.

Business schools have excelled at assessing students' ability and knowledge while doing relatively little in the skills area (Bigelow, 1995). The lack of behavioral change evidence is partly a function of measurement issues. That is, it may be a testament to the difficulties that accompany

assessment and development of soft skills. Indeed, these skills are not only difficult to measure-they may take a lifetime to master.

Kantrowitz, Tracy's (2005) doctoral theses was on development and construct validation of a measure of soft skills performance. In her set of studies she examined the dimensionality of soft skills performance, developed measures to assess soft skills performance from self and supervisor perspectives, and validated the measures of performance in a nomological network of non-ability individual differences and existing performance measures. Study 1 involved asking subject matter experts to provide a master list and critical incidents of soft skills. Data from Study 1 served as the stimuli in Study 2 for sorting and reduction of skills into dimensions of soft skills performance. A construct and criterion validation approach was taken in Study 3 to measure soft skills performance in relation to individual differences variables in a nomological network. Results showed that the taxonomy of soft skills performance was composed of seven clusters, but that the measure of soft skills performance was unidimensional. Personality and motivational variables significantly predicted soft skills performance through their influence on proximal motivational processes.

Heckman & Kautz (2012) summarised recent evidence on what achievement tests measure; how achievement tests relate to other measures of "cognitive ability" like IQ and grades; the important skills that achievement tests miss or mis measure, and how much these skills matter in life. Achievement tests miss, or perhaps more accurately, do not adequately capture, soft skills-personality traits, goals, motivations, and preferences

that are valued in the labor market, in school, and in many other domains. The authors further suggests that soft skills predict success in life, that they causally produce that success, and that programs that enhance soft skills have an important place in an effective portfolio of public policies.

The problem-oriented project -based learning (POPBL) is a teaching-learning method that promotes deeper learning, and learning by doing (Coyle, 1999; Lehmann et al., 2008). Students also incline to develop their social and cognitive skills through social interaction with others. By doing POPBL, students were interacting with peers who have various personalities and backgrounds. A self-constructed questionnaire was employed to find out students' perception towards the newly introduced approach, and how it helped them to enhance their Soft Skills. There were also items in the questionnaire that require students to name other Soft Skills that they think instantaneously enhanced through the POPBL process (Fatmawati Latada & Hafizoah Kassim (2017)

Azevedoa, Apfelthaler, & Hurst (2012), proposed a conceptual framework and industry-driven approach to measure required competencies of business graduates. Survey results showed that employers were not very confident in the level of capability of business graduates in the eight competencies investigated in the study.

In a recent dissertation by Haddad, Rebekah Jean, M.S.(2016) , a positive significant impact was noted for career decision self-efficacy and perceived soft skill attainment between those who had placement and exploratory Supervised Agricultural Experience Programs. This would suggest that students participating in programs that require greater

investment and student input are receiving greater perceived skill attainment and efficacy through their experience.

Chariroh, Siti (2016) in his doctoral thesis, adopted a qualitative research design to understand the different methods used by lecturers in assessing soft skills of students. Total of lecturers who became participants of this research were four lecturers who had experiences in assessing students' soft skills and who have been teaching for at least two years. An interview was used to collect the data of this research and the researcher used in depth interview. He found three strategies used by the lecturers to assess soft skills, using rubrics, conduct activities such as presentation, group discussion, classroom discussion, critical thinking project, consultation, group project, a textbook making, and creating simple dictionary, group work, teamwork outcome, self- discipline and punctuality in turning in the task with good result. The last strategy is observation including direct class observation, individual observation, and observation during presentation. He also listed six problems faced by lecturers in assessing students' soft skills. They were the following: too many students at the university, inactive student, assessing students' creativity, determining the students' original work or authenticity, processing before finishing the task, and to easy the challenge of scoring individual contribution in group work. However, not every participant had problems in assessing students' soft skills of the students.

In a doctoral theses by Tan Chan Chan (2016) named "Assessment Of A Soft Skill Instrument For Sixth Form Business Studies Students" an in-depth information on the competency level of soft skill elements of Sixth

Form Business Studies students in a school setting. A total of 101 Sixth Form Business Studies students self-assessed their elements of soft skill. Three Business Studies subject teachers were paired up as raters to assess the soft skills elements' of students using rubrics. Both quantitative and qualitative methods were employed to collect data using checklist, rating rubrics, and structured interview. Results of rubric ratings, both by student self-rating and teacher rating revealed that the Sixth Form Business Studies students possessed moderate competency for Teamwork, Critical Thinking, Problem Solving, Oral Presentation and Writing Skill. The Sixth Form Business Studies students' competency level for Critical Thinking, Problem Solving, Oral Presentation Skill were found to be severely below targeted competency levels.

Carnes, L., Awang, F., & Xiao, Q. (2017) suggested an innovative approach to develop soft skills in students. They recommended creating cross-disciplinary curricula that help students expand their scope of knowledge and skills beyond the confines of their own major and assist students in developing multidisciplinary skills sets. Additional elective courses should also be explored to help students gain sufficient expertise or experience relevant to those skill components while in higher education. They further went on to suggest that Business schools should consider implementing a holistic assessment system to examine students' attainment of knowledge specific to the field while providing a framework to reflect upon how the degree education has fostered students' attitudes toward learning, their future profession, and their fellow colleagues.

2.6 CONCLUSION

The objective of the literature review was to arrive at the premises for this study and to confirm the theoretical inputs towards the research work ahead. Accordingly, the major segments of literature review was arrived at and review was conducted at various phases enabling the further course of the research works. The major outcome of the literature review is that it confirms the significance of this research work by way of providing secondary evidences on the necessity for the development of the proposed tool. It also helped in understanding the existing psychometric assessment methods and the stages of tool development.



CONCEPTUAL CLARIFICATION STUDIES

- 3.1 *Study -1* Content analysis of current methods of soft skills training and assessment in B-schools (200 b-schools admission advertisements)
- 3.2 *Study -2* Qualitative study on employer's perception of soft skills of fresh management graduates
- 3.3 *Study -3* Quantitative survey of employer's perception of soft skills of fresh management graduates
- 3.4 *Study -4* Derivation of conceptual model for critical soft skills
- 3.5 Chapter Recap

About This Phase of Study

The objective of this phase of the study is to derive at the major soft skills from secondary and primary sources. This phase of the study was conducted during the year 2012 -2014 and the literature at that time was limited to few studies conducted outside India to find out employer's perception of soft skills of candidates. Hence, the researcher decided to conduct secondary as well as primary research on the importance of soft skills as placed by employers as well as the academic world in a qualitative and quantitative manner.

Step One: Study one: Content analysis of current methods of soft skills training and assessment in B-schools (200 B-Schools Admission Advertisements)

- In this step, a research was conducted by reviewing the importance placed on soft skills training based on its prominence in the Admission advertisements as seen in the MAT Prospectus for the year 2011

Step Two: Study Two and three: Qualitative and Quantitative survey among employers (206 samples)

- In this step, a qualitative and quantitative survey was conducted among the employers to understand their perception about soft skills. The employers were asked to rate the importance they placed on soft skills and the results were analysed to understand the importance on various soft skills.

Step Three: Derivation of Conceptual Framework for this study

- In this step, based on all the above literature and studies, a conceptual framework for Critical Soft skills was derived. This further becomes the basis for the construction and validation of the proposed tool.

3.1: Step 1: RESEARCH STUDY ONE

Content Analysis of Advertisements of B-Schools to Understand their Major Focus Area and Relevance of Soft Skills Training and Assessments

3.1.1. Introduction

Before getting on to the major research work on the tool development, it was decided to understand the relevance of the study from primary and secondary sources. As part of it, a content analysis study on the advertisements issued by B-Schools in India to understand their major focus areas for promoting their institutions. It would be an interesting exercise to understand the importance and relevance of soft skills and employability skills in promoting the institutions. This study presents the result of the content analysis work in this direction.

3.1.2 Objectives of the study

- [1]. To bring out the major focus areas of the Indian B-schools with specific reference to soft skills as showcased in their admission advertisements.
- [2]. To check the existence and usage of assessment methods and tools for soft skills assessment in the admission advertisements

3.1.3. Methodology

As the topic of soft skills development is something which is getting considerable attention in media and in corporate recruitment advertising these days, it is expected that the B-schools use these terminologies for their advertisement material. However, we acknowledge the fact that the presence

or absence of terminologies used in advertisements may or may not be the actual practice in those B-Schools. But, it was expected that the study will point to major focus areas of the Indian B-Schools. The study was hence conducted by a content analysis of the admission advertisements released by a sample of B-schools in India. From the entire population of over 5000 B-Schools in India, the sample chosen consists of institutions approved by AICTE (4766 as per 2012 data). We have excluded all the IIMs and other top B-schools that follow the Common Admission Test (CAT) exam for admissions. Other than CAT, the next major entrance exam taken by a large number of students is the Management Aptitude Test (MAT) conducted by All India Management Association (AIMA).

For this study, the advertisements were taken from the MAT bulletin, which is released by All India Management Association (AIMA), as part of the MAT entrance exam. The MAT bulletin is the prospectus covering the details of the MAT entrance exam, conducted twice every year as an eligibility exam for admissions to Management institutes in the country, which follow admissions based on MAT. We used this data, because these MAT institutes are those who face more difficulty in placing their students, when compared to the CAT institutes. The MAT bulletin consists of a minimum of a one page advertisement of each management institute following the MAT admission process. Unlike newspaper advertisements which may be small and less content oriented, the MAT advertisements are more verbose and each institution tries to showcase their physical and intellectual infrastructure. This supports the data collection for the study which is based on finding out the major focus area of B-schools in the area of soft skills.

3.1.4. Sample

The sample size of the study was 200, which was chosen from the 381 advertisements released in the MAT Bulletin of December 2011. The samples were chosen eliminating those advertisements which did not have much content and contained mostly pictures. Fifty institutions each from each zone was included, in order to have a uniform size from each zone of India. The four zones are Northern, Western, Eastern and Southern. The Institutions coming under Central India also fall under the Northern zone in the MAT bulletin.

3.1.5. Data Analysis and Discussion

The data from the MAT Prospectus was entered into Microsoft Excel based on tally points for each time a particular content appeared in the advertisement. This content tally was later analysed for common patterns. Basic descriptive analysis was done to know the frequency distribution of each item. As the objective was to check the importance given to each item, a percentage analysis only was done. The findings are presented below.

3.1.6 Classification of the Samples

The following are the classification information with regard to the samples of B-schools selected for the study.

Table 3.1. Course and Admission details of B-Schools

Factor	Classification	Frequency	Percent	Cumulative Percent
Course	MBA only	82	41.0	41.0
	MBA and PGDM/PGDBM	33	16.5	57.5
	PGDM only	85	42.5	100.0
	Total	200	100.0	
Admission Criteria	MAT Score alone	84	42.0	42.0
	MAT score +GD/interview	1	0.5	42.5
	MAT Score +GD + interview	115	57.5	100.0
	Total	200	100.0	

Source: MAT Prospectus Data, Dec 2011

Table 1 shows the type of course and the admission criteria followed in the sample institutions. It can be seen that almost equal (rather, slightly more) percentage of institutions are providing Post Graduate Diploma (PGDM/PGDBM) programs in place of Masters of Business Administration (MBA) (42.5%). It can also be seen that around 16.5% of the sample institutions provide both MBA and PGDM courses at the same campus. The table also shows the various admission criteria followed by the B-schools. 57.5% of the institutions follow a three tier admission process, where as almost the remaining percentage follow a single tier admission process, consisting of just the MAT score alone.

3.1.7 Infrastructure Facilities

The study revealed that a whopping 95% of the B-schools claim to possess excellent physical infrastructure facilities. Majority of the B-schools

showcased their building infrastructure including air conditioned classrooms, IT facilities, conference halls, hostel facilities and library facilities in their advertisements. In many advertisements, it was further noted that the emphasis was on physical infrastructure as compared to other academic matters. Another point to be observed is that, the factor ‘physical infrastructure’ is the one with the highest percentage in this entire study, which means, that almost all B-schools try to project their physical infrastructure the most, other than any other matter.

Table 3.2. Infrastructure Facilities claimed by B-Schools

Factor	Classification	Frequency	Percent
Claim Excellent Physical Infrastructure	Yes	190	95.0
	No	10	5.0
	<i>Total</i>	<i>200</i>	<i>100.0</i>
Claim Separate Hostel facilities for girls and boys	Yes	172	86.0
	No	28	14.0
	<i>Total</i>	<i>200</i>	<i>100.0</i>
Claim Excellent Library Facilities	Yes	173	86.5
	No	27	13.5
	<i>Total</i>	<i>200</i>	<i>100.0</i>

3.1.8 Academic Information

Some basic academic information were also checked by analyzing the content related to the Pedagogy followed and the teaching methods like usage of case study, presence of qualified faculty, industry exposure etc, which are tabulated in table 2 and 3.

Table 3.3. Usage of Pedagogy in B-Schools

Content	Frequency	Percent	Cumulative Percent
No specific name mentioned	82	41.0	41.0
Innovative Pedagogy	45	22.5	63.5
Job Oriented Pedagogy	27	13.5	77.0
Skill Based Pedagogy	16	8.0	85.0
Industry oriented Pedagogy	30	15.0	100.0
Total	200	100.0	

Source: MAT Prospectus, Dec 2011 Data

The Pedagogy of the institutions, as claimed by them is tabulated as above. It can be seen that 41% of the institutions do not mention any specific pedagogy or curriculum. Of the remaining 59%, highest percentage of them (22%) claim to have an “Innovative” pedagogy. The terminology “innovative pedagogy” in itself lacks clarity with regard to the methodology followed and cannot be considered as a generalized model. The other types of pedagogies mentioned as “skill based”, “industry oriented” and “job – oriented” also varies much and hence we can conclude that most of the B-Schools do not have an established/ generalized/ common pedagogy and teaching methodologies. It can be interpreted that each institution follows its own style of pedagogy to a great extent.

From Table 3.4, it can be seen that almost half of the sample institutions claim to use the Case study method in their Teaching-Learning (T-L) process. But, it must also be noted that this mention of case study in the advertisements may or may not affect the actual usage in the T-L process. Nevertheless, the mention of the case study method in the

admission advertisement shows that it is given considerable importance in that particular B-School and hence we can interpret that Indian B-schools are taking case method seriously. However, considering the importance of case study method in management education and the global standards, it can be said that this percentage is low. Though some B-schools claims the usage of role- plays along with case studies, a combination or other creative teaching methods are rare. Dean & Fornaciari (2002) discussed the pedagogical benefits of the case-based role play, which is an interactive technique that engages students in experiential, process-oriented activities based on the case format. However, such methods are yet to make a prominent presence in Indian B-schools.

Table 3.4 Academic Strengths claimed by B-Schools

Content	Classification	Frequency	Percentage
Usage of case studies (Case study method mentioned)	Yes	98	49.0
	No	102	51.0
	Total	200	100.0
Field trips, industrial exposure, internship	Yes	183	91.5
	No	17	8.5
	Total	200	100.0
Claim availability of Qualified faculty	Yes	179	89.5
	No	21	10.5
	Total	200	100.0
Claim Global Curriculum/ Exposure	Yes	162	81.0
	No	38	19.0
	Total	200	100.0
Claim Foreign collaboration	Yes	104	52.0
	No	96	48.0
	Total	200	100.0

Source: MAT Prospectus December 2011 data

3.1.9 Placement Information

Provision of good placement is the ultimate objective of any B-school, it is also used as a tool to market the institution as well. The following table shows the importance given by the institutions for projecting their placement facilities in their advertisements.

As per Table 3.5, it can be seen that 90.5% of the B-Schools claim that they have excellent Placement facilities. These facilities may include a dedicated Placement Cell, Placement Officer, and Campus recruitment facilities, tie up with Placement agencies and other avenues for placement. It can also be seen that a majority of 63.5% have mentioned the names of their previous recruiters.

Table 3.5. Placement matters

Factor	Classification	Frequency	Percent	Cumulative Percent
Placement Facilities mentioned	Yes	181	90.5	90.5
	No	19	9.5	100.0
	Total	200	100.0	
Names of Previous placement companies mentioned	Yes	127	63.5	63.5
	No	73	36.5	100
	Total	200	100.0	

Source: MAT Prospectus Dec 2011 data

Most of them have shown the logos or names of the companies/organisations where their previous students are presently working. The mention of MNCs in the list may be considered as a factor to

add value and credibility to the B-school. However except for a handful B-schools, the remaining ones do not guarantee 100% placement and does not mention previous placement rates in their advertisement. This factor also makes it clear that the placement matter is something which depends more on the individual skill sets of the candidate rather than the institution in which the candidate has done the course from. Thus, it is imperative that there should be more focus on skill development of the students.

3.1.10 Training Information

The data regarding the additional trainings that are given by these B-schools are tabulated below in Table 3.6 From Table 3.6, we can clearly see the focus of B-schools with regard to training. A majority 74% of them have claimed the provision of training in personality development, which also indicates that these trainings are taken into serious considerations by the B-schools. 68.5% claim to provide training in communication and presentation skills. 53% of them claim to provide Coaching, mentoring and counseling services to students. 55% of the B-schools claim to provide leadership skills training and 42.5% claim provision of entrepreneurship skills training to the students. Other training related words like Team building, innovation, creativity, life skills, corporate etiquette, decision making skills, behavioural skills, confidence building, negotiation skills, foreign languages etc were also found in the advertisements. However, as the percentages of usage of these were much less than 20%, these were ignored in the above table.

Table 3.6. Additional Training Programmes offered by B-Schools

Factor	Classification	Frequency	Percent	Cumulative Percent
Provide Personality Development training	Yes	148	74.0	74.0
	No	52	26.0	100.0
	<i>Total</i>	<i>200</i>	<i>100.0</i>	
Provide training in Communication and Presentation skills	Yes	137	68.5	68.5
	No	63	31.5	100.0
	<i>Total</i>	<i>200</i>	<i>100.0</i>	
Provide Counseling, Coaching and Mentoring	Yes	106	53.0	53.0
	No	94	47.0	100.0
	<i>Total</i>	<i>200</i>	<i>100.0</i>	
Provide Leadership Skills Training	Yes	110	55.0	55.0
	No	90	45.0	100.0
	<i>Total</i>	<i>200</i>	<i>100.0</i>	
Provide Entrepreneurship Skills Training	Yes	85	42.5	42.5
	No	115	57.5	100.0
	<i>Total</i>	<i>200</i>	<i>100.0</i>	

Source: MAT Prospectus Dec 2011 data

3.1.11 Soft skills and Assessment tools

One of the objectives of this study is to identify the emergence of the usage of the term ‘soft skills development’ and to check the usage of psychometric or any other assessment tools by these institutions. The results are tabulated in the Table 3.7.

Table 3.7. Soft skills assessment and development in B-Schools

Factor	Classification	Frequency	Percent
Whether the word “Softs skills” is mentioned	Yes	103	51.5
	No	97	48.5
	<i>Total</i>	<i>200</i>	<i>100.0</i>
Usage of any psychometric /other assessment tools mentioned	Yes	18	9.0
	No	182	91.0
	<i>Total</i>	<i>200</i>	<i>100.0</i>

Source: MAT Prospectus Dec 2011 data

The above table clearly leads to one of the interesting findings of this study, that is, the lack of any assessment tool or methods for soft skills of the students. A mere 9% of the institutions claim the usage of some psychometric or assessment tool for the assessment of soft skills of the students. Again, it is not clear whether these tools are used as a benchmarking tool or just as a support for personality development trainings. However, almost half of the institutions (51.5%) claim to provide some kind of trainings or other interventions for the soft skills development of the students. As we observe this findings, we cannot ignore the fact that mention of the assessment tools in the advertisements is independent of the actual usage of these tools. But at the same time, considering the importance of the usage of instruments of high reliability and validity at two important stages, we can at least arrive at an interpretation that there is no benchmarking in the case among the vast number of B-schools. We also

acknowledge the fact that, there may be many institutions who are using such instruments as part of their personality development and soft skills development programs, but has not mentioned the same in the advertisement. However, considering the importance given to other matters like physical infrastructure and placements, we feel that soft skills assessments are not getting adequate focus. As found in the placement matters, i.e. the absence of exact placement rates, may be an outcome of the lack of a systematic method of soft skills assessment and development. Placement rates depend on individual skill sets and that's where soft skills play a primary role.

A further analysis was done using SPSS 17 to explore more meaningful interpretations. Crosstabs helped in getting an insight into the importance given to soft skills development.

Fig 3.1 shows that PGDM courses stress more on the personality development than the MBA courses. Fig 3.2 shows that among the different types of courses, PGDM courses have a better usage of assessment tools or psychometric tools when compared to MBA courses. This may be due to the fact that, institutions have better autonomy in conducting PGDM courses compared to MBA courses. (Fig3.2)

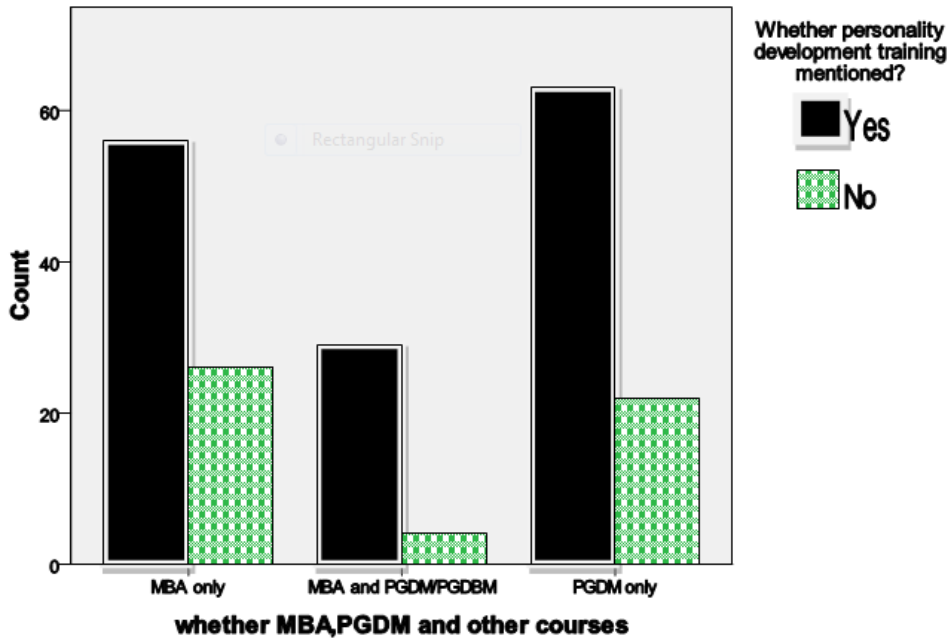


Figure 3.1. Course wise comparison of personality development programs

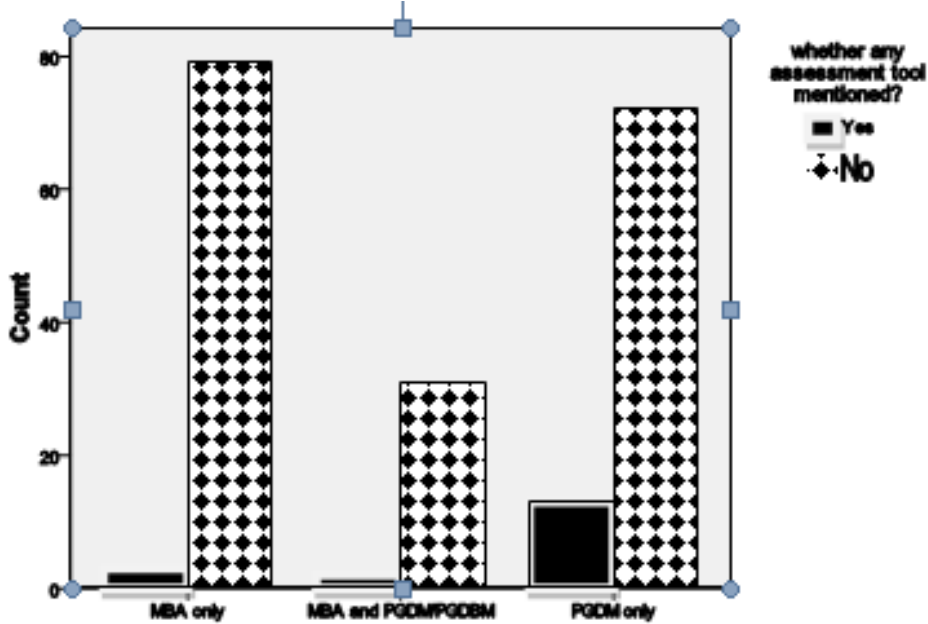


Figure 3.2. Comparison of usage of psychometric tools /assessment tools among different types of courses

3.1.12 Conclusion and outcomes of the study

The study tried to bring out the important focus areas of the Indian B-schools while offering management programs and relied on secondary source of admission advertisements of these institutions. It has been found that the most important factor of importance is the physical infrastructure itself. The B-schools also focus on Placement facilities, qualified faculty, industrial exposure, Global curriculum etc as a top priority. The B-schools also claim to provide adequate training facilities. However, one area, which is lacking is the usage of scientific assessment tools or psychometric tools for assessment of soft skills of managers. Considering the importance of soft skills in the development of a manager, it can be said that the B-schools need to provide considerable attention for the same. Daniel & Benjamin (2010) suggest that practitioners maintain their awareness of psychometric principles and a basic understanding of validity at a minimum before they use any measure for developmental or personnel selection purposes. The study also necessitates the benchmarking or standardization of the soft skills of entry level managers so that the quality of management education can be improved. One of the key factors in this process is the acquisition of employability skills including soft skills.

3.2: Step 2: RESEARCH STUDY TWO

Qualitative Study on Employer's Perception of Soft Skills of Fresh Management Graduates

3.2.1 Introduction

This step of the work was to understand the employers perception of the soft skills and thereby try to derive some preliminary understanding of the constructs under the phenomenon “soft skills” . This was conducted by sending out an open ended questionnaire to a random sample of HR managers. The details of the study and the results are presented below.

3.2.2 Objective of this study

- To assess/examine the general perception of the Employers on the quality of graduates passing out from B-Schools in India
- To understand the viewpoints of employers on improving the employability of the B-school graduates so as to arrive at the importance placed on soft skills.

3.2.3 Methodology

Since the objective of this study was to elicit maximum responses which could enable a content analysis later, a qualitative study was designed with two Open ended questions and two rating questions were sent to Employers of fresh management graduates.

3.2.4 Sampling Details

A Random sample of HR and management professionals from various industry sectors who hire fresh management graduates were chosen, through online professional network websites like LinkedIn and Job sites like Naukri.com. An ideal Respondent Profile consisted of the following parameters

- Minimum Managerial Experience of 5 years
- Varied industry sector
- Either in HR role or have experience of hiring fresh Management graduates

3.2.5 Data Collection

The data for this study was collected via an email survey from the respondents.

Total Emails Sent: 500 (A follow up telephone call was also given to ensure better response rate)

- Total responses collected : 95
- Response Rate: 0.19

Despite the lower response rate, the quality of response received is high with most of the respondents expressing in detail with at least 30 words each in the open ended questions. Most of the respondents were highly cooperative and wanted to take part in the study genuinely and express their viewpoints on the subject.

3.2.6 Survey Questions

The following are the survey questions which are included in the purview of this study

1. What skills do you think does the present generation of b-school graduates lack the most (if any)? (open ended)
2. Your Suggestions for improving the quality of B-School graduates(Please feel free to write your real opinion and suggestions) (open ended)
3. How do you rate the overall soft skill competencies of the b-school graduates you have **interviewed** in the past year? (Scale of 1 to 10)
4. How do you rate the overall soft skill competencies of the b-school graduates you have **recruited** in the past year? (Scale of 1 to 10)

3.2.7 Research Analysis and Findings

The dataset was collected by email survey as described above. The demographic data collected in the study was to check the respondent profile. Since the email invite was sent to respondents falling in the category mentioned as well as a demographic check was in built in the survey ensuring that the respondents attempt the survey only if they fall in the category mentioned above, there was no necessity to eliminate any data. Fig 3.3 shows the industry category of the respondents. It can be seen that most of the respondents fall into service sectors.

A large volume of write ups were found in many cases and a thorough content analysis was done to find common thread. Each question was analysed for patterns of similarity in concepts and the common points were

grouped. Based on the grouping, a quantitative data was prepared, by calculating the frequency of the responses. Some of the unique and relevant comments are also listed for academic interest, in this thesis.

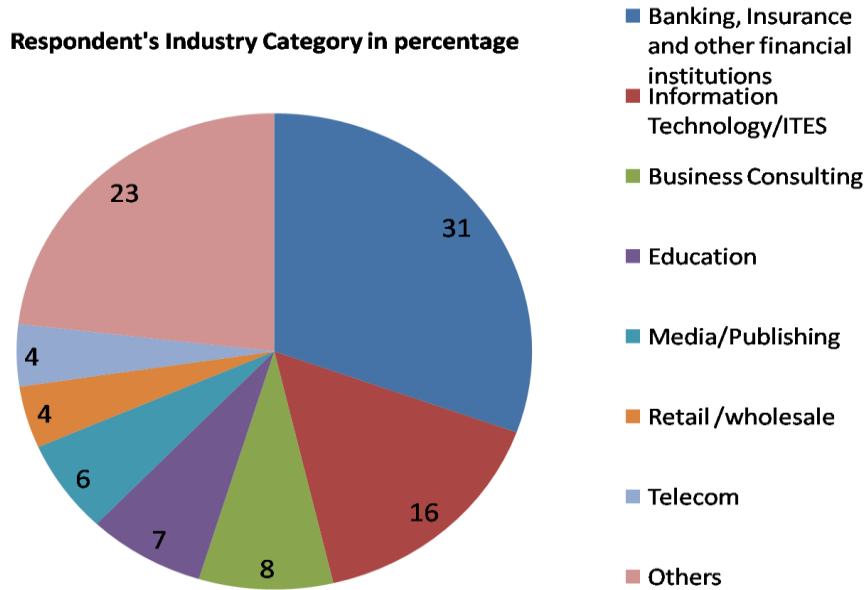


Figure 3.3: Respondent Industry Profile

What B School Students Lack

Table 3.8. Content analysis report of the Survey Question 1

	Frequency	Percent	Valid Percent
Non Realistic/ practical	23	24.2	39.0
Lack of soft skills	16	16.8	27.1
Lack of self confidence	15	15.8	25.4
Lacks Hard Work	2	2.1	3.4
Lack of Analytic Skills	3	3.2	5.1
Total	59	62.1	100.0
Not Responded	36	37.9	
Total	95	100.0	

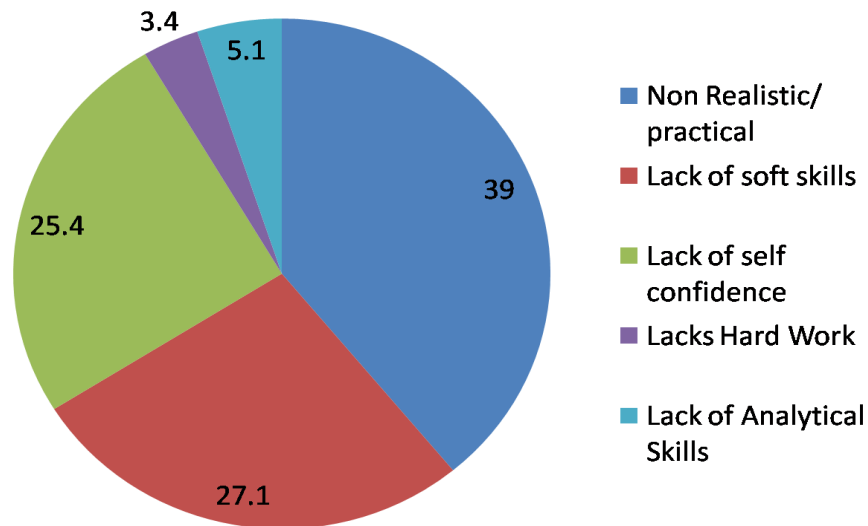


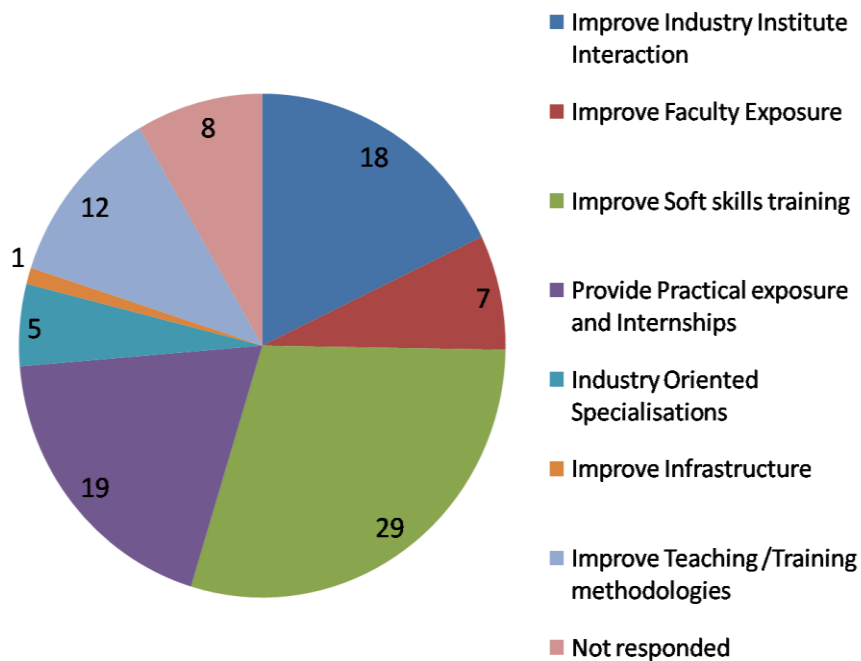
Figure 3.4 Graphical representation of the results of the survey question 1

- 39 percent of the respondents felt that the current generation of management graduates do not have a practical exposure and may also possess a unrealistic expectation.
- 27.1 percent agrees that the freshers lacks soft skills
- 25.4 percent says that they lack self-confidence.

This implies the necessity for providing avenues for graduates in obtaining workplace exposure as well as training in soft skills. Both these could directly improve the self confidence level too.

Table 3.9. Content Analysis Report of Survey question 2.

Suggestion for Improving Quality of B-Schools	Frequency	Percentage
Improve Industry -Institute Interaction	17	18
Improve Faculty Exposure	7	7
Improve Soft skills training	28	29
Provide Practical exposure and Internships	18	19
Industry Oriented Specialisations	5	5
Improve Infrastructure	1	1
Improve Teaching /Training methodologies	11	12
Not responded	8	8
Total	95	100

**Figure 3.5.** Graphical representation of the survey results for question 2

- It is clearly evident that 29 percent of the respondents agree to the importance of soft skills training for the students.

- The second highest importance is for providing practical exposure or internships to the students
- Another area is improving Industry-institute interaction and Faculty exposure

Analysis of the two Quantitative Questions were done by simple average scoring.

- How do you rate the overall soft skill competencies of the b-school graduates you have INTERVIEWED in the past year? (Scale of 1 to 10)

The Average score is 5.8 on a scale of 1-10

- How do you rate the overall soft skill competencies of the b-school graduates you have RECRUITED in the past year? (Scale of 1 to 10)

The Average Score is 6 on a scale of 1-10

- Implication: The average score for the interviewed candidates as well as the recruited candidates remain nearly the same. This implies that the general quality of the management graduates are somewhat the same and not much of the difference between a successful hire and a non-hire. This could also mean that Employers are still expecting more quality in the soft skills competencies of the candidates

Other findings from the content analysis of the responses

On analyzing the written content on the lack of quality of B-School graduates as well as the suggestions for improving , the following list of major qualities were mentioned by the respondents.

Table 3.10. List of qualities derived from the content analysis of the Questions 1 and 2

Initiative
Presentation skills
Interpersonal relations
Analytical skills
Decision making skills
EQ
Negotiation skills
Confidence
Problem solving skills
Motivation
communication skills
Work ethics
reasoning skills
Stress management
Grooming
Email Etiquette -Drafting Formal Letters /Official communications
Telephone Etiquette
Aspiration & Goal
Good Attitude
Subject knowledge
Spoken English
Market Awareness
Industry Knowledge

Implication: It can be seen that many of the above qualities come under the purview of “Soft Skills”. Many parameters like personality traits, knowledge, market awareness etc. which cannot be defined as “skills” are currently used under the big umbrella of “soft skills”. This again necessitates the fact that a proper definition of “soft skills” of fresh management graduates should be arrived at in a scientific manner.

Suggestions to improve the quality of B-School Graduates

For the purpose of academic interest, we are herewith reporting some of the original comments and suggestions as expressed in the dataset by the respondents.

Table 3.11. List of relevant suggestions as collected from the responses

-
- Encourage Faculty to take up Part time jobs in Industry
 - Industry specific "add on" courses
 - Ensure the input quality of students
 - Provide Internship for at least 6 months
 - Compulsory general book readings
 - Minimum 30 % of the marks/Grading system should be given to an external evaluator who should scientifically monitor and evaluate the progress of the student who is working with him as a Trainee/young learner which will equip the student to start functioning better even from the initial days of joining employment as a professional.
 - Concurrent training on soft skill from the beginning of the course rather than the quick fix approach during the placement activities
 - Projects based on current / social affairs apart from the curriculum
 - Optional domain specific training toward end of the Business studies
 - Finishing school to be compulsory and should be done by trained professionals
 - While interviewing candidates, it was found that they had no idea about their projects done during their course. Most of the students had copy pasted projects.
 - A Course on Negotiation and Analysis within a given set of constraints/boundaries and Logic must be made mandatory
 - Have least number of classroom sessions; let students be in real time/life situations and submit 'Reports'
 - Eliminate as much as possible 'Objective type/Yes-No/Multiple choice' questions and rote learning
 - Realistic perception on the business environment especially socio-political-economic environment
 - Industry –Institute Interaction should be given utmost importance.
-

Some of the comments quoted by the respondents are listed below for academic interest.

1. *“ They need an attitude adjustment”*
2. *“They lack Patience”*
3. *“They don't understand the business needs and the management's expectation from an MBA fresher. “*
4. *“They are overselling themselves and they think they know everything.”*
5. *“B-Schools should Invest on human infrastructure than material.”*
6. *“Presentation Skills are very poor.”*
7. *“Most of them don't know 'What to do' next.”*
8. *“Mail Writing Skill are average.”*
9. *“They jump to conclusion too early. Defined processes don't excite them.”*
10. *“They should have an eye for details.”*
11. *“Lacks Commitment”*

3.2.8 Conclusion

The Study two of this phase has contributed towards identifying the importance of soft skills of management graduates and its perception among employers. The content analysis clearly throws light on the necessity of soft skills in a management graduate as well as the major soft skill competencies expected. The study also brings out some of the interesting and relevant opinion related to current quality of B-school graduates and thereby contributing to the literature in this regard. The study also tries to bridge the gap in the business education by bringing in feedback from the employers. The qualitative study thus leads to the next phase – which is study three – Quantitative survey on employers' perception of soft skills of fresh management graduates.

3.3: Step 2: RESEARCH STUDY THREE

Quantitative Survey of Employer's Perception of Soft Skills of Fresh Management Graduates

3.3.1 Introduction

After the Study Two, it became important to conduct a direct quantitative survey to understand the perception of quality of b-school graduates especially on the soft skills. Study Three therefore was conducted to identify the rating that employers give for the soft skills of fresh management graduates. The major outcome expected out of this study is the derivation of most important or in other words “top rated” soft skills of management graduates.

3.3.2. Objectives of the study

We define the research objectives as follows for this study.

- To understand the important soft skills expected from fresh management graduates by employers and arrive at the top rated soft skills factors by an employer
- To provide empirical evidence to the literature on soft skills and contribute towards bridging the academia –industry gap in the field of management education

3.3.3. Methodology

The research design includes a literature review, rating survey and statistical analysis using SPSS Software. It commenced by a review of literature to understand the existing empirical studies in this context and not

many studies in the Indian context were found to undertake the same. The following methodology was adopted to arrive at the research findings.

Phase 1: Expert Opinion & Content Analysis.

The Phase1 of the study comprised of a series of personal discussions by the researcher among the experts so as to list out the common terminologies for denoting the soft skills items. The researcher met a total of 12 such experts of which 4 of them were Academicians, 5 of them Industry representatives, and 3 of them were established trainers. A content analysis of the interview transcripts helped in listing of soft skills items.

The results from Study Two - the Qualitative survey among employers also yielded sufficient pointers towards the soft skills items. Both the above were collated and a list of 156 individual items was made. The redundant or repetitive items were removed. Some items which pointed towards technical or knowledge related skills or too subject specific skills were also removed. Finally, a list of 128 items was made.

Phase 2: Survey among Employers

These 128 items was then converted to a rating scale from 1 to 10, with 1 being the least important and 10 being the most important. A few additional demographic items were included in the questionnaire. This questionnaire was converted into an online survey and was then administered to Management Professionals, especially HR professionals. Since the objective is to get a general view of the soft skills expectations, the survey was not limited to any particular industry segment.

Respondent Profile: The respondents of this study are currently working in different corporate from different parts of India, preferably in a decision making position about hiring of fresh management graduates. A minimum work experience of 3 years is needed to be considered as a valid response.

Sampling: Snowball sampling.

Data Collection: An initial database of management professionals/ preferably HR professionals was made by filtering the above criteria in leading job portals like Naukri.com, Monster.com and from professional networking site LinkedIn. From the database, a series of emails were sent to over 3000 such professionals inviting them to participate in the study. However, the response rate was very poor, due to the length of the questionnaire or may be due to bulk emailing issues. Hence, it was decided to undertake a snowball sampling method thereafter. The initial respondents (around 50 in number) were then contacted personally by email as well as telephone to refer suitable friends of theirs to participate in the study. The researchers also used their own network of senior HR professionals in the industry. Thus a total of 206 samples were collected during the period 2014 October to 2015 September. The target was to cross 200 dataset, in order to arrive at a meaningful factor analysis.

Limitations

The major limitation of the study is the errors that could have crept in due to the length of the questionnaire. Since the email response rate was poor, a snowball sampling was used to request the respondents to participate in the survey.

Table 3.12. Demographic Details and Preliminary Analysis

Age Profile of Respondents			
<i>Age Bracket</i>	<i>Frequency</i>	<i>Percentage</i>	<i>Cumulative percentage</i>
<25	12	6	
25-35	96	47	52
35-45	61	30	82
45-55	29	14	96
55-65	6	3	99
>65	2	1	100
Total	206	100	
Educational Profile of the Respondents			
<i>Qualification</i>	<i>Frequency</i>	<i>Percentage</i>	<i>Cumulative percentage</i>
Graduate	36	17	
Post Graduate	156	76	93
Mphil	4	2	95
PhD	8	4	99
Post Doctoral	2	1	100
Total	206	100	
Number of Years of Work Experience			
<i>Years of Experience</i>	<i>Frequency</i>	<i>Percentage</i>	<i>Cumulative percentage</i>
2-5yrs	26	13	
5-10yrs	60	29	42
10-15yrs	60	29	71
15-20yrs	19	9	80
>20yrs	41	20	100
Total	206	100	
Gender of the Respondent			
<i>Gender</i>	<i>Frequency</i>	<i>Percentage</i>	
Female	74	36	
Male	128	62	
Missing	4	2	
Total	206	100	

Designation/ Management Level of Respondents			
<i>Designation</i>	<i>Frequency</i>	<i>Percentage</i>	<i>Cumulative percentage</i>
Supervisor Level	14	7	
Middle Manager Level	78	38	45
Senior Manager Level	33	16	61
Top Management	72	35	96
Consultant	9	4	100
Total	206	100	

Employee size of the Organisation to which Respondent belongs to			
<i>No of Employees</i>	<i>Frequency</i>	<i>Percentage</i>	<i>Cumulative percentage</i>
<=20	21	10	
20-200	54	26	36
200-2000	65	32	68
2000-10000	29	14	82
10000-20000	9	4	86
>=20000	13	6	93
No Response	15	7	100
Total	206	100	

This took longer time period for the data collection and the entire data collection period was almost one year. There could have been changes in the response pattern due to the length in the period / length of the questionnaire / other reasons.

3.3.4. Data Analysis, Results & Discussion

The objective of analysis was data reduction in order to arrive at meaningful conclusion regarding the major factors of soft skills from the long list. The following tables and discussions give a snapshot of the same.

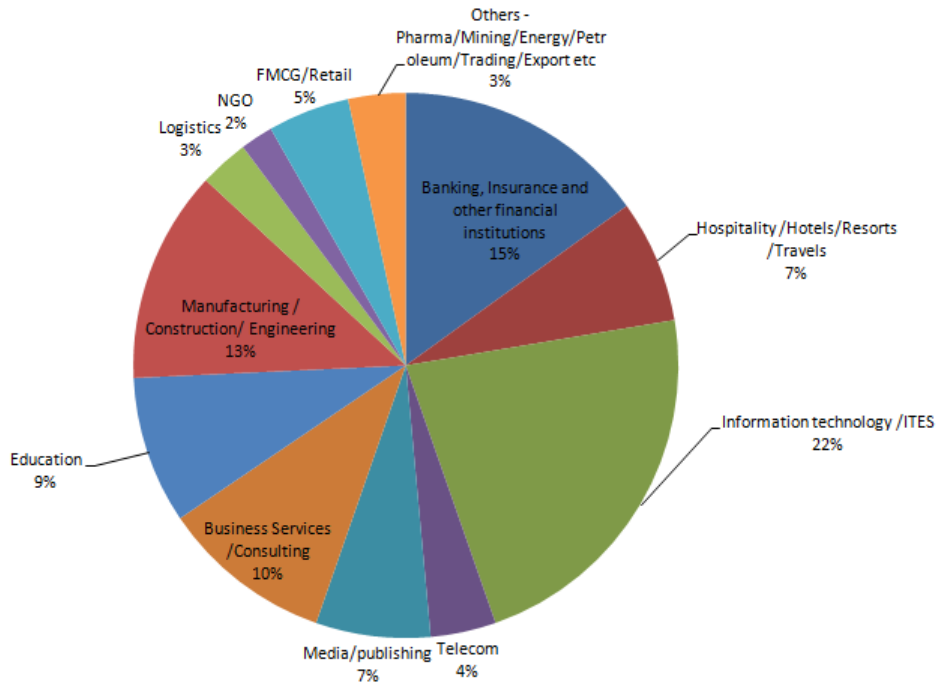
Demographic Details and Respondent Quality

The dataset comprising of 206 Employers comprised of 64 percentage of respondents are Males and 36 percent females. The response from male and female are not equal. However, considering the sample numbers, both the genders cross the minimum sample size for a large sample. Hence the dataset can be considered to be of good quality.

A total of 77 percent of the respondents belonged to 25-45 age group which is quite good representation and also means that the responses are of good quality and is based on their vast experience in the field.

As can be seen from the Table 3.12, majority of the respondents are highly qualified with at least a Post graduate degree in Management and the respondents are aware of the field of B-School education and hence, the response quality could be accepted as good for this study. Only a low number of respondents fall below the experience level of 5 years. Majority have more than 5 years of work experience. 20 percent of the respondents also have more than 20 years' experience, which also implies the expert quality of the dataset. The higher the size of organization denotes the existence of better systems and procedures for hiring. It also means that the expectations and importance placed on soft skills could be more. Except for 07 percent, all the remaining respondents fall under middle and above management positions and have decision making powers within their organizations. Only 04 percent of the respondents are in the consultant category. The quality of response is quite high for this study.

Figure 3.6. Industry wise representation of Respondents



The industry wise representation seems to be quite adequate considering the volume of Fresher being hired. However, there is lesser representation from some industry sectors like Logistics, FMCG, Retail, Telecom and Pharmaceuticals, which also hire Fresh Management Graduates. That could be a possible limitation of this study. The spread of different segments of the industry type seems to be adequate for this study, since only a generalized view of the soft skills importance is the outcome expected. The industry specific soft skills norms could be developed at a later stage in another study.

Exploratory Factor Analysis

In the first attempt Exploratory Factor Analysis with 206 dataset with the 128 items, the results yielded 20 factors. However, it was found that, the majority of the factor beyond the first few had less than 5 items in many cases. Hence, it was decided to reduce the item list by other means before the EFA was run. Also, it was noted that all the items had an average scoring of above 6, which meant that all these items are important soft skills. However, it could also mean that since the rating scale was 1 to 10, the range is not much evident. Therefore, all items which had communalities of 0.8 or above only were chosen for further analysis. Thus a final list of 94 items was selected for further study.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy tests is a minimum standard which should be passed before a factor analysis (or a principal components analysis) should be conducted. KMO & Bartlett's Test of Sphericity is a measure of sampling adequacy that is recommended to check the case to variable ratio for the analysis being conducted. In most academic and business studies, KMO & Bartlett's test play an important role for accepting the sample adequacy. While the KMO ranges from 0 to 1, the world-over accepted index is over 0.6. Also, the Bartlett's Test of Sphericity relates to the significance of the study and thereby shows the validity and suitability of the responses collected to the problem being addressed through the study. Here the value is reported to be 0.949 ($p < 0.05$) which is very close to 1 and can state that the sampling adequacy for this study is ratified.

Table 3.13. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.949
	Approx. Chi-Square	10566.003
Bartlett's Test of Sphericity	Df	1431
	Sig.	.000

It is a must to examine the table of 'Communalities' which tells us how much of the variance in each of the original variables is explained by the extracted factors. Higher communalities are desirable. If the communality for a variable is less than 0.50 it is a statement for exclusion from the analysis because the factor solution contains less than half of the variance in the original variable, and the explanatory power of that variable might be better represented by the individual variable. In the case stated here, no statement have communalities lesser than 0.50 and all the statements were included in the analysis.

Table 3.14. Communalities

Communalities		
SI No		Extraction
1	Able to draft written communication with a professional standard	0.819
2	Able to express problems to the concerned authority	0.793
3	Able to handle work pressure	0.817
4	Able to read and interpret complex documents	0.768
5	Accepts Rejection	0.796
6	Acts assertively	0.756
7	Acts decisively	0.765
8	Acts honest	0.751
9	Acts proactively	0.768

10	Acts with integrity	0.766
11	Answers questions politely	0.775
12	Appears neat and tidy	0.804
13	Appears pleasant and happy	0.750
14	Attends to details related to job.	0.776
15	Aware of culture differences among people	0.795
16	Builds and maintains relationships	0.824
17	Coaches / trains others	0.825
18	Collects and analyses information in a useful manner	0.818
19	Considers consequences when making decisions	0.792
20	Cooperates with others	0.783
21	Defines objectives	0.776
22	Defuses a situation / confronts issues	0.776
23	Delegates appropriately	0.827
24	Delivers presentations confidently	0.801
25	Develops others	0.856
26	Develops rapport with others	0.766
27	Distinguishes big from small errors	0.803
28	Do not hurt cultural or religious sentiments of coworkers	0.750
29	Evaluates performance of team	0.862
30	Exercises judgement	0.824
31	Expresses opinions without hurting others	0.792
32	Follows the rules and regulations of the organization	0.758
33	Follows through on commitments	0.820
34	Follows up with others	0.842
35	Gains power to exercise influence over others	0.752
36	Gives feedback to others	0.772
37	Handles delicate/confidential situations carefully	0.808
38	Handles objections	0.763

39	Hears others' points of view	0.815
40	Influences others	0.778
41	Knows about own strengths and weaknesses	0.797
42	Knows end goal and what to do to accomplish goal	0.837
43	Knows resources	0.758
44	Learns unwritten rules	0.798
45	Listens to concerns of others	0.799
46	Maintains confidential information properly	0.765
47	Manages impression	0.756
48	Models behaviors he/she would like to see others perform	0.803
49	Modifies reactions to fit the culture of the organization	0.793
50	Motivates others	0.775
51	Negotiates	0.756
52	Observes the situation and others' behavior	0.827
53	Organizes work	0.824
54	Overcomes setbacks	0.822
55	Persists/works hard	0.760
56	Plans and organizes his/her time and activities	0.852
57	Possess a good humour sense	0.800
58	Presents self with proper authority	0.805
59	Promotes a team environment	0.838
60	Promotes product/service/business knowledge	0.791
61	Provides solutions	0.796
62	Ready to take up assignments	0.845
63	Recognizes limitations	0.775
64	Recognizes people's efforts	0.820
65	Resolves conflict	0.781
66	Respects Boss	0.767
67	Respects coworkers	0.817

68	Responsible towards his/her work	0.845
69	Seeks information	0.783
70	Sees the big picture as well as details	0.841
71	Sets goals	0.814
72	Sets SMART goals (Specific, measurable, achievable, realistic and time bound)	0.786
73	Shows accessibility/approachability	0.843
74	Shows an entrepreneurial spirit	0.799
75	Shows confidence	0.860
76	Shows enthusiasm	0.841
77	Shows interest in job	0.821
78	Shows sensitivity to organizational culture	0.799
79	Solves problems	0.846
80	Takes care of personal hygiene and Grooming	0.769
81	Takes initiative	0.853
82	Takes risks	0.753
83	Thinks before talking	0.794
84	Tolerates stress	0.817
85	Turns negative situation into a positive/learning situation	0.784
86	Understands the political environment	0.762
87	Updates knowledge and skills	0.810
88	Uses democratic decision-making	0.819
89	Uses humor to diffuse tension	0.839
90	Voices opinions	0.815
91	Wears dress according to the occasion	0.762
92	Willingness to learn new things	0.820
93	Works as a team player	0.856
94	Writing emails/letters/documents professionally	0.849

3.3.5. Content Validity Analysis and Coding

The objective of the next phase is to reduce the 94 items to form meaningful clusters or groups of soft skills. A content validity analysis was formed by checking if the item represented any meaningful cluster. A primary list of 10 such clusters was formed by the researcher as shown in Table 3.15.

Table 3.15: Tentative Cluster Name

Sl no	Tentative Cluster Name
1	Adaptability
2	Communication Skills
3	Decision making Skills
4	Leadership Skills
5	Task Efficacy
6	Self-Management
7	Interpersonal Skills
8	Stress Management
9	Professional Grooming
10	Moral & Professional Ethics

Eight Subject Matter Experts (SME) were identified and requested to participate in the content validity analysis. The SMEs included Academicians, HR Practitioners, Psychologists and Soft Skills Trainers. The eight SMEs were given the list of 94 items and asked to categorize the items into a suitable cluster from the ten given as a guideline by the researcher. An item was added to the cluster if at least Five out of Eight SMEs agreed to the item-cluster match.

During this phase of analysis, the SMEs identified the necessity of having a separate cluster for Goal Setting since it is an important skillset for higher order thinking. Hence a new cluster was added to the above list. Similarly a few name alterations were suggested and final Cluster List is created as follows along with the corresponding number of items.

Table 3.16. Cluster name and Number of Items

Sl no	Cluster Name – Final version	No. of Items
1	Adaptability	8
2	Communication Skills	15
3	Decision making Skills	9
4	Leadership Skills	17
5	Planning & Task Efficacy	8
6	Self-Management	9
7	Interpersonal Skills	11
8	Stress Management	4
9	Professional Grooming	5
10	Moral & Professional Ethics	4
11	Goal Setting Skills	4
	Total	94

Confirmatory factor analysis

The clustered items were then subjected to CFA to confirm whether the items yielded meaningful factors. Most of the clusters yielded single factors confirming the content validity and the item –cluster match. Only two clusters yielded more than one factor. The results are tabulated below.

Table 3.17. Cumulated Factor Analysis Results

Cluster No:	Name	No. of Components extracted	Eigen Values of the components	% of Variance	Cumulative %
1	Adaptability	1	4.052	50.645	50.645
2	Communication Skills	2	7.701 1.125	59.238 8.652	59.238 67.890
3	Decision making Skills	1	5.056	56.173	56.173
4	Leadership Skills	3	6.310 4.551 3.817	31.550 22.754 19.085	31.550 54.304 73.389
5	Planning & Task Efficacy	1	5.560	69.497	69.497
6	Self-Management	1	6.835	62.135	62.135
7	Interpersonal Skills	1	6.369	57.902	57.902
8	Stress Management	1	2.860	71.492	71.492
9	Professional Grooming	1	2.948	58.959	58.959
10	Moral & Professional Ethics	1	2.680	66.998	66.998
11	Goal Setting Skills	1	2.985	74.618	74.618

From the above cluster table, we arrive at the following Final Factor Names (Table 3.18) with a revised naming based on the factors naming decided by the researcher in consultation with SMEs. There were additional factors only for two of the clusters namely – communication skills and leadership skills and hence the names originally proposed is retained for all the rest.

Varimax rotation tries to maximize the variance of each of the factors, so the total amount of variance accounted for is redistributed over the extracted factors. Finally, the Rotated Component Matrix shows the factor loadings for each variable. The new components are identified based on the

statements which are loaded strongly. The next step is to look at the content of questions that load onto the same factor to try to identify common themes. If the mathematical factor produced by the analysis represents some real-world construct then common themes among highly loading questions can help in identifying the factors. Thus the following factor names are proposed.

Table 3.18 Final Factor Names

Factor No	Factor Name
1	Adaptability
2	Planning & Task Efficacy
3	Self-Management
4	Interpersonal Skills
5	Stress Management
6	Professional Grooming
7	Moral & Professional Ethics
8	Decision making skills
9	Goal Setting skills
10	Communication Skills
11	Humour Sense
12	Leadership skills
13	Team building Skills
14	Power & Motivation

In the above table, the new Factors from 10 to 14 are belonging to the original clusters, communication skills and leadership skills. The factor loadings as well as the order of the factors can also be considered as a pointer towards the order of importance placed by employers. Thus, the top rated factors include all the factors which have Eigen values of over 2. Thus,

it is reiterated empirically that all the above factors are critical for the soft skills development of management graduates.

Based on the above research and data analysis, we can say that the subject of soft skills for management students will be incomplete without incorporating the above 14 factors. The management education curriculum shall consider the above 14 factors as important in their soft skills curriculum and it is imperative that the above inputs from employers side is also given due weight age and the curriculum is designed in such a way that soft skills is treated a combination of Personality traits, behaviors, abilities, efficacies, attitudes and ethics of an individual which is required for effective workplace involvement and productivity.

Step 3.4: RESEARCH STUDY FOUR

Derivation of Conceptual Model for Critical Soft Skills

3.4 Introduction and Recap of work done

The phase one of the study was purely exploratory in nature, trying to arrive at two things

1. What are soft skills? Can we define Soft skills?
2. What are the soft skills expectations of an employer for a fresh management graduate?

The phase started with trying to look at existing literature in the area of employer's perception of soft skills of management graduates.

The research work when started in 2012 did not have much literature on a valid conceptual framework for soft skills of managerial candidates. A few major studies were chosen and considered as a base for arriving at a conceptual framework for the current study. The first phase of the current study was thus to arrive at a conceptual framework suitable for the development of the proposed tool. Before we go there, the two major studies which were taken as a guideline for the phase one are as follows.

Kantrowitz's (2005) doctoral theses was on development and construct validation of a measure of soft skills performance. In her set of studies she examined the dimensionality of soft skills performance, developed measures to assess soft skills performance from self and supervisor perspectives, and validated the measures of performance in a

nomological network of non-ability individual differences and existing performance measures. Study 1 involved asking subject matter experts to provide a master list and critical incidents of soft skills. Data from Study 1 served as the stimuli in Study 2 for sorting and reduction of skills into dimensions of soft skills performance. A construct and criterion validation approach was taken in Study 3 to measure soft skills performance in relation to individual differences variables in a nomological network. Results showed that the taxonomy of soft skills performance was composed of seven clusters, but that the measure of soft skills performance was unidimensional. Personality and motivational variables significantly predicted soft skills performance through their influence on proximal motivational processes.

Azevedoa, Apfelthaler, & Hurst (2012), proposed a conceptual framework and industry-driven approach to measure required competencies of business graduates. Survey results showed that employers were not very confident in the level of capability of business graduates in the eight competencies investigated in this study.

The above two studies gave a conceptual model for conducting a similar study in the phase one study of the current work. In both the above studies, the employers were asked to rate the importance of the major soft skills and the above list was arrived at as a finding.

The Ten Major soft skills that evolved from her study are as follows;

Table 3.19. Ten Major Soft Skills as per Kantrowitz (2005)

1	Communication Skills
2	Leadership Skills
3	Self-Management Skills
4	Decision Making/Problem Solving Skills
5	Management Skills
6	Organization Skills
7	Interpersonal Skills
8	Political Skills
9	Analysis/Creativity Skills
10	Selling Skills

Table 3.20. Eight Required Competencies by Azevedoa, Apfelthaler, & Hurst (2012)

1.	Influencing and persuading (i.e. ability to use communication and negotiation skills to positively influence individual behavior)
2.	Teamwork and relationship building (i.e. ability to work in teams whilst utilizing appropriate interpersonal skills to build relationships with colleagues, team members and external stakeholders)
3.	Critical/Analytical (i.e. ability to analyse problems and situations in a critical and logical manner)
4.	Self and time management (i.e. ability to organize oneself, one's time effectively)
5.	Leadership (i.e. ability to take responsibility for a task, give direction, provide structure and assign responsibility to others)
6.	Ability to see the bigger picture (i.e. ability to see how things are interconnected; manifested by an ability to think about the business both strategically and operationally)
7.	Presentation (i.e. ability to prepare and deliver effective presentations to different audiences)
8.	Communication (i.e. ability to communicate clearly and concisely, using a range of verbal and written methods)

Next task was to understand how the B-Schools currently placed its importance on soft skills as a selling proposition. As we know, when something is used as a Sales agenda, it could be expected to be given due importance in the actual scenario of service delivery. It was found that only around 50 percent of the institutions did actually mention the importance for soft skills development in their sales proposition. Surprisingly, despite the mention of provision of such a training, only less than 10 percent of them used any sort of psychometric tool for assessment of the outcomes. This could mean that either the B-schools are not aware of these tools or they don't consider that this was important.

The next exploration was among a group of HR recruiters where it was asked four qualitative questions on their perception on current quality of B-School education and ways to improve them. They were also asked to rate the students they interviewed and the students they recruited on a rating scale of 10. The study elicited the major findings as follows

- 29 percent (Highest) of the respondents agree to the importance of soft skills training for the students
- The second highest importance is for providing practical exposure or internships to the students
- Another area is improving Industry-institute interaction and Faculty exposure
- The average score of candidates they interviewed was 5.8 and the candidates they hired was 6. This implies that the quality of a hire was only around 60 percent, whereas their expectations could mean higher.

Based on all the above exploration, it was decided to go into detailed quantitative survey asking the importance of each soft skills items from the employers themselves. A series of expert discussions and content analysis of the above study results were done to arrive at 128 item questionnaire which asked the recruiters to rate it in a scale of 10. The data collected from 206 employers, all over India was further analysed to empirically arrive at a final soft skills factor list of 14 factors.

These 14 factors will act as the starting point for the derivation of the conceptual framework of the study.

3.4.1. Expert conceptual validation study

After the above three studies , it was found that the conceptual framework needs to be more abridged than elaborate in order to limit the scope of the study. A Parsimonious list of “Critical soft skills” was necessary in order to make the assessment tool more reliable and valid. Hence, the fourteen factors list was further vetted by an expert panel which consisted of the following members

- Academicians - with expertise in HR - 4
- Soft skills Trainers - with at least 5 years’ experience in the field - 6
- HR Managers with at least 10 years’ experience - 4
- Researcher - 1
- Total - 15 Experts

Each of them was asked to categorise the 14 factors as “Critical” and “Preferable”. When 10 of the 15 experts agreed to one factor as “critical”, it was taken into consideration. Accordingly, a table of preferences was generated as follows;

Table 3.21: Expert Conceptual Validation Preference Table

Sl no	Factor	Number of Experts who think this is Critical	Selected / rejected
1	Adaptability	8	Rejected
2	Planning & Task Efficacy	10	Selected
3	Self-Management	12	Selected
4	Interpersonal Skills	12	Selected
5	Stress Management	7	Rejected
6	Professional Grooming	7	Rejected
7	Moral & Professional Ethics	9	Rejected
8	Decision making skills	11	Selected
9	Goal Setting skills	12	Selected
10	Communication Skills	14	Selected
11	Humour Sense	7	Rejected
12	Leadership skills	12	Selected
13	Team building Skills	12	Selected
14	Power & Motivation	9	Rejected

Conceptual Model for this Study

The conceptual framework for the current study thus got derived as a finding from the phase one study as well as the previous works as follows. The eight factors that the Experts Panel selected went on to be considered as the Conceptual Model of this study. However, it was further recommended by the Expert Panel to club two of the factors together as in the case of Interpersonal skills and Team building skills. This final framework defines the Seven Critical soft skills for a job aspirant as communication skills,

leadership skills and initiative , interpersonal and team work skills , self-management skills, decision making skills and Task efficacy.

Table 3.22. Seven Critical Soft Skills for Management Graduates

1	Communication Skills
2	Leadership Skills & Initiative
3	Interpersonal and Team building skills
4	Self-Management skills
5	Decision making skills
6	Task Efficacy
7	Goal Setting Skills

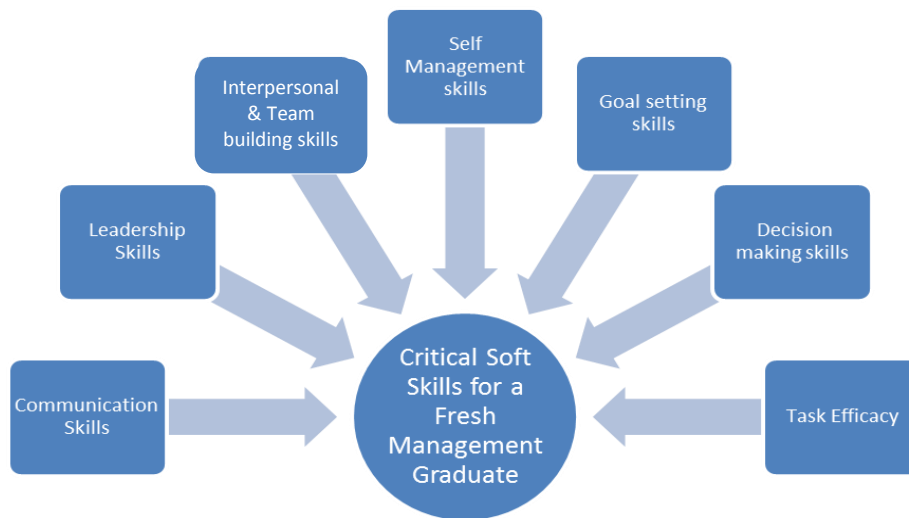


Figure 3.6. Critical Soft Skills for a Fresh Management Graduate
The Conceptual Model

Operational definition : for Critical soft skills for a Fresh management graduate for this study is thereby defined as a set of independent skills denoted by communication skills, leadership skills , interpersonal and team work skills , self-management skills, goal setting skills , problem solving and decision making skills and task and operational efficacy.

Communication Skills: This stands for set of skills which helps a candidate to communicate for professional purposes using oral skills - which includes interpersonal communication , presentation skills and written skills in the form of reports or official documents.

Leadership Skills: This stands for a set of skills which enables a candidate to take leadership roles, take initiative and responsibility related to task at hand.

Interpersonal &

Team building skills: This stands for skills which is crucial for creating and maintaining a cordial relationship with colleagues and superiors.

Self-management skills: This stands for the level of awareness about self including their perception of the individual's strengths and weaknesses.

Goal Setting skills: This stands for the candidate's capability to understand and articulate long term and short term goals which is important at work

Decision making skills: This stands for those skills which enables capability to solve problems and to take suitable decisions as per the need of the organization / situation.

Task efficacy: This stands for the candidate's capability to deliver results and task completion as per mandates.

3.5 CONCLUSION

The chapter completes one of the major steps in this research work – finalization of the framework. This was possible by various steps of qualitative and quantitative studies. Study one of secondary source content analysis of the admission advertisements of MBA to derive at the importance placed for soft skills by the institutions helped in identifying some of the soft skills items. The third step was to conduct a qualitative and quantitative survey among the employers to understand their preferences of soft skills. And finally , we derived the conceptual framework of Critical Soft Skills using the results of the empirical study as well as the rating study done among the group of HR experts. The seven Critical Soft skills are therefore concluded as Communication Skills, Leadership and Initiative Skills, Interpersonal and Team building skills, Self management skills, Goal Setting skills, Problem Solving and Decision making skills and Task and Operations Efficacy.

The next chapter deals with the development of the proposed Psychometric tool and the various rounds of item reductions.



TOOL DEVELOPMENT AND PRELIMINARY ANALYSIS

★ Contents ★

4.1 *Objective of this phase*

4.2 *Methodology*

Step One - Item generation

Step Two – Tool construction

4.3 *Step three: administration of the tool*

This chapter presents the results of tool construction as well as the preliminary exploration of the tool's properties by going through various steps as listed below.

4.1 OBJECTIVE OF THIS PHASE

To design the proposed tool based on psychometric principles for self-assessment of the seven critical soft skills factors identified in the phase one.

4.2 METHODOLOGY

STEP ONE: ITEM GENERATION

This phase of the research work underwent several rounds of brainstorming and creative discussions by the researcher, guide and a few Subject Matter Experts. The experts chosen for this phase were all psychologists with experience in psychometric tool administration. A total of four such experts including the researcher and the guide contributed to this step. The items which were generated in the phase one were mostly a few words or a short description of a soft skills characteristic. The list of items generated from the phase one exploratory studies were the basis for the tool construction. The item generation meant that each original item was converted to a self-reporting item following rules of psychometric principles.

STEP TWO: TOOL CONSTRUCTION

The items for each of the SEVEN critical soft skills were designed separately ensuring the following factors

- Each item measured only one characteristic and did not have any dual edged measurement
- For every 5 items, one reverse scoring item was designed
- The items were simple and easy to comprehend for anyone

- New items were created in some cases to include any missing theoretical area in the construct that is measured.

STEP ONE and STEP TWO of this phase is reported in the following tables. The scale's original item (as given to the employers for rating) and the new item constructed based on the same is given in the tables. The items in italics and underlined are the reverse scored items.

Table 4.1: Communication Skills Scale Items

	Original Item	Constructed Item
1	Able to draft written communication with a professional standard	I am able to prepare my assignments , reports , records etc in a systematic way as expected by my faculty/ supervisors
2	Able to express problems to the concerned authority	I am able to express my problems to my teachers/ faculty when needed.
3	Able to read and interpret complex documents	<i><u>I am not able to understand complex documents while reading them.</u></i>
4	Collects and analyses information in a useful manner	I collect and analyse all information needed for doing my job effectively.
5	Delivers presentations confidently	I am confident of delivering presentations as part of all jobs assigned to me.
6	Hears others' points of view	<i><u>I am not able to patiently listen to other's points of view in a discussion</u></i>
7	Voices opinions	I always express my opinions in a discussion.
8	New item - Body language	I am able to adjust my body language according to the situation or topic of presentation.
9	New item - Gestures	I understand and correct any bad gestures I may have while communicating or presenting
10	New item -Eye contact	I maintain a good level of eye contact with the audience while communicating or presenting

Table 4.2: Decision making skills scale items

	Original Item	Constructed Item
1	Acts decisively	I can take appropriate decisions related to myself or my works.
2	Considers consequences when making decisions	I am able to evaluate the consequences while making decisions.
3	Defuses a situation / confronts issues	<i><u>I am tensed whenever any issues occur in any relationship or situation</u></i>
4	Distinguishes big from small errors	I can understand the difference between big mistakes and small errors.
5	Exercises judgment	My friends appreciate my decision making capability.
6	Negotiates	I usually negotiate with my classmates for solving issues in the class.
7	Resolves conflict	Whenever there is any conflict or clash of interests among my friends, I help in resolving the same.
8	New Item	<i><u>I usually escape from situations which can lead to conflict.</u></i>
9	Uses democratic decision-making	<i><u>I do not ask everyone's opinion whenever a group decision is to be taken.</u></i>

Table 4.3. Goal Setting Skills Scale Items

	Original Item	Constructed Item
1	Defines objectives	I set clear goals for accomplishing my tasks.
2	Knows end goal and what to do to accomplish goal	I always have a timeframe for attaining my goals.
3	Sets goals	<i><u>I sometimes set goals which cannot be measured for completion</u></i>
4	Sets SMART goals (Specific, measurable, achievable, realistic and time bound)	Normally the goals I set are achievable
5	NEW ITEM	I do not set unrealistic goals in my personal or professional life.

Table 4.4. Interpersonal skills & team building scale items

	Original Item	Constructed Item
1	Builds and maintains relationships	I am always able to maintain good relationships with people
2	Cooperates with others	People find it easier to cooperate with me in group works.
3	Develops rapport with others	My friends say that I can easily develop rapport with others
4	Expresses opinions without hurting others	<i><u>I may hurt people when I express my opinions</u></i>
5	Gives feedback to others	I give proper feedback to others whenever required
6	Listens to concerns of others	<i><u>I do not listen to the concerns of others</u></i>
7	Observes the situation and others' behavior	I observe other's behaviour in every situation
8	Recognizes people's efforts	I appreciate and recognise other people's efforts
9	Respects coworkers	I give due respect to everyone with whom I interact.
10	Shows accessibility/approachability	Students from other classes or colleges also interact with me easily.
11	Works as a team player	I enjoy working in teams
12	Coaches / trains others	I train / teach my fellow classmates on tough topics during my free time.
13	Delegates appropriately	I am capable of splitting the tasks among group members when I am the group leader.
14	Develops others	I help others to identify and improve on their weaknesses
15	Evaluates performance of team	I can understand the subtle differences in the performances of others in a team.
16	Promotes a team environment	<i><u>While working in projects I do not encourage people to work as a team</u></i>

Table 4.5. leadership skills and initiative scale items

	Original Item	Constructed Item
1	Acts proactively	I am proactive most of the time.
2	Follows up with others	I follow up with every group member on the status of an assignment on a regular basis
3	Overcomes setbacks	It is easy for me to overcome failures
4	Ready to take up assignments	I am always ready to take up new projects
5	Takes initiative	I usually take initiative for new projects in our class.
6	Takes risks	I take moderate risks in life
7	Gains power to exercise influence over others	I try to influence others by gaining positions of power.
8	Handles objections	<i><u>I feel offended when others try to object to my ideas or opinions</u></i>
9	Influences others	I can influence people to work towards the goals we set.
10	Models behaviors he/she would like to see others perform	I am a role model for others in my class
11	Motivates others	I always motivate others

Table 4.6. Self - Management Skills Items

	Original Item	Constructed Item
1	Appears pleasant and happy	I am mostly pleasant and happy
2	Knows about own strengths and weaknesses	I have a clear understanding of my strengths and weaknesses
3	Plans and organizes his/her time and activities	<i><u>I do not plan my day and my time very well.</u></i>
4	Recognizes limitations	I am aware of my limitations.
5	Shows confidence	I am confident person in taking up tasks
6	Shows enthusiasm	I am mostly enthusiastic while doing all tasks entrusted to me
7	Updates knowledge and skills	I regularly update myself with the latest information in my field of interest.
8	Willingness to learn new things	<i><u>I am not willing to learn new things</u></i>

Table 4.7: Task efficacy scale items

	Original Item	Constructed Item
1	Attends to details related to job.	I strive to attain perfection in every job
2	Follows through on commitments	I consistently follow up on the commitments made by people
3	Knows resources	When a task is assigned to me, I clarify all the resources needed for completing it.
4	Organizes work	I maintain a "to-do" list or a " plan of action " for any task
5	Persists/works hard	<u><i>I tend to lose interest in doing something when the work gets dragged or challenging</i></u>
6	Promotes product/service/business knowledge	I try to promote my college among others
7	Provides solutions	People come to me whenever they need a solution for certain problems
8	Responsible towards his/her work	<u><i>I do not take responsibility towards my work</i></u>

4.3. STEP THREE: ADMINISTRATION OF THE TOOL

After the construction of the tool, the next phase is to administer the tool among the target population and check the psychometric properties and reduce the items to standardize the tool

4.3.1 Objective:

To collect primary data through a pilot administration for initial statistical analysis of the tool.

4.3.2. Methodology:

The newly constructed tool was distributed among the target sample – MBA Freshers. The psychometric tool was converted into an online survey

using Google forms with LIKERT SCALING on Agree / Disagree along with some demographic data as follows

1. Location
2. Father's Occupation
3. Mother's Occupation
4. Name of college
5. Name of University
6. Location of School education – Rural /suburban / urban
7. Location of college education – Rural / suburban / urban
8. Have you taken any Employability Test or similar Psychometric Test to assess your soft skills?
9. What is your Career Goal?
10. Have you attended any placement interview in the past one month?
11. Have you got any placement offer before leaving campus?
12. If the results of the placement is not yet available, What do you think is the chance that you will get selected in the interviews you had attended in the past one month?

4.3.3. Population

The test measures the major soft skills of fresh management graduates and hence the population is defined as any young adult who has completed or nearing completion of a Post graduate / graduate studies in management /business studies.

Management graduates per se are a broader definition considering the vast number of B-Schools in the country. For better definition, it was

decided to limit the study among students from accredited institutions (AICTE Approved).

As per the AICTE data (2015-16), there were 10311 approved MBA institutions all over India. The total intake capacity is 3, 50,612 (2015-16) and the total enrollment that happened during the year is around 2,00,859.

PGDM data is separately stated – Intake Capacity – 79812 and the actual Enrollment – 38230

Totaling both these figures, we arrive at the following total population as shown in Table 4.8

Table 4.8. Intake Capacity and Enrollment data of Management Institutes

	MBA	PGDM	Total
Intake Capacity	3,50,612	79812	430424
Enrollment	2,00,859	38230	239089

4.3.4. Sample frame

- MBA/PGDM graduates or final years who have registered their resumes in Job portals

4.3.5. Sample size

- Ideal Sample size for a 99% confidence level with +/- 5 % Confidence interval (margin of error) is 664
- Hence , Target sample size : 1000

4.3.6. Data collection

- Since there is no official source of MBA fresher database available, the researcher resorted to using database of two leading job portals namely www.Naukri.com and www.monster.com.
- A large database of over 1.2 Lakh Fresh MBA / PGDM graduates was collected from the two portals. The PAN India database was then filtered to MBA fresh graduates who registered in the portal between May 2016 - July 2016. This came to approximately 20000.
- An email was sent to the candidates inviting them to participate in the survey. Out of the 20000 emails sent, approximately 10 percent bounced. From the emails which were received, 1018 responses were received during the total study. However there was only 975 valid dataset after eliminating those with incomplete or irrelevant data. The data was collected in three phases as - Pilot (200 numbers) ,Validation study phase(575), Standardisation phase (200). Response rate is 5.5 percent.

Since the survey was administered using online survey tool, data validation was done simultaneously and no missing data is reported. However, some data were eliminated to remove dataset from respondents who did not possess the required qualification – management degree from an AICTE approved institutions. A few dataset were removed for haphazard responses. For eg: Marking the same response of 5 or 3 in all items.

The Tool underwent initial validation process with a small sample of 200 data (Pilot analysis) to check if the study was on right track. On

Preliminary analysis, it was found that the Statistical analysis (Exploratory Factor Analysis) yielded sufficient results. After which, the remaining dataset of 675 numbers was collected and the further analysis was conducted with the full dataset of 875.

- **TOTAL DATA COLLECTED : 1018**
- **VALID DATA : 975 (in three phases with the same sample frame) ;
Pilot phase : 200 (First level EFA), Second phase (EFA and CFA Stage) : 675 and final phase (for setting norms) : 100**

4.3.7. Data analysis

The primary objective of this phase of the statistical analysis is Item reduction. Factor analysis is done to eliminate items which do not have the statistical properties needed for inclusion in the tool. A total dataset of 875 (including the pilot 200 and second phase 675) is used for this phase of the study. A Principal Component Analysis (PCA) is done and the rotated component matrix is derived using IBM SPSS statistics 20 software. The results of the PCA is reviewed to identify those items which do not fall into the factor and thereby rejected. This process is repeated for all the seven scales in the tool. The results of PCA as well as the item selection table is presented below for each of the seven critical soft skills scale.

4.3.7.1 Communication skills scale- stage one item reduction

The items under communication skills scale were subjected to factor analysis using SPSS and the results were used to reject the items which were not loading together. The rotated component matrix is shown in Table 4.9 below.

Table 4.9: Communication Skills Scale - Rotated Component Matrix^a

	Component	
	1	2
I am able to prepare my assignments , reports , records etc in a systematic way as expected by my faculty/ supervisors	.603	.323
I am able to express my problems to my teachers/faculty when needed.	.622	-.003
I collect and analyse all information needed for doing my job effectively.	.589	.473
I am confident of delivering presentations as part of all jobs assigned to me.	.697	.089
I always express my opinions in a discussion.	.638	.148
I am able to adjust my body language according to the situation or topic of presentation.	.708	.040
I understand and correct any bad gestures I may have while communicating or presenting	.623	.059
I maintain a good level of eye contact with the audience while communicating or presenting	.789	.201
I am not able to understand complex documents while reading them.	.055	.772
I am not able to patiently listen to other's points of view in a discussion	.085	.721

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Table 4.10: Communication Skills Scale - KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.859
	Approx. Chi-Square	528.858
Bartlett's Test of Sphericity	Df	45
	Sig.	.000

The KMO and Bartlett score for Communication Skills Scale is reported in Table 4.10. We can see that the score is 0.859 which is way

above the minimum requirement of 0.5. Hence we can say that the score fulfils the sampling adequacy norms and the results of the factor analysis can be used for decision making regarding item reduction.

On analyzing the above results, it was found that only two of the items are forming the second component. On further observation, it was found that those two items are reverse scored ones and could have led to errors in measurements. Hence, one more round of varimax rotation factor analysis with fixed component of one was attempted. The results are as below shown in Table 4.11

Table 4.11. Communication Skills Scale - Varimax rotation Component Matrix^a

	Component 1
I am able to prepare my assignments , reports , records etc in a systematic way as expected by my faculty/ supervisors	.680
I am able to express my problems to my teachers/faculty when needed.	.576
I collect and analyse all information needed for doing my job effectively.	.723
I am confident of delivering presentations as part of all jobs assigned to me.	.680
I always express my opinions in a discussion.	.647
I am able to adjust my body language according to the situation or topic of presentation.	.672
I understand and correct any bad gestures I may have while communicating or presenting	.600
I maintain a good level of eye contact with the audience while communicating or presenting	.807
I am not able to understand complex documents while reading them.	.339
I am not able to patiently listen to other's points of view in a discussion	.348

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

From the above results, it is evident that the last two items needs to be eliminated. Accordingly, the two items Comn09R and Comn10R are eliminated in this step. The selection list is tabulated in Table 4.12 below for better understanding.

Table 4.12. Item Selection List – Communication Skills Scale

Item code	Item	Selected /Rejected
Comn01	I am able to prepare my assignments , reports , records etc in a systematic way as expected by my faculty/ supervisors	Selected
Comn02	I am able to express my problems to my teachers/faculty when needed.	Selected
Comn03	I collect and analyse all information needed for doing my job effectively.	Selected
Comn04	I am confident of delivering presentations as part of all jobs assigned to me.	Selected
Comn05	I always express my opinions in a discussion.	Selected
Comn06	I am able to adjust my body language according to the situation or topic of presentation.	Selected
Comn07	I understand and correct any bad gestures I may have while communicating or presenting	Selected
Comn08	I maintain a good level of eye contact with the audience while communicating or presenting	Selected
Comn09R	I am not able to understand complex documents while reading them.	Rejected
Comn10R	I am not able to patiently listen to other's points of view in a discussion	Rejected

4.3.7.2. Decision making skills scale - - stage one item reduction

The items under Decision making skills scale were subjected to factor analysis using SPSS and the results were used to reject the items which were

not loading together. The rotated component matrix is shown in Table 4.13 below.

Table 4.13: Decision Making Skills - Rotated Component Matrix^a

	Component	
	1	2
I can take appropriate decisions related to myself or my works.	.698	.199
I am able to evaluate the consequences while making decisions.	.740	.026
I can understand the difference between big mistakes and small errors.	.695	-.044
My friends appreciate my decision making capability.	.693	.049
I usually negotiate with my classmates for solving issues in the class.	.447	-.189
Whenever there is any conflict or clash of interests among my friends, I help in resolving the same.	.690	-.050
I am tensed whenever any issues occur in any relationship or situation	.278	.486
I usually escape from situations which can lead to conflict.	-.128	.742
I do not ask everyone's opinion whenever a group decision is to be taken.	-.084	.662

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.
 a. Rotation converged in 3 iterations.

Table 4.14. Decision Making Skills - KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.746
Bartlett's Test of Sphericity	Approx. Chi-Square	285.789
	Df	36
	Sig.	.000

The KMO and Bartlett Score (Table 4.14) is found to be sufficient for the scale and hence the Factor Analysis results are accepted. On analyzing the above results, it was found that THREE of the reverse scored items are forming the second component. On further observation, it was found that those two items are reverse scored ones and could have led to errors in measurements. Hence, one more round of varimax rotation factor analysis with fixed component of one was attempted. The results are as below.

Table 4.15. Decision Making Skills Scale - Component Matrix^a

	Component 1
I can take appropriate decisions related to myself or my works.	.696
I am able to evaluate the consequences while making decisions.	.743
I can understand the difference between big mistakes and small errors.	.696
My friends appreciate my decision making capability.	.704
I usually negotiate with my classmates for solving issues in the class.	.453
Whenever there is any conflict or clash of interests among my friends, I help in resolving the same.	.698
Extraction Method: Principal Component Analysis.	
a. 1 components extracted.	

From the above results, it is evident that the last three items needs to be eliminated. Accordingly, the three items Decn07R, Decn08R and Decn9R are eliminated in this step. The item selection and rejection list is tabulated in Table 4.16 below for better understanding.

Table 4.16. Item Selection List – Decision Making Skills

Item code	Item	Selected/ Rejected
Decn01	I can take appropriate decisions related to myself or my works.	Selected
Decn02	I am able to evaluate the consequences while making decisions.	Selected
Decn03	I can understand the difference between big mistakes and small errors.	Selected
Decn04	My friends appreciate my decision making capability.	Selected
Decn05	I usually negotiate with my classmates for solving issues in the class.	Selected
Decn06	Whenever there is any conflict or clash of interests among my friends, I help in resolving the same.	Selected
Decn07R	I am tensed whenever any issues occur in any relationship or situation	Rejected
Decn08R	I usually escape from situations which can lead to conflict.	Rejected
Decn09R	I do not ask everyone's opinion whenever a group decision is to be taken.	Rejected

4.3.7.3. Interpersonal and Team Building Skills

The items in Interpersonal and Team building skills scale were subjected to factor analysis using SPSS and the results were used to reject the items which were not loading together. The rotated component matrix is shown in Table 4.17 below

Table 4.17: Interpersonal and Teambuilding Skills Scale - Rotated Component Matrix^a

	Component		
	1	2	3
I am always able to maintain good relationships with people	-.013	.920	-.080
People find it easier to cooperate with me in group works	.029	.917	-.030
My friends say that I can easily develop rapport with others	.045	.870	-.042
I give proper feedback to others whenever required	.698	-.003	.043
I observe other's behaviour in every situation	.593	.044	-.012
I appreciate and recognise other people's efforts	.659	.008	.226
I give due respect to everyone with whom I interact.	.570	-.040	.074
Students from other classes or colleges also interact with me easily.	.646	.043	.068
I enjoy working in teams	.629	.033	.188
I may hurt people when I express my opinions	.010	-.010	.571
I do not listen to the concerns of others	.225	-.105	.738
I train / teach my fellow classmates on tough topics during my free time.	.551	.079	.115
I am capable of splitting the tasks among group members when I am the group leader.	.602	-.046	.150
I help others to identify and improve on their weaknesses	.669	.011	.107
I can understand the subtle differences in the performances of others in a team.	.571	-.026	-.006
While working in projects I do not encourage people to work as a team	.178	-.030	.696

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 4 iterations.

Table 4.18. Interpersonal and Teambuilding Skills Scale - KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.911
	Approx. Chi-Square	2254.878
Bartlett's Test of Sphericity	Df	45
	Sig.	.000

Table 4.19. Interpersonal and Team Building Skills Scale Component Matrix^a

	Component 1
I am always able to maintain good relationships with people	-.032
People find it easier to cooperate with me in group works .	.024
My friends say that I can easily develop rapport with others	.035
I give proper feedback to others whenever required	.677
I observe other's behaviour in every situation	.560
I appreciate and recognise other people's efforts	.696
I give due respect to everyone with whom I interact.	.564
Students from other classes or colleges also interact with me easily.	.635
I enjoy working in teams	.656
I may hurt people when I express my opinions	.187
I do not listen to the concerns of others	.443
I train / teach my fellow classmates on tough topics during my free time.	.560
I am capable of splitting the tasks among group members when I am the group leader.	.619
I help others to identify and improve on their weaknesses	.669
I can understand the subtle differences in the performances of others in a team.	.541
While working in projects I do not encourage people to work as a team	.386

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

The KMO And Bartlett's Score for Interpersonal and Team Building skills Scale is 0.911 which is very high score for confirming the sampling adequacy of this study. The factor analysis of all items under interpersonal skills gave three components and hence we decided to go with a single component Factor analysis. The results are as follows. Based on the results, all items without 0.5 score was rejected from further analysis.

From the above table 4.19, all items which are below 0.5 value are rejected and a final selection list is tabulated in Table 4.20. Thus the 6 items , interpersonal01, interpersonal02, interpersonal03, interpersonal14, interpersonal15 and interpersonal16 are rejected from this scale. The remaining items thus form the interpersonal and teambuilding skills scale.

Table 4.20: Item Selection List - Interpersonal and Teambuilding Skills Scale

Item code	Item	Selected/ Rejected
Interpersonal01	I am always able to maintain good relationships with people	Rejected
Interpersonal02	People find it easier to cooperate with me in group works .	Rejected
Interpersonal03	My friends say that I can easily develop rapport with others	Rejected
Interpersonal04	I give proper feedback to others whenever required	Selected
Interpersonal05	I observe other's behaviour in every situation	Selected
Interpersonal06	I appreciate and recognise other people's efforts	Selected
Interpersonal07	I give due respect to everyone with whom I interact.	Selected
Interpersonal08	Students from other classes or colleges also interact with me easily.	Selected
Interpersonal09	I enjoy working in teams	Selected
Interpersonal10	I train / teach my fellow classmates on tough	Selected

	topics during my free time.	
Interpersonal11	I am capable of splitting the tasks among group members when I am the group leader.	Selected
Interpersonal12	I help others to identify and improve on their weaknesses	selected
Interpersonal13	I can understand the subtle differences in the performances of others in a team.	selected
Interpersonal14R	I may hurt people when I express my opinions	rejected
Interpersonal15R	I do not listen to the concerns of others	Rejected
Interpersonal16R	While working in projects I do not encourage people to work as a team	Rejected

4.3.7.4. Goal Setting Skills Scale

The items under Goal Setting skills scale were subjected to factor analysis using SPSS and the results were used to reject the items which were not loading together. The rotated component matrix is shown in Table 4.21 below

Table 4.21. Goal Setting Skills Scale Component Matrix^a

	Component 1
I set clear goals for accomplishing my tasks.	.925
I always have a timeframe for attaining my goals.	.910
Normally the goals I set are achievable	.910
I do not set unrealistic goals in my personal or professional life.	.764
I sometimes set goals which cannot be measured for completion	.193

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Table 4.22. Goal Setting Skills Scale - KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.825
	Approx. Chi-Square	577.010
Bartlett's Test of Sphericity	Df	10
	Sig.	.000

The KMO and Bartlett Score (Table 4.22) is 0.825 is found to be sufficient for the scale and hence the Factor Analysis results are accepted. It was found that other than one item – Goal03R, all the remaining gave a clear single factor. This item thus got eliminated in this stage. The item selection and rejection list is tabulated in Table 4.23 below.

Table 4.23. Item selection List – Goal Setting Skills

Item code	Item	Selected / Rejected
Goal01	I set clear goals for accomplishing my tasks.	Selected
Goal02	I always have a timeframe for attaining my goals.	Selected
Goal04	Normally the goals I set are achievable	Selected
Goal05	I do not set unrealistic goals in my personal or professional life.	Selected
Goal03R	I sometimes set goals which cannot be measured for completion	Rejected

4.3.7.5. Self-management skills scale

The items under Self - Management skills scale were subjected to factor analysis using SPSS and the results were used to reject the items which were not loading together. The rotated component matrix is shown in Table 4.24 below

Table 4.24. Self-Management Skills Scale - Rotated Component Matrix^a

	Component	
	1	2
I am mostly pleasant and happy	.714	.176
I have a clear understanding of my strengths and weaknesses	.667	.125
I am aware of my limitations.	.661	.071
I am a confident person	.815	.116
I am mostly enthusiastic while doing all tasks entrusted to me	.748	.199
I regularly update myself with the latest information in my field of interest.	.728	.078
I do not plan my day and my time very well .	.135	.815
I am not willing to learn new things	.136	.802

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Table 4.25. Self-Management Skills Scale - KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.847
Approx. Chi-Square		439.209
Bartlett's Test of Sphericity	Df	28
	Sig.	.000

The KMO and Bartlett Score (Table 4.25) is 0.847 and is found to be sufficient for the scale and hence the Factor Analysis results are accepted.

From the above results, it is evident that the last two items needs to be eliminated. Accordingly, the two items SelfMgmt03R and SelfMgmt09R

are eliminated in this step. The item selection and rejection list is tabulated in Table 4.26 below for better understanding.

Table 4.26. Item Selection List – Self Management Skills Scale

Item code	Item	Selected / Rejected
SelfMgmt01	I am mostly pleasant and happy	Selected
SelfMgmt02	I have a clear understanding of my strengths and weaknesses	Selected
SelfMgmt04	I am aware of my limitations.	Selected
SelfMgmt06	I am a confident person	Selected
SelfMgmt07	I am mostly enthusiastic while doing all tasks entrusted to me	Selected
SelfMgmt08	I regularly update myself with the latest information in my field of interest.	Selected
SelfMgmt03R	I do not plan my day and my time very well.	Rejected
SelfMgmt09R	I am not willing to learn new things	Rejected

4.3.7.6. Leadership skills and initiative - stage one item reduction

The items under Leadership Skills and Initiative scale were subjected to factor analysis using SPSS and the results were used to reject the items which were not loading together. The rotated component matrix is shown in Table 4.27 below.

Table 4.27. Leadership Skills and initiative Scale - Component Matrix^a

	Component 1
I take moderate risks in life	.286
I am proactive most of the time.	.507
It is easy for me to overcome failures	.539
I am always ready to take up new projects	.732
I usually take initiative for new projects in our class.	.707
I follow up with every group member on the status of an assignment on a regular basis	.656
I try to influence others by gaining positions of power.	.228
I can influence people to work towards the goals we set.	.675
I am a role model for others in my class	.563
I always motivate others	.679
I feel offended when others try to object to my ideas or opinions	.126

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Table 4.28. Leadership Skills and initiative Scale - KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.833
	Approx. Chi-Square	1984.140
Bartlett's Test of Sphericity	Df	55
	Sig.	.000

The KMO and Bartlett Score (Table 4.27) is 0.833 which is found to be high for the scale and hence the Factor Analysis results are accepted. From the above results, it is evident that a few items needs to be eliminated. Accordingly, the three items LSini05, LSini07 and LSini11R are eliminated

in this step. The item selection and rejection list is tabulated in Table 4.29 below for better understanding.

Table 4.29. Item Selection List - Leadership Skills and Initiative Scale

Item code	Item	Selected / Rejected
LSini05	I take moderate risks in life	Rejected
LSini01	I am proactive most of the time.	Selected
LSini02	It is easy for me to overcome failures	Selected
LSini03	I am always ready to take up new projects	Selected
LSini04	I usually take initiative for new projects in our class.	Selected
LSini06	I follow up with every group member on the status of an assignment on a regular basis	Selected
LSini07	I try to influence others by gaining positions of power.	Rejected
LSini08	I can influence people to work towards the goals we set.	Selected
LSini09	I am a role model for others in my class	Selected
LSini10	I always motivate others	Selected
LSini11R	I feel offended when others try to object to my ideas or opinions	Rejected

4.3.7.7 Task efficacy

The items under Task Efficacy scale were subjected to factor analysis using SPSS and the results were used to reject the items which were not loading together. The rotated component matrix is shown in Table 4.30 below

Table 4.30. Task Efficacy Scale : Component Matrix^a

	Component 1
I strive to attain perfection in every job	.646
I consistently follow up on the commitments made by people	.606
When a task is assigned to me, I clarify all the resources needed for completing it.	.709
I maintain a "to-do" list or a " plan of action " for any task	.638
I try to promote my college among others	.611
People come to me whenever they need a solution for certain problems	.606
I tend to lose interest in doing something when the work gets dragged or challenging	.404
I do not take responsibility towards my work	.451

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Table 4.31. Task Efficacy Scale - KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.812
Approx. Chi-Square	1208.935
Bartlett's Test of Sphericity	Df
	28
	Sig.
	.000

The KMO and Bartlett Score (Table 4.31) is found to be high for the scale and hence the Factor Analysis results are accepted. The items that are rejected at this stage are TaskEff05R and TaskEff08R. The results are tabulated in Table 4.32.

Table 4.32. Item Selection List - Task Efficacy Scale

Item code	Item	Selected / Rejected
TaskEff01	I strive to attain perfection in every job	Selected
TaskEff02	I consistently follow up on the commitments made by people	Selected
TaskEff03	When a task is assigned to me, I clarify all the resources needed for completing it.	Selected
TaskEff04	I maintain a "to-do" list or a " plan of action " for any task	Selected
TaskEff06	I try to promote my college among others	Selected
TaskEff07	People come to me whenever they need a solution for certain problems	Selected
TaskEff05R	I tend to lose interest in doing something when the work gets dragged or challenging	Rejected
TaskEff08R	I do not take responsibility towards my work	Rejected

4.3.8. Consolidated results of phase two

The statistical analysis conducted in this stage enabled the item construction as well as the item reduction. The results are tabulated in Tables 4.33 and 4.34.

Table 4.33: Consolidated table of items generation & construction -
The Tool Vs 1

Scale	Number of items from Phase one	New items	Total
Communication Skills	7	3	10
Decision Making Skills	8	1	9
Goal Setting Skills	4	1	5
Interpersonal skills & Team Building skills	16	0	16
Leadership skills and Initiative	11	0	11
Self Management skills	8	0	8
Task Efficacy	8	0	8
Total	62	5	67

STAGE TWO- ITEM REDUCTION**Table 4.34:** Consolidated Table of Items Reduction -The Tool Vs 2

Scale	Number of items	Rejected items	Final set of items
Communication Skills	10	2	8
Decision Making Skills	9	3	6
Goal Setting Skills	5	1	4
Interpersonal skills & Teamwork skills	16	6	10
Leadership skills	11	3	8
Self-Management skills	8	2	6
Task Efficacy	8	2	6
Total	67	19	48

4.6 CHAPTER RECAP

This chapter dealt with the crux of the entire PhD work where the objective was to construct a psychometric tool for assessing the managerial soft skills. The steps included item generation based on the results from previous phase and then the pilot administration with which the first level item reduction was completed. A series of Statistical Factor analysis enabled removing items which were not loading to each of the seven scales. Finally, from the scale of 67 items, we have arrived to a second version of the tool with 48 items for the total seven scales.

In the next chapter, we validate the 48 item scale using advanced statistical tools of SEM using AMOS Software and the final tool is presented.



EMPIRICAL VALIDATION STUDY

★ Contents ★

- 5.1 *Objective*
- 5.2 *Methodology*
- 5.3 *Model validation and latent structure analysis*
- 5.4 *Concept of validity and reliability*
- 5.5 *Stage 1: individual CFA model analysis*
- 5.6 *Stage 2: correlated CFA model*
- 5.7 *Stage 3: latent structure analysis*
- 5.8 *Standardisation of the newly developed tool*
- 5.9 *Naming of the tool final version*
- 5.10 *Content validity index*
- 5.11 *Derivation of norm values*
- 5.12 *Design of answer key and score interpretation for ICMS*
- 5.13 *Chapter recap*

This chapter presents the Empirical Validation study and presents the model validation results as well as the standardisation of the newly developed tool.

5.1. OBJECTIVE OF THIS PHASE

- To validate the newly designed psychometric tool by doing necessary advanced statistical analysis to arrive at psychometric validity measures.
- To arrive at norm values for Management Graduates for each of the scale in the newly constructed tool and report the same.

5.2 METHODOLOGY

The primary objective of this phase is to fine tune the scales to eliminate any more items and thereby confirm the final tool. The scale is subjected to further analysis by conducting SEM using AMOS. The SEM process enables in eliminating the items which do not still load satisfactorily to each of the scale. The various validities are also established before going for the final data collection for standardization process.

Face validity

The Face validity of this study is already established in the research work completed so far, where the exhaustive list of items was reduced through the processes of EFA and CFA to arrive at the critical soft skills model. According to Churchill (1979), clearly specifying the domain of the construct, generating items that exhaust the domain, and purifying the resulting scale should produce a measure which is content or face valid and reliable.

Construct validity

Advanced Statistical Analysis using SPSS and AMOS were utilized on the already collected data (775) numbers for deriving the final

psychometric properties which are elaborated in the coming sections. Post the finalization of the tool, it was administered to the same sample frame (200 numbers) to arrive at norm values for that population.

5.3 MODEL VALIDATION AND LATENT STRUCTURE ANALYSIS

This section of the chapter explains the model testing results performed to confirm the validity, reliability and latent structure of the scale measures. This model testing is recommended as a pre-condition for the scale validation purpose (Hair et al., 2010). In this study, scale validation testing was conducted through Confirmatory Factor Analysis (CFA). All these validation followed in this study performed using CFAs were conducted in three different stages:

- In stage one, the study conducted individual CFAs for all seven dimensions (e.g., communication skills, decision making skills, goal setting skills, leadership and initiative skill, self-management skill, task efficiency skill, and team working skill). These individual CFAs were performed mainly to assess the validity of the items covering the respective dimensions. In this stage, the study also eliminated those items with low CFA factor loadings.
- In this second stage, the study conducted an overall CFA model, where all the scale dimensions were allowed to correlate each other. The major objective of this stage of analysis is to check the validity and reliability of the scale dimensions, specifically convergent and discriminant validity.

- In the third stage, the study checked a model, where the researcher analysed the second order CFA model. In this model, the study considered all these seven dimensions as the first order construct, reflecting the global higher order construct. In this stage, the study compared this second order CFA model with the correlated CFA model, and analysed the fit. This stage of analysis helps the study to confirm the latent structure of the proposed scale.

In the following sections, the study first discusses the concept of validity and reliability and different measures used for checking the same. Later, the study discussed different CFA models and its results.

5.4 CONCEPT OF VALIDITY AND RELIABILITY

Validity explains the ability of an instrument (here the scales) to measure what the researcher intended to measure. Similarly, reliability of an instrument examines the extent of random error in the scale measures. In this stage, study decided to perform two types of validity. First type validity called as convergent validity. This type of validity explains the extent of convergence among the items covering the respective dimension. Similarly, the discriminant validity explains the extent of divergence between the items covering the different dimensions. In this stage, the study analysed the reliability of the study measurements using a coefficient, called as Composite Reliability (CR). In the following pages, the study provided the measurement model testing Tables derived from CFA analysis and also provides its interpretations.

Convergent validity

In this study, the researcher tested the convergent validity of the scale measures using three different measures. The first measure used is CFA factor loadings. It was recommended that if the CFA factor loadings are above 0.50 and loaded high, then it indicate the evidence of convergent validity. Further, another measure generally used by researchers to confirm the convergent validity is called as: Average Variance Extracted (AVE). If the AVE values are above 0.50 it also indicate the convergent validity of the scale measures. Finally, it is also suggested that if the CR values are above 0.50 it also informs the evidence of convergent validity. In the current study, the researcher used all these three measures for the purpose of checking the same

Discriminant Validity

To examine the discriminant validity the study followed an important discriminant validity check procedure recommended by Hair et al (2010). In this procedure, it is recommended that if the AVE values of the dimensions are greater than the correlation square between the construct pairs it indicate the discriminant validity.

In addition to the aforementioned measures, a variety of goodness-of-fit indices are also available to indicate the adequacy of measured constructs to a model, but there seems to be little consensus on what are the appropriate indices (Hinkin, 1995). Hinkin (1995) noted that significance of Chi-square was reported most frequently, and the smaller the chi-square value, the better the data fit to the model. However, chi-square is very sensitive to sample size, diverse indices have thus been developed for

assessing overall goodness of fit. A ratio of the chi-square value to the degrees of freedom of 5 to 1 was a practical rule of thumb (Hinkin, 1995). Although evaluation of fit indices is somewhat subjective, the higher values, the better the model fit to the empirical data. In addition, Hinkin (1995) reported that other fit indices (e.g., CFI, GFI, TLI, etc.) above 0.85 were considered acceptable.

In this line, many other useful criteria have been developed proposed for confirming the overall goodness-of-fit in a CFA methodology and for confirming how well one model does have a fit over another model. According to Schermelleh-Engel et al. (2003), covariance based technique is capable of producing multiple goodness-of-fit indices, such as: (a) descriptive measures of overall model fit or goodness of fit, such as chi-square (χ^2), root mean square error of approximation (RMSEA), root mean square residual (RMR), and standardized root mean square residual (SRMR); (b) descriptive measures based on model comparison. The measures in the second category based on model comparisons are the normed fit index (NFI), the non-normed fit index (NNFI), the comparative fit index (CFI), the goodness-of-fit index (GFI), and the adjusted goodness-of-fit index (AGFI); and (c) descriptive measures of model parsimony, such as the parsimony goodness-of-fit index (PGFI), and the parsimony normed fit index (PNFI), etc. The concept of parsimony serves as a criterion for choosing between several alternative models proposed in the study.

Although in a CFA framework, most of these evaluation criteria or indices are based on the Chi-square statistic. The chi-square value is preferred in a model confirmation perspective over a test statistic as a measure of fit due to its sensitivity to sample size and deviations from multi

normality (Golob, 2003). Given the limitations of Chi-square, different researchers have proposed a plethora of newly goodness-of-fit indices in the SEM framework to examine the goodness of fit of the model, and these indices take a more pragmatic approach to the evaluation process (Byrne, 2001). In this, one of the first fit statistics generally used to address this problem was the normed Chi-square, i.e., the ratio of χ^2/df (Wheaton, Muthen, Alwin, & Summers, 1977). Alternative goodness-of-fit measures of overall model fit have also been developed proposed in the current CFA literature, such as the root mean square error of approximation (RMSEA), root mean square residual (RMR), and standardized root mean square residual (SRMR). In the CFA framework, the root mean square residual (RMR) shows the average residual value derived from the fitting of the variance-covariance matrix for the proposed model to the variance covariance matrix of the sample data collected (Byrne, 2001). However, it has been stated that these residuals are difficult to interpret due to its relation to the sizes of the observed variances and covariances. Considering this limitation, the standardized root mean square residual (SRMR) were proposed, which represent the average value across all standardized residuals. In addition, it is very recently RMSEA been recognized as one of the most useful informative criteria in covariance structure modelling framework (Byrne, 2001). In addition, the other most frequently used goodness-of-fit measures grounded on direct assessment of the variance covariance matrices for the sample and model are the normed fit index (NFI), the non-normed fit index (NNFI), the comparative fit index (CFI), the goodness-of-fit index (GFI), the adjusted goodness-of-fit index (AGFI), the parsimony-adjusted goodness of- fit index (PGFI) etc. Among the stated direct assessment measures, the normed fit index (NFI) is considered as a practical criterion for evaluation of proposed model fit, however, there

exists some limitation of the same , because it has a tendency to underestimate fit in small samples (Byrne, 2001). Bentler and Bonnett (1980) developed the Non-normed Fit Index (NNFI), also known as the Tucker-Lewis Index (TLI) which generally show the disadvantage of the NFI which is affected by sample size. In addition, CFI was also formulated by Bentler (1990) from NFI to take sample size into account. The another measure, goodness-of-fit index (GFI) is a measure of the relative amount of variance and covariance matrix of the sample data that is jointly explained by the variance and covariance matrix for the hypothesized model (Byrne, 2001).

The AGFI has the benefit of adjusting for the number of degrees of freedom contained in the model, which makes the AGFI unique from the GFI. Both GFI and AGFI indices range from zero to 1.00, where the values close to 1.00 being indicative of good fit of the model. The measure, parsimony-adjusted goodness-of-fit index (PGFI) takes into account the complexity of the hypothesized model proposed for the assessment of overall model fit (Byrne, 2001), which was modified later based on GFI and NFI. It is hard to decide which global indices to use for reporting results of model fitting; thus it is necessary to consider multiple criteria in evaluating a model (Bagozzi & Yi, 1998; Schermelleh-Engel et al., 2003). To examine CFA, in this study the researcher used AMOS software package due to its user friendliness.

5.5 STAGE ONE: INDIVIDUAL CFA MODEL ANALYSIS

As reported in Figure 5.1 & Table 5.1 the examination standardized factor loading reported that all the seven items measuring communication skill dimension loaded highly into that factor. In all the cases, the factor loadings were above the suggested cut-off of 0.50. The model fit analysis

supported that the data fit to the model well. Thus, the study supported the seven item dimensional structure of the first dimension “communication skill”.

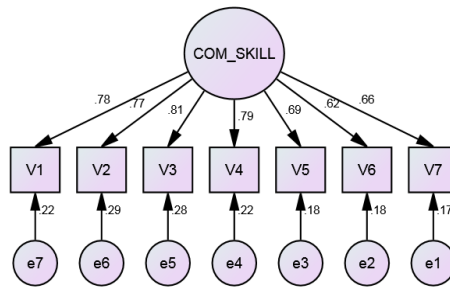


Figure 5.1: CFA model [Communication skill]

Table 5.1. Model fit indices [Communication Skill]

Fit indices	Estimated values
χ^2	1511.11, $p < 0.01$
χ^2/df	1.91
CFI	.936
IFI	.938
GFI	.900
TLI	.927
RMR	.055
SRMR	.054
RMSEA	.040

Next, the study checked the CFA using all the six items of decision making skill dimension. However, during the CFA analysis, two items reported low loadings. Hence, the study deleted these two items and performed the second CFA model. These deleted items are (1) “I Usually negotiates with my classmates for solving the issues in the class, and (2)

“whenever there is a conflict or clash or interest among my friends, I help in resolving the same”. In the revised CFA model, as reported in Figure 5.2 & Table 5.2 the examination standardized factor loading reported that all remaining four items measuring decision making skill dimension loaded highly into that factor. In all the cases, the factor loadings were above the suggested cut-off of 0.50. The model fit analysis supported that the data fit to the model well. Thus, the study supported the four item dimensional structure of the second dimension “decision making skill”.

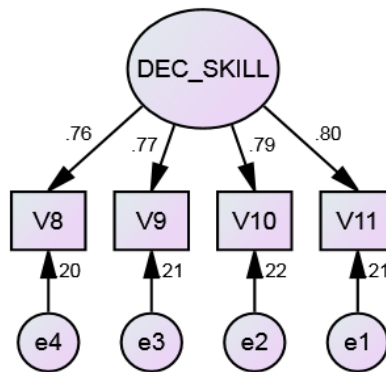


Figure 5.2: CFA model [Decision making skill]

Table 5.2: Model fit indices [Decision making Skill]

Fit indices	Estimated values
χ^2	1211.10, $p < 0.01$
χ^2/df	1.66
CFI	.912
IFI	.911
GFI	.901
TLI	.922
RMR	.050
SRMR	.051
RMSEA	.041

In The third CFA analysis, the study incorporated four items in the individual CFA analysis. As reported in Figure 5.3 & Table 5.3 the examination standardized factor loading reported that all the four items measuring goal setting skill dimension loaded highly into that factor. In all the cases, the factor loadings were above the suggested cut-off of 0.50. The model fit analysis supported that the data fit to the model well. Thus, the study supported the four item dimensional structure of the third dimension “Goal setting Skill”.

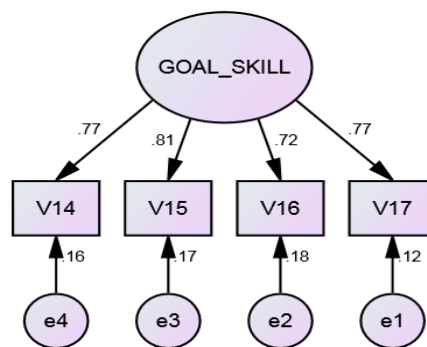


Figure 5.3. CFA model [Goal Setting skill]

Table 5.3. Model fit indices [Goal setting Skill]

Fit indices	Estimated values
χ^2	1232.10, $p < 0.01$
χ^2/df	1.68
CFI	.910
IFI	.910
GFI	.911
TLI	.912
RMR	.054
SRMR	.050
RMSEA	.051

In the fourth CFA model, first the study incorporated all the eight items “Leadership and initiative Skill” in the analysis. However, during the CFA analysis, three items reported low loadings. Hence, the study deleted these three items and performed the revised CFA model. These deleted items are (1) “I am proactive most of the time, (2) “It is easy for me to overcome failures”, and (3) “I am a role model for other in my class”. In the revised CFA model, as reported in Figure 5.4 & Table 5.4 the examination standardized factor loading reported that all remaining four items measuring decision making skill dimension loaded highly into that factor. In all the cases, the factor loadings were above the suggested cut-off of 0.50. The model fit analysis supported that the data fit to the model well. Thus, the study supported the five item dimensional structure of the fourth dimension “Leadership & Initiative skill”.

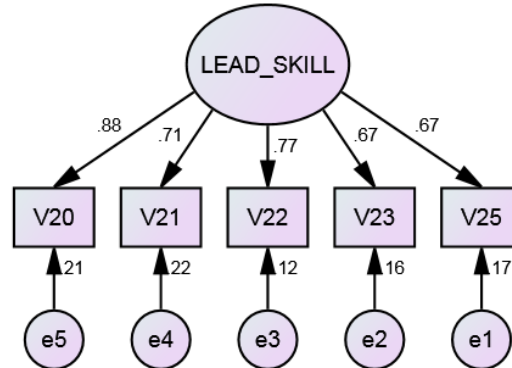


Figure 5.4: CFA model [Leadership & Initiative skill]

In the fifth CFA analysis, the study incorporated six items in the individual CFA analysis. As reported in Figure 5.5 & Table 5.5 the examination standardized factor loading reported that all the six items measuring self-management skill dimension loaded highly into that factor.

In all the cases, the factor loadings were above the suggested cut-off of 0.50. The model fit analysis supported that the data fit to the model well. Thus, the study supported the six item dimensional structure of the fifth dimension “Self-management Skill”.

Table 5.4. Model fit indices [Leadership & Initiative Skill]

Fit indices	Estimated values
χ^2	1921.11, p < 0.01
χ^2/df	1.55
CFI	.911
IFI	.912
GFI	.910
TLI	.910
RMR	.051
SRMR	.051
RMSEA	.055

Figure 5. 5: CFA model [Self-management skill]

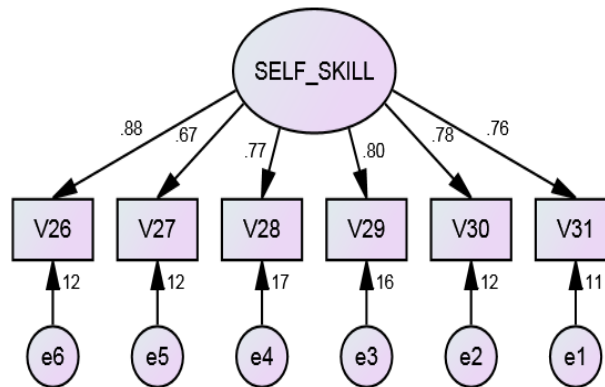


Table 5.5: Model fit indices [Self-management Skill]

Fit indices	Estimated values
χ^2	999.11, p < 0.01
χ^2/df	1.23
CFI	.932
IFI	.912
GFI	.911
TLI	.913
RMR	.056
SRMR	.055
RMSEA	.057

In the fifth CFA analysis, the study incorporated all the six items covering the task efficiency skill in the individual CFA analysis. As reported in Figure 5.6 & Table 5.6 the examination standardized factor loading reported that all the six items measuring task efficiency skill dimension loaded highly into that factor. In all the cases, the factor loadings were above the suggested cut-off of 0.50. The model fit analysis supported that the data fit to the model well. Thus, the study supported the six item dimensional structure of the sixth dimension “Task efficiency Skill”.

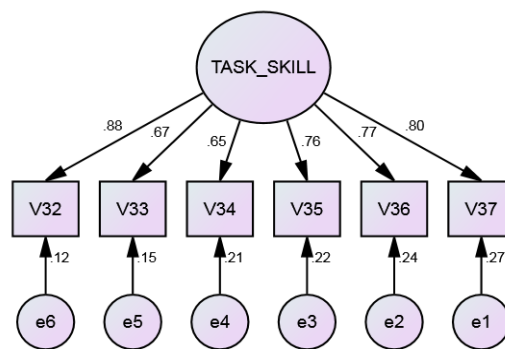
**Figure 5.6:** CFA model [Task efficiency skill]

Table 5.6. Model fit indices [Task efficiency Skill]

Fit indices	Estimated values
χ^2	1032, $p < 0.01$
χ^2/df	1.46
CFI	.912
IFI	.910
GFI	.910
TLI	.912
RMR	.050
SRMR	.051
RMSEA	.051

In the sixth CFA model, first the study incorporated all the ten items of “Team working Skill” in the analysis. However, during the CFA analysis, five items reported low loadings. Hence, the study deleted these five items and performed the revised CFA model. These deleted items are (1) “I observe others’ behaviour in every situation, (2) “I give due respect with whom I interact”, (3) “I train/teach my fellow classmates”, (4) “I am capable of splitting my tasks”, and (5) “I can understand the subtle differences”. In the revised CFA model, as reported in Figure 5.7 & Table 5.7 the examination standardized factor loading reported that all remaining five items measuring team working skill dimension loaded highly into that factor. In all the cases, the factor loadings were above the suggested cut-off of 0.50. The model fit analysis supported that the data fit to the model well. Thus, the study supported the five item dimensional structure of the seventh dimension “Team Working Skill”.

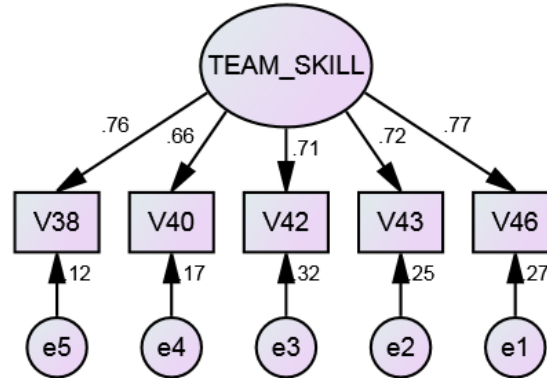


Figure 5.7: CFA model [Team working skill]

Table 5.7: Model fit indices [Team working Skill]

Fit indices	Estimated values
χ^2	987.11, $p < 0.01$
χ^2/df	1.67
CFI	.910
IFI	.910
GFI	.911
TLI	.911
RMR	.057
SRMR	.051
RMSEA	.051

5.6. STAGE TWO: CORRELATED CFA MODEL

In this stage, the study conducted a CFA with all those items identified in the first stage CFA model (See the results of individual CFAs). In this CFA model, the researcher allowed all the study constructs to correlate each other. This is mainly to examine the correlation between the

study constructs, which is very essential to check discriminant validity of the scale dimensions.

Considering the recommendations of Hair et al. (2010), the study analysed the goodness of fit of the overall CFA model that is the correlated CFA model (See Figure 5.8). From the analysis, it was observed that the overall correlated CFA model indicated a good fit ($\chi^2 = 4334.12$, CFI = 0.90, GFI = 0.90, SRMR = 0.040, RMSEA = 0.050, TLI = 0.92). It also confirms the goodness of fit of the measurement model. All these directed the study that the scale used to measure different dimensions are valid and reliable, therefore, proceed for confirmation of the construct validity.

As reported in Table 5.8 the examination factor loading reported that all the items measuring its respective dimensions were loaded highly into that factor. In all the cases, the factor loadings were above the suggested cut-off of 0.50. In addition, the examination of estimated CR values supported that for all dimensions the values were above the suggested cut-off of 0.50. Finally, the examination of AVE values (See Table 5.8) also supported that for all dimensions, the calculated AVE values were above the suggested threshold of 0.50. All these confirmed that the scale measures used to capture different dimensions carrying sufficient convergent validity.

As reported in Table 5.8, the examination of AVE values with the correlation square between the constructs revealed that in all the cases the calculated AVE values were greater than the pair wise correlations. Thus, the study confirmed the fact the scale measures used to measure different dimensions are divergent or it carries adequate level of discriminant validity.

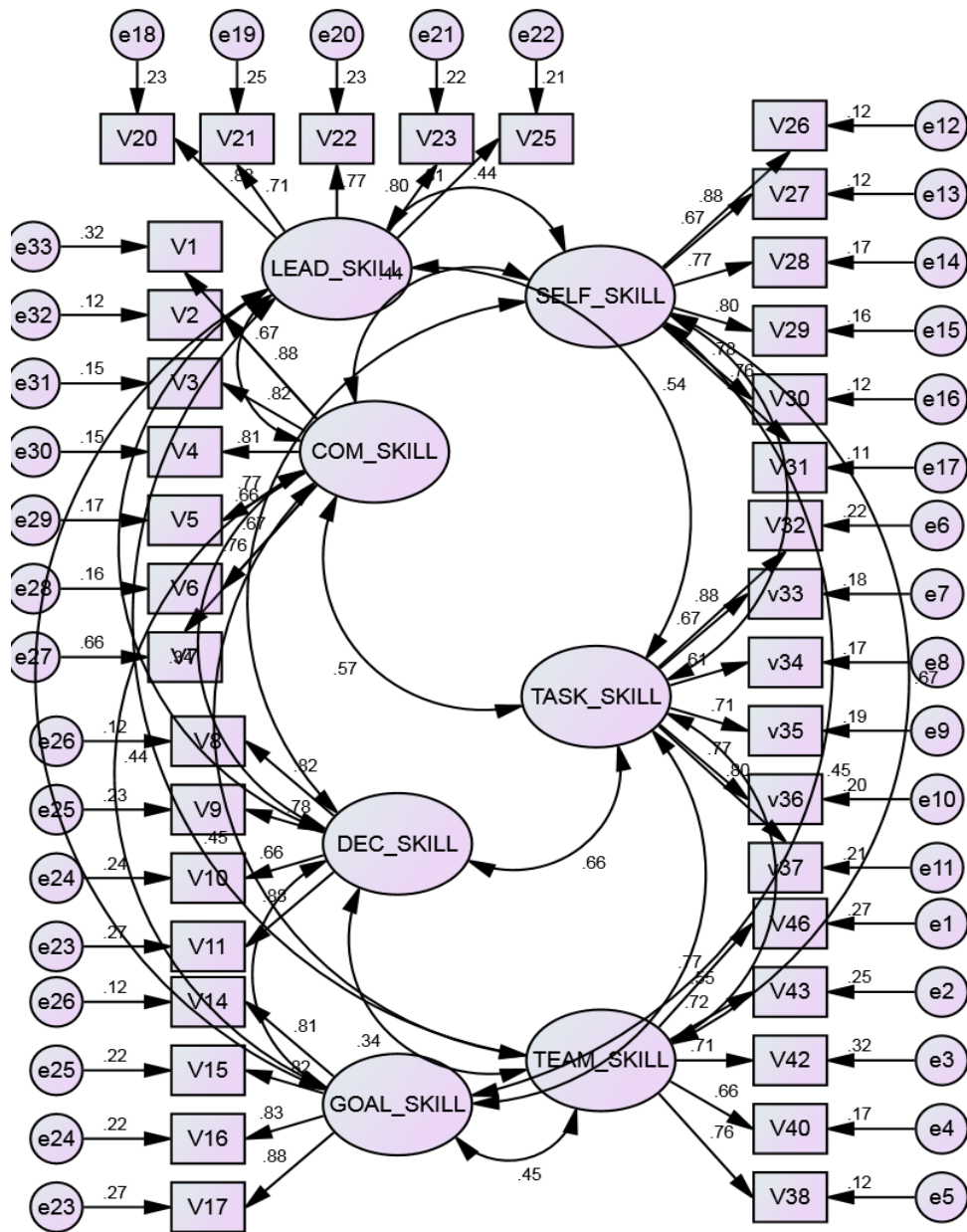


Figure 5.8. Correlated CFA model

Table 5.8: CFA factor loadings [correlated CFA model]

Items	CFA loadings	AVE	CR
COMM_SKILL		0.767	0.78
V1	0.67		
V2	0.88		
V3	0.82		
V4	0.81		
V5	0.77		
V6	0.66		
V7	0.76		
DEC_SKILL		0.785	0.68
V8	0.82		
V9	0.78		
V10	0.66		
V11	0.88		
GOAL_SKILL		0.835	0.801
V14	0.81		
V15	0.82		
V16	0.83		
V17	0.88		
LEAD_SKILL		0.780	0.77
V20	0.88		
V21	0.71		
V22	0.77		
V23	0.8		
V25	0.74		
SELF_SKILL		0.776	0.69
V26	0.88		
V27	0.67		
V28	0.77		
V29	0.8		

V30	0.78		
V31	0.76		
TASK_SKILL		0.734	0.691
V32	0.88		
V33	0.67		
V34	0.64		
V35	0.71		
V36	0.77		
TEAM_SKILL		0.715	0.721
V37	0.76		
V38	0.66		
V40	0.71		
V42	0.72		
V43	0.77		
V46	0.67		

5.7. STAGE 3: LATENT STRUCTURE ANALYSIS

In this stage, the study conducted a CFA, where all the seven dimensions were modelled as first order construct. This first order construct was modelled as the reflection of the higher order construct. Figure 4.9, presents the higher order CFA model. The objective of this stage of analysis is to check the latent structure. This is mainly conducted through the comparison of model fit of the earlier model (correlated model) with the second order model. As expected, in the second order model the study received satisfactory goodness of fit indices. The comparison indicated that the second order CFA model fit well with the data in comparison with correlated model. Table 5.9 provides the comparison of the model fit indices of second order model with the correlated model. Hence, the study confirmed that the scale carry second order dimensional structure.

Table 5.9. Comparison of the model fit indices

Fit indices	Correlated model	Second order factor model
χ^2	4334, $p < 0.01$	4304, $p < 0.01$
χ^2/df	1.66	1.55
CFI	.90	.91
IFI	.911	.92
GFI	.90	.92
TLI	.92	.93
RMR	.050	0.46
SRMR	.040	0.40
RMSEA	.050	0.45

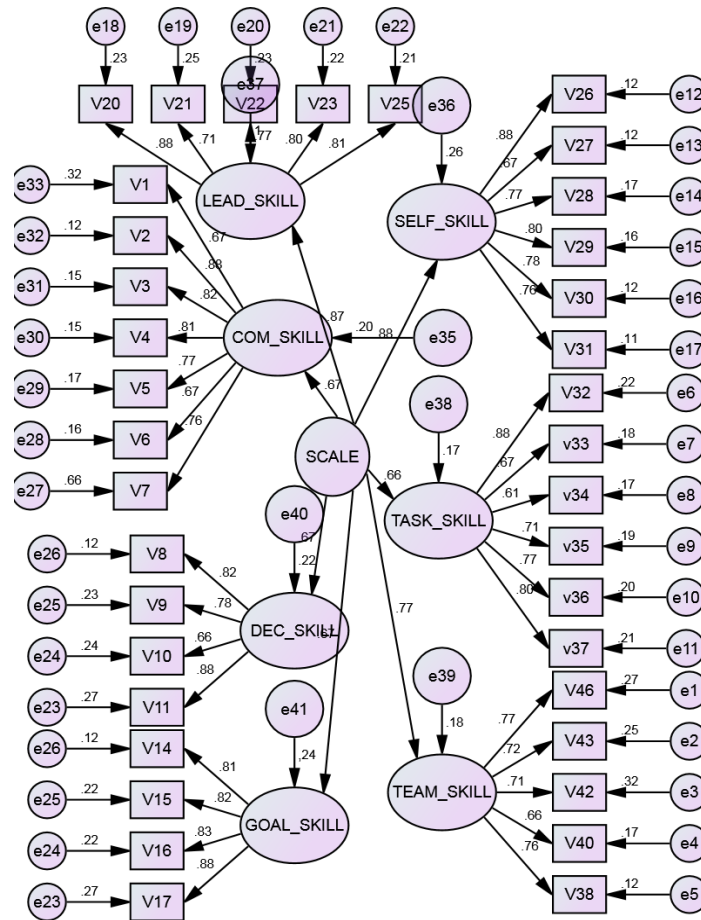


Figure 5.9. Second order CFA model

5.8. STANDARDISATION OF THE NEWLY DEVELOPED TOOL

Standardization of a newly developed psychometric tool is attempted by deriving the reliability and validity scores for each of the scales in it. In this section, the reliability and validity scores for each scale as well as the stages of item reduction (as tabulated in table 5.10 below.) is presented. The table gives a snapshot of the entire psychometric tool development work done in this thesis.

Table 5.10 Reliability and Validity Scores of Seven Critical Soft skills Scales

	Original Tool	After EFA	After Independent CFA	Construct Reliability (CR)	Validity Index (AVE Score)
Communication skills	10 items	8 items	7 items	0.78	0.767
Decision making skills	9 items	6 items	4 items	0.68	0.785
Goal Setting Skills	5 items	4 items	4 items	0.801	0.835
Leadership and Initiative skills	11 items	8 items	5 items	0.77	0.780
Self-Management Skills	8 items	6 items	6 items	0.69	0.776
Task Efficacy	8 items	6 items	6 items	0.691	0.734
Interpersonal and Team Building Skills	16 items	10 items	5 items	0.721	0.715
Total Scale	67 Items	48 items	37 items		

5.9. NAMING OF THE TOOL FINAL VERSION

Based on the above statistical results, we finally derive the Inventory for Critical Managerial Soft Skills - the final version. The final tool therefore has 37 items and assesses the seven critical soft skills . The tool is named as “Inventory for Critical Managerial Soft Skills” and is abridged as “ICMS”. The final version of the tool is presented below as Exhibit 5.1

Exhibit 5.1.***Inventory for Critical Managerial Soft Skills (ICMS) -final version***

Instructions to candidates: please select the best response from the below items which you think is true in your case. Kindly do not think for long and put a tick mark for the option that comes first to your mind.

Sl No	Item	Response Options				
		SD- Strongly Disagree	D- Disagree	Neutral	Agree	Strongly Disagree
		SD	D	N	A	SD
1	I set clear goals for accomplishing my tasks.					
2	I am always ready to take up new projects in our class / workplace					
3	I can take appropriate decisions related to myself or my works					
4	I am mostly pleasant and happy					
5	I am able to prepare my assignments , reports , records etc in a systematic way as expected by my faculty/ supervisors					
6	I have a clear understanding of my strengths and weaknesses					
7	I usually take initiative for new projects in our class /workplace					
8	I strive to attain perfection in every job					
9	I maintain a good level of eye contact with the audience while communicating or presenting					
10	I always have a timeframe for attaining my goals.					
11	I am able to evaluate the consequences while making decisions					
12	I can understand the subtle differences in the performances of others in a team.					
13	I am aware of my limitations.					
14	I follow up with every group member on the status of an assignment on a regular basis					
15	I can understand the difference between big mistakes and small errors.					
16	I consistently follow up on the commitments made by people					
17	I am a confident person					

18	Normally the goals I set are achievable
19	I collect and analyse all information needed for doing my job effectively.
20	I train / teach my fellow classmates on tough topics during my free time.
21	I can influence people to work towards the goals we set.
22	I am mostly enthusiastic while doing all tasks entrusted to me
23	When a task is assigned to me, I clarify all the resources needed for completing it.
24	I always express my opinions in a discussion
25	I am capable of splitting the tasks among group members when I am the group leader.
26	I always motivate others
27	I am able to express my problems to my teachers / faculty when needed
28	I regularly update myself with the latest information in my field of interest.
29	I am able to adjust my body language according to the situation or topic of presentation.
30	My friends appreciate my decision making capability.
31	I help others to identify and improve on their weaknesses
32	I am confident of delivering presentations as part of all jobs assigned to me.
33	I maintain a "to-do" list or a " plan of action " for any task
34	People come to me whenever they need a solution for certain problems
35	I understand and correct any bad gestures I may have while communicating or presenting
36	I do not set unrealistic goals in my personal or professional life
37	I try to promote my college among others

5.10. CONTENT VALIDITY INDEX

In order to establish the content validity of the newly developed tool, it was decided to do a content validity index analysis by approaching experts. Accordingly the following set of Experts were approached and asked to rate each of the item as derived from the previous stage (48 items) and its relevance towards the soft skills scale mentioned.

Twelve Experts consisted of the following categories were asked to rate each of the items (37 items) based on the relevance of the items towards the scale and Clarity of Items towards the scale

The Twelve Experts belonged to the following Groups

- Psychologists / Psychometric Test Administrators with at least 5 years field experience - 5 numbers
- HR Professionals with at least 10 years experience in conducting screening tests in employment - 3 numbers
- Soft Skills and Behavioral Trainers with atleast 8 years of training and development experience - 4 numbers

The Experts rated each of the scale for the relevance of the questions and clarity of questions. **The CVI score is arrived in the following manner**

Number of experts with rating 3 and above out of 5 / total number of experts.

Table 5. 11. CVI Scores for ICMS –final version

Dimensions of ICMS	Relevance of Items	Clarity of Items
Communication Skills Scale	1	0.83
Decision Making skills scale	1	0.92
Goal setting Skills	1	1
Leadership Skills	1	1
Self-Management Skills	1	0.92
Task Efficacy	0.875	0.75
Interpersonal And Teamwork Skills	0.75	0.75

The Content Validity Index (CVI) scores are considered to be high if the scores are above 0.7. If any of the scale or items possessed a CVI score below 0.50, it shall be rejected. In the case of ICMS, the CVI analysis has given substantially high scores for the scales and hence the Content Validity for the tool is established.

5.11. DERIVATION OF NORM VALUES

Any standardized psychometric tool shall be accompanied with norm values in order to effectively administer them. Accordingly, one more final data collection was attempted. This time, the ICMS Final version was administered to a group of 100 Management graduates and the scores were tabulated as following in order to arrive at the final norm values.

Table 5. 12. Consolidated Norm Table For A Sample Of 100 Management Graduates

Sl No	Scale name	Mean value	Total score possible	Average score
1	Communication skills	4.40715	40	35.31
2	Decision making skills	4.2913	25	21.35
3	Goalsetting skills	3.3624	20	12.34
4	Leadership skills and initiative	4.36	25	21.8
5	Self management skills	4.4157	35	31.03
6	Task efficacy	4.306	30	25.9
7	Interpersonal and teamwork skills	4.305	20	17.5

Table 5.13. Norm Value Table : Communication Skills Scale

Item no	Item	Mean value
Com01	I am able to prepare my assignments , reports , records etc in a systematic way as expected by my faculty/ supervisors	4.452
Com03	I collect and analyse all information needed for doing my job effectively.	4.6185
Com04	I am confident of delivering presentations as part of all jobs assigned to me.	4.4431
Com05	I always express my opinions in a discussion	4.2974
Com06	I am able to adjust my body language according to the situation or topic of presentation.	4.4133
Com07	I understand and correct any bad gestures I may have while communicating or presenting	4.3303
Com08	I maintain a good level of eye contact with the audience while communicating or presenting	4.4513
Comn02	I am able to express my problems to my teachers/ faculty when needed	4.2303
Total Mean Value		4.40715

Average Score: 35.31/40

Table 5.14. Norm Value Table: Decision Making Skills Scale

Item no	Item	Mean Value
Dec01	I can take appropriate decisions related to myself or my works.	4.4585
Dec02	I am able to evaluate the consequences while making decisions.	4.2954
Dec04	I can understand the difference between big mistakes and small errors.	4.3713
Dec05	My friends appreciate my decision making capability.	4.3056
Total Mean Value		4.4913

Average Score: 17.4 /20

Table 5.15: Norm Value Table: Goal Setting Skills Scale

Item no	Item	Mean Value
Go01	I set clear goals for accomplishing my tasks.	3.3374
Go02	I always have a timeframe for attaining my goals.	3.2862
Go04	Normally the goals I set are achievable	3.3067
Go05	I do not set unrealistic goals in my personal or professional life	3.1190
Total Mean Value		3.2623

Average Score: **12.39** /20

Table 5.16. Norm Value Table: Leadership Skills Scale

Item No	Item	Mean Value
LSIni03	I am always ready to take up new projects	4.4831
LSIni04	I usually take initiative for new projects in our class.	4.1272
LSIni06	I follow up with every group member on the status of an assignment on a regular basis	4.2790
LSIni08	I can influence people to work towards the goals we set.	4.3867
LSIni10	I always motivate others	4.5333
Total mean value		4.36

Average Score: 21.8/ 25

Table 5.17. Norm Value Table : Self-Management Skills Scale

Item no	Item	Mean Value
SM01	I am mostly pleasant and happy	4.5005
SM02	I have a clear understanding of my strengths and weaknesses	4.5221
SM04	I am aware of my limitations.	4.4872
SM06	I am a confident person	4.5621
SM07	I am mostly enthusiastic while doing all tasks entrusted to me	4.4021
SM08	I regularly update myself with the latest information in my field of interest.	4.3087
Average mean		4.4157

Average score : 26.8/30

Table 5.18. Norm Value Table : Task Efficacy Scale

Item no	Item	Mean Value
TaskEff01	I strive to attain perfection in every job	4.4226
TaskEff02	I consistently follow up on the commitments made by people	4.1959
TaskEff03	When a task is assigned to me, I clarify all the resources needed for completing it.	4.5313
TaskEff04	I maintain a "to-do" list or a " plan of action " for any task	4.2359
TaskEff06	I try to promote my college among others	4.2574
TaskEff07	People come to me whenever they need a solution for certain problems	4.1969
	Total Mean	4.306

Average score: 25.9 / 30

Table 5.19. Norm Value Table: Interpersonal and Team building skills Scale

Item No	Item	Mean Value
TeamBuilding01	I train / teach my fellow classmates on tough topics during my free time.	4.2195
TeamBuilding02	I am capable of splitting the tasks among group members when I am the group leader.	4.4882
TeamBuilding03	I help others to identify and improve on their weaknesses	4.3836
TeamBuilding04	I can understand the subtle differences in the performances of others in a team.	4.1313
	Total Mean	4.305

Average score: 17.45 / 20

5.12 DESIGN OF ANSWER KEY AND SCORE INTERPRETATION FOR ICMS

The norm values that we derived is used to design a Scoring Key for the ICMS final version. The answer key will enable a test administrator to score the items and compare with the norm values for interpretation and provide suitable advice / intervention for the candidate.

The ICMS Scoring Key is shown as Exhibit 5.2 below

Exhibit 5.2.

ICMS Scoring Key

Instructions to Test Administrator : The Inventory for Critical Managerial Soft Skills (ICMS) is used to assess the critical soft skills of a candidate. The tool is a self-rating standardized psychometric tool and shall be administered with an objective of understanding the status of critical soft skills of a candidate. The critical soft skills assessed in this tool are the following.

Communication Skills:

This stands for set of skills which helps a candidate to communicate for professional purposes using oral skills - which includes interpersonal communication , presentation skills and written skills in the form of reports or official documents

Leadership Skills:

This stands for a set of skills which enables a candidate to take leadership roles, take initiative and responsibility related to task at hand.

Interpersonal and Team work skills:

This stands for skills which is crucial for creating and maintaining a cordial relationship with colleagues and superiors.

Self - Management skills:

This stands for the level of awareness about self-including their perception of the individual's strengths and weaknesses.

Goal Setting skills:

This stands for the candidate's capability to understand and articulate long term and short term goals which is important at work

Decision Making Skills:

This stands for those skills which enables capability to solve problems and to take suitable decisions as per the need of the organization / situation.

Task Efficacy:

This stands for the candidate's capability to deliver results and task completion as per mandates.

Scoring method

The tool is designed on LIKERT SCALE for agreeableness. The Scoring is done in the following manner

Strongly Disagree	- 1 point
Disagree	- 2 points
Neither Agree nor Disagree	- 3 points
Agree	- 4 Points
Strongly Agree	- 5 Points

Each of the item is scored points as per the candidate's response. The items corresponding to each of the scale is given in the ICMS Norm Table below. The Norm Values are also listed in the same table.

ICMS Norm Table		
SCALE	Items under the scale	Norm Value for MBA Fresher Adults aged 22- 30)
Communication Skills	Item numbers 5 , 9, 19, 24, 27,29, 32 , 35	Norm Value : 35.3 /40
Decision Making Skills	Item Numbers 3, 11, 15, 30	Norm Value : 17.4 /20
Goal Setting Skills	Item numbers 1,10, 18, 36	Norm Value : 12.39/ 20
Leadership Skills & Initiative	Item Numbers 2,7, 14, 21 , 26	Norm Value: 21.8/25
Self - Management Skills	Item numbers 4,6,13,17,22, 28	Norm Value : 26.8/30
Task Efficacy	Item numbers 8,16,23, 33,34, 37	Norm Value: 25.9/30
Interpersonal and Teamwork Skills	Item numbers 12,20,25,31	Norm Value: 17.45/20

Score Interpretations

Based on the norm values, the administrator can guide the candidate on specific areas of soft skills improvement.

Scale	Score value	Interpretation
Communication Skills	Below 33	Low
	34- 36	Average
	36 -39	High
	40	Over confident
Decision Making Skills	Below 15	Low
	16-18	Average
	19	High
	20	Over Confident
Goal Setting Skills	Below 11	Low
	12-14	Average
	15-18	High
	19-20	Over Confident
Leadership Skills & Initiative	Below 20	Low
	21-22	Average
	23-24	High
	25	Over confident
Self - Management Skills	Below 25	Low
	26-27	Average
	28-29	High
	30	Over confident
Task Efficacy	Below 25	Low
	25-27	Average
	27-29	High

	30	Over confident
Interpersonal and Teamwork Skills	Below 16	Low
	17-18	Average
	18-19	High
	20	Over Confident

5.13. CHAPTER RECAP

The Chapter Five of this thesis dealt with the Statistical analysis to arrive at the Psychometric properties of the tool which subsequently named as “Inventory for Critical Managerial Soft Skills - ICMS”. From the results of the chapter four, the data got further analysed using AMOS to arrive at the CFA Scores for confirming the reliability and validity indexes of each of the scale. Further the latent structure analysis was conducted and a second order CFA Model fit was confirmed. This indicates that all these scale correlate to an overlying structure - in this case, the “Critical Soft Skills” thereby confirming the validity of the scales to be used together as a single tool. This chapter also went ahead to administer the final version of ICMS to a group of 100 MBA fresher’s and arrive at norm values for each of the scales. The norm values as well as the ICMS final version along with the ICMS Scoring Key is also presented in this chapter. The next chapter gives the summary and conclusion of this research work.



- 6.1 *Summary*
- 6.2 *Discussion of findings*
- 6.3 *Implications and recommendations for theory, research and practice*
- 6.4 *Limitations of the study*
- 6.5 *Conclusion*

This chapter gives the results and conclusion of the study along with necessary appendices and bibliography.

6.1. SUMMARY

The purpose of this study was to develop an instrument to measure the various dimensions of critical Soft skills competencies of managerial candidates and to empirically validate the instrument. The conceptual model of seven critical Soft Skills was derived from the literature and through empirical studies. Each dimension was further defined and its domain mapped. Items were generated to measure each dimension. The scales were then examined for clarity, content validity and face validity through an expert validation process. Revisions were made to the scale based on the feedback to enhance content validity and face validity. An EFA was conducted to examine the dimensionality of the revised set of scales and factor loadings were examined to create a parsimonious representation of the item sets. The results of the EFA demonstrated construct validity of the revised scales. Reliability tests were conducted on the revised scales and reliability coefficients for each scale determined. Finally, a CFA was conducted to confirm the model. The model confirms a secondary latent structure which means that all these seven scales are part of a dimension, which is, in this case – the Critical Soft skills. Thus, the tool constructed and validated was named as **“Inventory for Critical Managerial Soft Skills – ICMS”**. The scoring key was designed and the tool was re administered among candidates to arrive at norm values for the population – fresh management graduates.

6.2. DISCUSSION OF FINDINGS

A review of the literature on soft skills and its importance in employee hiring and training revealed a rich diversity of ideas and propositions

especially more prevalent in recent times: However, the literature lacked research works in the field of assessment of soft skills which is indeed a very important step in training and development . This study therefore tried to firstly understand by preliminary exploration works towards identification and confirmation of the most important soft skills and then went on to design and empirical validation of the tool, later named as “Inventory for Critical Managerial Soft Skills – ICMS”

The first research question tried to identify the importance of the various soft skills in the hiring of fresh management graduates. Various stages of studies including literature analysis, content analysis and direct sample survey among employers were conducted and further statistically analysed to arrive at the most critical skills. Seven critical soft skills were thus identified by expert conceptual analysis and finally the conceptual framework for the study was derived. The Operational definition for the seven critical soft skills were also defined.

Guided by the second research question, the seven dimensions of the ICMS were operationalized through definitions. The content for each domain was mapped and items were generated to elicit responses on each of them. Principles of survey design were used in generating an inventory of items to measure each dimension. Thus at the end of the process, there were 67 items totally, with each dimension having close to double and up to three times the number of items that would eventually be necessary to measure the dimensions.

In order to develop an instrument that could demonstrate evidence of reliability and validity, it was necessary to follow procedures of expert

validation and face validation. Feedback from experts was used to revise or delete items that had a clarity index of less than 0.7. The expert validation process thus helped improve the clarity of the items, a necessary condition for achieving reliability for the scales. The content validity of the scales was also enhanced through revisions proposed by the experts. An exploratory factor analysis was conducted using principal axis factoring after the tool was administered on target population and the data collected. Based on correlation values between items of a scale, and factor loadings of items to the identified factors, items that did not adequately measure the construct were deleted. Balancing domain sampling adequacy with parsimony three to five items were selected for each dimension that best measured the factor corresponding to the seven scales of ICMS. Thus the exploratory factor analysis provided empirical validity for a seven factor structure to the 48 item ICMS scale, as theorized by the Critical Soft Skills model. Reliability coefficients for the scales were all found to be greater than .8, providing evidence of good reliability.

Finally, a confirmatory factor analysis was conducted to test the hypothesis that the seven factor structure, supported by the results of the Exploratory Factor Analysis was proven. The CFA also helped in eliminating a few more items which did not yield good loadings. Finally, the tool was finalized with 37 items which measures seven critical soft skills competencies. Thus the findings of this study provide theoretical and empirical support to the ICMS model through evidence of construct validity, content validity, face validity, reliability, and factor structure reflecting its conceptual foundation.

6.3. IMPLICATIONS AND RECOMMENDATIONS FOR THEORY, PRACTICE AND RESEARCH

6.3.1. Implications and recommendations for theory

The concept of the soft skills competency development has evolved over the last few decades, with several conceptualizations and interpretations. Various theoretical constructs and models have been derived based on empirical studies conducted in various contexts on what comprises soft skills. However, a proper theoretical model acceptable to various context is yet to be arrived at. Stephen Gibb (2014) has stressed the need for a theoretical model for assessment of soft skills. The common themes, depicted in the Critical Soft skills Model helps in narrowing down the most important skills - the foundation skills. This study thereby strengthens the research on soft skills and assessment by providing an empirical evidence to the theory building process in the area of soft skills development and assessment. The study could contribute to the literature on soft skills by confirming the critical soft skills as well as providing a standardized tool.

6.3.2: Implications and recommendations for practice

The ICMS is a practical tool for soft skills assessment and can be used as a precursor for personal change and development. With the ever increasing importance of soft skills in the workplace more and more organizations need practical tools and solutions for effective strategies and practices. The critical soft skills framework will enable organizations to understand the phenomenon of soft skills and take a more holistic approach to dealing with the individual capabilities. The tool could also help an individual to plan and analyze his / her skill development areas. The tool

can be used for analysis at a sector level and can also provide information that would be critical for professional associations and organizations in that sector. Generational differences at the workplace indicate that an awareness of soft skills would help organizations be better equipped to understand and support a young workforce with perhaps different values and needs. As organizations face the steep costs of dealing with turnover, this model could present an opportunity for retaining their talent and in better utilization of the resources. The tool though can help with the screening of the soft skills competencies of the candidates and aid in the recruitment strategies of organizations, it is recommended that the same is used with caution along with other means of recruitment screenings until the predictive validity is established in due course. The findings of this study can raise awareness for the need and possibility for soft skills and the tool will thereby enable a quick and easier assessment of the critical soft skills.

6.3.3. Future research areas

With the development of a multidimensional model of soft skills, and a clearer understanding of the various dimensions, there is now an opportunity to further explore the distinct dimensions. More studies on the various remaining dimensions, apart from these seven critical soft skills presents a vast research scope. Research in any area is substantially enhanced by the ability to measure a construct. The development and validation of the ICMS instrument opens the doors for further validation of the instrument. Testing for convergent validity with other constructs in the soft skills inventory / employability and discriminant validity with constructs such as emotional intelligence or workplace performance

measures are recommended. Validating the instrument for other cultural contexts should be considered.

With an instrument to measure soft skills, with evidence of high internal consistency and validity, it will be possible to study the antecedents and consequences of the critical soft skills and provide a new perspective in the study of soft skills and its impact on individual as well as organizational outcomes. More studies analyzing variances in perceptions due to gender differences, cultural differences, difference in career stage could help strengthen understanding of soft skills competencies.

Apart from the above the future research scope for ICMS for providing further evidence of validity for the scales could also include

- conducting a CFA with a larger sample to check if there is any variance
- Administering the 37-item scale to a new sample and arriving at psychometric properties
- Using two versions of the 37-item scale with different item orders to examine item order bias
- Upgrading or adding scales for any of the softskills which are not part of the ICMS tool , based on the needs of the industry at a periodic manner

6.4. LIMITATIONS AND DELIMITATIONS OF THE STUDY

Every research study has its limitations and delimitations. Thoroughly and thoughtfully identifying them is important to make accurate interpretations based on the findings. Thus, they have been enumerated here. One of the limitations of the ICMS instrument is that it measures only the critical soft skills which were identified as most important for managerial

aspirants. However, we have to understand that these seven soft skills are just a few of the many soft skills competencies and need not represent the managerial soft skills in its entirety. Also, the items try to assess the self-reported perception of one's own preferences and competencies. Perceptions are based on observations registered by individuals and those could be different depending on numerous factors such as the age, tenure, level, attitude and personality of the person reporting the same. Basing measurement on perception also poses limitations due to measurement biases such as social desirability and acquiescence. Measures were taken to minimize those biases in the design of the instrument, but the possibility cannot be ignored. It has been noted (Podsakoff et al., 2003, Thomas & Kilmann, 1975) that in addition to the tendency for participants to respond in a culturally acceptable manner, items in a questionnaire that possess more social desirability may correlate to others because of their social desirability. Social desirability at an item level as well as at construct level could be a potential cause of result variance for the ICMS instrument. The order in which statements are posed or questions are asked could be a source of bias (Hayes, 1964, Podsakoff et al., 2003). At this stage of the study, the instrument was not tested for such bias and will be considered in a follow-up study by reordering the items and providing different versions to see if there is variance in responses.

Another important limitation of the study is the varying time period for each phase. The time difference between phase one and the final phase could have had some influence on the ratings or results of the statistical analysis.

Another limitation for this study emanates from the sample selection. the population for this study cannot be obtained as a clear list, eliminating the possibility of random sampling. Hence we had to use the available database from job portals and send out email questionnaires. However the response rate was very poor considering the volume of emails sent out in order to achieve the total dataset of 975. The researcher also resorted to some data collection through local networks .Hence the dataset could not be considered as purely random and hence could have had some effect on the results.

This study is also limited to the population to management graduates within India. Thus the validity of this instrument is restricted to the cultural context of India and included Management graduates with 0-1 years of experience and does not consider responses of later/middle career professionals.

Another limitation of this study is that this study does not arrive at the Predictive Validity of the tool. Predictive validity can be arrived only with application of the tool in a longer context and check the dataset of candidates who perform better at work based on the results of the tool . This longer duration study is not included in the scope of this thesis and could be undertaken as a follow up research later. It has to be understood that predictive validity is a validity which is evolved through years of application of the tool and refining the tool.

6.5 CONCLUSION

At a macro-economic level, according to the International Monetary Fund (IMF), India is projected to become the 6th largest global economy by

2020 and the 3rd largest (behind China and the US) by 2030. However, the same can be achieved by developing a pool of skilled human resource who can be made readily available to industry.

We have been hearing the words “Soft skills” much in the past few decades. Training and development industry is a multi-billion industry and without proper outcomes, it becomes a bad investment. Every industry is transforming in the way it functions with the advent of technology and the way people interact with them. It is imperative that there shall be effective training systems and assessment systems. The concept of soft skills is something that is getting defined slowly in this process. With more research works in this field, the concept is getting more acceptance and clarity.

This study accomplished the task of furthering theory through the development of a critical soft skills framework for understanding soft skills competencies of management aspirants. Further it established a fresh perspective with which organizations can better understand, and respond to the phenomenon of soft skills. With the development of a scale to measure the critical soft skills, this study has opened new avenues for research on soft skills. Thus, this study makes a significant contribution to research, theory, and practice.

This study agrees to several previous studies in the field of employer’s perception of soft skills (Andrews & Helen (2008) , Kantrowtiz (2005), Khain Wye & Mee Lim (2009, William Hinchliffe & Jolly (2011) , Daud, Abidin, Sapuan, & Rajadhurai (2011), LaPrince (2013) to name a few) where it has been found that “soft skills” and its various dimensions contribute to the management graduates effectiveness. Several new studies

also strengthen the assumptions and findings of this study. For eg: In a survey by Chowdary & Ponnuru (2016) employers were asked questions about the importance of Soft skills Training and Development and soft skills deficiencies in employees. Sixty-seven percent of human resources managers said they would hire an applicant with strong soft skills whose technical abilities were lacking; only 11% would hire someone who had strong technical expertise but weak in Soft-skills. In addition, the overwhelming majority 92% of HR managers felt technical skills are easier to acquire than soft skills.

Similarly, according to the 20th CEO Survey by the leading consulting company Pricewaterhouse Coopers (PWC), **87%** of CEOs worldwide (among 1379 CEOs interviewed in 79 countries) mentioned '**Non-availability of key skills**' as the top most concern impending their growth. In the same study it was also found that while STEM and digital skills were seen as important, demand for these was outstripped by 'soft' skills – adaptability, problem-solving, creativity and leadership (PWC,2017) .

Despite several such studies, there has not been many studies in trying to design an assessment tool for assessing soft skills. This study therefore is a pioneering effort in trying to design a psychometric tool for the selected critical soft skills. Therefore this study could be a beginning of similar works in this direction and developing the curriculum for soft skills training and development in management education. To conclude, this is a beginning of further research and possibilities in the area of soft skills assessment.



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APPENDICES

Research Questionnaire

Employer Perception of Soft Skills of Business Graduates

Researcher

CHANDRA VADHANA R.
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Dear Sir/Madam,

Everyone speaks about “soft skills” these days. As Employers, you say that you need candidates with exemplary “soft skills”. **But, what exactly is “Soft skills”?** Considering that technical competence being a constant, then what differentiates one candidate from another could be the presence of “soft skills”. However, this concept is still an under researched area and needs to undergo empirical validation process in order to gain wider acceptance and applicability. Hence, **YOU**, as an **employer** could contribute to this field by giving your thoughtful response, based on your expertise of recruiting fresh business graduates.

The purpose of this study is to identify critical soft skills competencies of entry level business graduates. That is, to identify those important qualities which include knowledge, skill and attitude, that you expect from a **fresh** business graduate (BBA/MBA/PGDM/other management programs) to possess.

I humbly request you to select the appropriate response in the attached questionnaire based on your own **industry specific needs**.

The information obtained via this survey will be used for academic purposes only. At no point, will the identity of the respondent and the company will be revealed. I thank you in advance for your invaluable assistance and cooperation in completing the questionnaire. Should there be any doubts or ambiguity in any items, please feel free to contact me.

Please note that the term fresh business graduate in this questionnaire is defined as a degree, or masters holders in management. They may be working as executives/ management trainees in the field of Marketing, Sales, finance, HR, operations, logistics, customer service etc.

ALL RESPONDENTS SHALL BE KEPT ANONYMOUS AND THEIR RESPONSES SHALL BE KEPT STRICTLY CONFIDENTIAL

Please read the following statements statements??? and select the option, which you think is right for an ideal entry level Business graduate to possess. Please keep in mind that you **consider your industry specific needs** and **Not** a generalized viewpoint about business graduates.

Use a properly balanced scale for measuring the importance. Can refer the scale of importance

Or other option is to go for a plain 5 point or 10 point scale where we denote 1 for not at all important and 5 or 10 for very important. This may increase the freedom of the respondent to answer and moreover we get more precise evaluation. This cannot be put to a factor analysis since the structure dint support that.

We have To think seriously on how to increase the aesthetic beauty of the questionnaire since more number of questions are involved.

Sl no		Very much important	Important	Somewhat important	Not so important	Unimportant
1.	Accepts Feedback					
2.	Acts assertively					
3.	Acts calmly during crisis					
4.	Acts courteous and respectful					
5.	Acts creatively					
6.	Acts decisively					
7.	Acts patiently					
8.	Acts straightforward					
9.	Acts honest					
10.	Acts with integrity					
11.	Adapts to environment					
12.	Able to modify communication according to audience					
13.	Able to handle work pressure					
14.	Appears neat and tidy					
15.	Appears pleasant and happy					
16.	Admits mistakes					
17.	Analyses needs of work					
18.	Acts proactively					
19.	Answers questions politely					
20.	Able to express expectations					
21.	Able to express problems to the concerned authority					
22.	Able to draft written communication with a professional standard					
23.	Asks questions					
24.	Attends to details related to job.					

25.	Aware of culture differences among people					
26.	Builds a network of resources needed for execution of job					
27.	Builds and maintains relationships					
28.	Coaches /trains others					
29.	Commands the respect of others					
30.	Compliments others on valid points					
31.	Considers consequences when making decisions					
32.	Controls emotions					
33.	Cooperates with others					
34.	Possess a good humour sense					
35.	Defines objectives					
36.	Defuses a situation /confronts issues					
37.	Delegates appropriately					
38.	Delivers presentations confidently					
39.	Demonstrates empathy					
40.	Develops a strategy plan					
41.	Develops others					
42.	Develops rapport with others					
43.	Distinguishes big from small errors					
44.	Evaluates performance					
45.	Expresses opinions without hurting others					
46.	Exercises judgement					
47.	Follows through on commitments					
48.	Follows the rules and regulations of the organization					
49.	Follows up with others					
50.	Gains power to exercise influence over others					
51.	Gives feedback to others					
52.	Gets dissimilar people to work together					
53.	Greets employees and coworkers					
54.	Handles delicate/confidential situations carefully					
55.	Handles objections					

56.	Has a global perspective					
57.	Hears other points of view					
58.	Holds others accountable for their actions					
59.	Holds self accountable for actions					
60.	Influences others					
61.	Is active most of the time					
62.	Juggles conflicting priorities					
63.	Knows end goal and what to do to accomplish goal					
64.	Knows about own strengths and weaknesses					
65.	Knows resources					
66.	Learns unwritten rules					
67.	Listens to concerns of others					
68.	Maintains and enhances self and others' self-esteem					
69.	Maintains confidential information properly					
70.	Manages impression					
71.	Micromanages projects					
72.	Models behaviors he/she would like to see others perform					
73.	Modifies reactions to fit the culture of the organization					
74.	Motivates others					
75.	Negotiates					
76.	Observes the situation and others' behavior					
77.	Organizes work					
78.	Overcomes setbacks					
79.	Persists/works hard					
80.	Persuades					
81.	Plans and organizes his/her time and activities					
82.	Presents self with proper authority					
83.	Promotes a team environment					
84.	Promotes product/service/business/knowledge					
85.	Provides solutions					

86.	Ready to take up assignments					
87.	Responsible					
88.	Respects coworkers					
89.	Respects Boss					
90.	Recognizes limitations					
91.	Recognizes people's efforts					
92.	Remains firm in decisions					
93.	Resolves conflict					
94.	Responds to upset customers					
95.	Seeks information					
96.	Sees big picture as well as details					
97.	Sets goals					
98.	Sets SMART goals (Specific, measurable , achievable, realistic and Time bound)					
99.	Shows accessibility/approachability					
100.	Shows an entrepreneurial spirit					
101.	Shows confidence					
102.	Shows enthusiasm					
103.	Shows interest					
104.	Shows sensitivity to organizational culture					
105.	Solves problems					
106.	Takes initiative					
107.	Takes rejection					
108.	Takes risks					
109.	Talks before he/she thinks					
110.	Tolerates stress					
111.	Turns negative situation into a positive/learning situation					
112.	Understands the political environment					
113.	Updates knowledge and skills					
114.	Uses democratic decision-making					
115.	Uses humor to make a point					

116.	Voices opinions					
117.	Works as a team player					
118.	Willingness to learn new things					
119.	Keeps abreast with latest in the field					
120.	Writing skills					
121.	Good email writing skills					
122.	Collects and analyses information in a useful manner					
123.	Wears dress according to the occasion					
124.	Takes care of personal hygiene and grooming					
125.	Uses latest gadgets					
126.	Able to read and interpret complex documents					
127.	Able to communicate in simple language					
128.	Speaks language without grammatical errors					

Respondents Background

1. **Gender** : Male Female
2. **Age** :
3. **Your highest Qualification:** Graduation PG Mphil Phd
4. **Your total number of year of working experience**
(in completed years) :
5. **Your designation:**
6. **Your total number of years in the present organization:**
7. **What kind of organization do you work for?**
 - Multi National Corporation (MNC)
 - Local company /firm
8. **Size of the organization** (Number of employees including management.
If exact figure unknown, please give an approximate number):
9. **Which of the following business sectors does your organization belong to?**
 - Banking, Insurance and other financial institutions
 - Logistics & Transportation
 - Construction /Real Estate

- Manufacturing
- Information technology /ITES
- Telecom
- Education
- Retail /wholesale
- Agricultural
- Mining
- Government /NGO
- Hospitality
- Hospitals
- Consulting
- Others ((Please specify)

10. **How many fresh business graduates you have recruited within the last year?** (Approximate figure, if exact figure not available):

11. **What is the most preferred recruitment method you use?**

- Advertisements - online portals
- Advertisements - newspaper and other offline media
- Campus recruitments
- Employee referrals
- Recruitment consultants
- Others: (Please specify):

12. **How do you rate the overall soft skill competencies of the b-school graduates you have recruited in the past year?**

1-Poor.....10 Excellent

13. **How do you rate the overall soft skill competencies of the b-school graduates you have interviewed in the past year?**

1-Poor.....10 Excellent

14. **What skills do you think does the present generation of b-school graduates lack the most (if any)?**

15. **Your Suggestions for improving the quality of b-schools (Please feel free to write your real opinion and suggestions**



Assessment Test for Soft Skills of Management Graduates

Dear Management graduate,

Thank you for your time for taking part in this test. You may be contacted for suitable job or internship opportunities based on your profile . Hence please do it meticulously and carefully.

The following questionnaire is a test for assessing managerial softskills of MBA freshers. The questionnaire must be preferably completed at one go and may take around 10- 15 mins for completion. Kindly do not leave it incomplete in between, since the answers don't get saved unless you press ur submit button in the end. There are 130 questions and all are mandatory.

Each question must be read carefully and scored as per what you think is applicable for you. DO NOT THINK TOO MUCH. ANSWER WHAT COMES TO UR MIND FIRST. There are no right or wrong answers. All questions are mandatory. Pls select "neutral" only if the question is not clear.

Each Section has 10 Questions and there are 11 Sections for you to answer . All the best! Click the NEXT button to start the test.

*Required

Section 2 of 12

This test attempts to find out your personal softskills competencies hence be honest wit your answers.

Choose the best option for each question.

Choose 1 if you deny or are Mostly NOT likely to be as given in the statement

Choose 2 if you partially deny the statement

Choose 3 ONLY If you are Unsure or unable to choose

Choose 4 if you partially agree to the statement

Choose 5 if you Fully agree or are Most likely to be as given in the statement

1. I usually modify my reactions to fit to the culture of the people around. *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

2. I can modify my action to suit the political environment of the organization *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

3. I am able to prepare my assignments , reports , records etc in a systematic way as expected by my faculty/ supervisors *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

4. I am able to adapt to the organisational culture of any organisation that I am attached to *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

5. I could learn the unwritten rules of conduct while doing my internship. *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

6. I give respect to my faculty at all times. *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

7. I find it difficult to adjust with the rules and regulations of the college *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

8. I have sometimes hurt the cultural or religious sentiments of a classmate or friend *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

9. I can understand the political behavior of people around me. *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

10. I can easily understand the cultural differences among people. *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

Section 3 or 12

Choose the best option for each question.

Choose 1 if you deny or are Mostly NOT likely to be as given in the statement

Choose 2 if you partially deny the statement

Choose 3 ONLY if you are Unsure or unable to choose

Choose 4 if you partially agree to the statement

Choose 5 if you Fully agree or are Most likely to be as given in the statement

11. I am confident of delivering presentations as part of all jobs assigned to me. *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

12. People appreciate my ability to crack jokes to diffuse any tension. *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

13. I always express my opinions in a discussion. *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

14. I appreciate and enjoy humour in all conversations with others. *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

15. I collect and analyse all information needed for doing my job effectively. *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

16. I am not able to patiently listen to other's points of view in a discussion *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

17. Whenever I need to give a negative response, I am able to put it politely. *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

18. I am not able to understand complex documents while reading them. *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

19. I do not think much before I speak *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

20. I am able to express my problems to my teachers/faculty when needed. *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

Section 4 of 12

Dear Management graduate, This test attempts to find out your personal softskills competencies . Kindly focus on each item before clicking the button !

Choose the best option for each question.

Choose 1 if you deny or are Mostly NOT likely to be as given in the statement

Choose 2 if you partially deny the statement

Choose 3 ONLY If you are Unsure or unable to choose

Choose 4 if you partially agree to the statement

Choose 5 if you Fully agree or are Most likely to be as given in the statement

21. I am able to evaluate the consequences while making decisions. *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

22. **I usually negotiate with my classmates for solving issues in the class. ***

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

23. **Whenever there is any conflict or clash of interests among my friends, I help in resolving the same. ***

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

24. **I can understand the difference between big mistakes and small errors. ***

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

25. **I can take appropriate decisions related to myself or my works. ***

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

26. **I am tensed whenever any issues occur in any relationship or situation ***

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

27. **I maintain a good level of eye contact with the audience while communicating or presenting ***

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

28. **I understand and correct any bad gestures I may have while communicating or presenting ***

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

35. I always have a timeframe for attaining my goals. *

Mark only one oval.

	1	2	3	4	5	
Strongly Agree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Disagree

36. Normally the goals I set are achievable *

Mark only one oval.

	1	2	3	4	5	
Strongly Agree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Disagree

37. I set clear goals for accomplishing my tasks. *

Mark only one oval.

	1	2	3	4	5	
Strongly Agree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Disagree

38. I do not ask everyone's opinion whenever a group decision is to be taken. *

Mark only one oval.

	1	2	3	4	5	
Strongly Agree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Disagree

39. I am always able to maintain good relationships with people *

Mark only one oval.

	1	2	3	4	5	
Strongly Agree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Disagree

40. I usually escape from situations which can lead to conflict. *

Mark only one oval.

	1	2	3	4	5	
Strongly Agree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Disagree

Section 6 of 12

Congrats!, you are now half way through in the test. We know that its a bit long. But, persistence is also one of the very important softskills of a fresher. And the way you answer the questions also shows that.

Choose the best option for each question.

Choose 1 if you deny or are Mostly NOT likely to be as given in the statement

Choose 2 if you partially deny the statement

Choose 3 ONLY If you are Unsure or unable to choose

Choose 4 if you partially agree to the statement

Choose 5 if you Fully agree or are Most likely to be as given in the statement

41. I appreciate and recognise other people's efforts *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

42. I am proactive most of the time. *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

43. I train / teach my fellow classmates on tough topics during my free time. *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

44. Students from other classes or colleges also interact with me easily. *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

45. I observe other's behaviour in every situation *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

46. I give due respect to everyone with whom I interact. *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

47. I do not listen to the concerns of others *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

48. I give proper feedback to others whenever required *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

49. I enjoy working in teams *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

50. I may hurt people when I express my opinions *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

Section 7 of 12

Choose the best option for each question.

Choose 1 if you deny or are Mostly NOT likely to be as given in the statement

Choose 2 if you partially deny the statement

Choose 3 ONLY If you are Unsure or unable to choose

Choose 4 if you partially agree to the statement

Choose 5 if you Fully agree or are Most likely to be as given in the statement

51. I try to influence others by gaining positions of power. *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

52. I always motivate others *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

53. It is easy for me to overcome failures *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

54. I can influence people to work towards the goals we set. *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

55. I follow up with every group member on the status of an assignment on a regular basis *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

56. I feel offended when others try to object to my ideas or opinions *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

57. I can understand the subtle differences in the performances of others in a team. *

*subtle means "capable of making fine distinctions"

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

58. I help others to identify and improve on their weaknesses *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

59. I am a role model for others in my class *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

60. I am capable of splitting the tasks among group members when I am the group leader. *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

Section 8 of 12

Choose the best option for each question.

Choose 1 if you deny or are Mostly NOT likely to be as given in the statement
Choose 2 if you partially deny the statement
Choose 3 ONLY If you are Unsure or unable to choose
Choose 4 if you partially agree to the statement
Choose 5 if you Fully agree or are Most likely to be as given in the statement

61. I am an honest person *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

62. I try to be ethically correct in all situations. *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

63. I am mostly neat and tidy *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

64. Others find it easier to share confidential or delicate situations because I can handle it well. *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

65. I take moderate risks in life *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

66. I have a set of principles and values which I adhere to always *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

67. I usually take initiative for new projects in our class. *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

68. I am always ready to take up new projects *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

69. I cannot maintain a secret for long *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

70. While working in projects I do not encourage people to work as a team *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

Section 9 of 12

Choose the best option for each question.

Choose 1 if you deny or are Mostly NOT likely to be as given in the statement

Choose 2 if you partially deny the statement

Choose 3 ONLY If you are Unsure or unable to choose

Choose 4 if you partially agree to the statement

Choose 5 if you Fully agree or are Most likely to be as given in the statement

71. I am aware of table manners and other business etiquette *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

72. I am aware of my limitations. *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

73. I dream of becoming an entrepreneur one day *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

74. I have a clear understanding of my strengths and weaknesses *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

75. I ensure that I wear dress according to the occasion *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

76. I am mostly pleasant and happy *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

77. I often fall sick due to lack of maintaining proper hygiene *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

78. My friends say I appear like a professional in my way of dressing and behaviour *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

79. I do not plan my day and my time very well . *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

80. I know how to create a good impression on others *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

Section 10 of 12

Choose the best option for each question.

Choose 1 if you deny or are Mostly NOT likely to be as given in the statement

Choose 2 if you partially deny the statement

Choose 3 ONLY If you are Unsure or unable to choose

Choose 4 if you partially agree to the statement

Choose 5 if you Fully agree or are Most likely to be as given in the statement

81. I possess skills to start and manage a business *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

82. Whenever there is a stressful situation in class, I try to ease the situation and bring a positive change *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

83. I am aware of my own emotions in any particular situation. *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

84. Rejections or failures are part of life and I can handle such situations easily. *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

85. I am not willing to learn new things *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

86. I become highly stressed when the faculty gives deadlines for completion of projects or assignments *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

87. I regularly update myself with the latest information in my field of interest. *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

88. I am mostly enthusiastic while doing all tasks entrusted to me *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

89. I can tolerate any stress caused by personal or academic matters *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

90. I am a confident person *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

Section 11 of 12

We are now at the last lap! Read carefully and answer!

Choose the best option for each question.

Choose 1 if you deny or are Mostly NOT likely to be as given in the statement

Choose 2 if you partially deny the statement

Choose 3 ONLY If you are Unsure or unable to choose

Choose 4 if you partially agree to the statement

Choose 5 if you Fully agree or are Most likely to be as given in the statement

91. I have important goals for my life. *

Mark only one oval.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

92. I can adjust my emotions to suit any situation. *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

93. I do not take responsibility towards my work *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

94. I try to promote my college among others *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

95. People come to me whenever they need a solution for certain problems *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

96. When a task is assigned to me, I clarify all the resources needed for completing it. *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

97. I believe that somebody will take care of me when I am old. *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

98. I maintain a "to-do" list or a " plan of action " for any task *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

99. I consistently follow up on the commitments made by people *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

100. I believe I have what it takes to succeed in my life. *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

101. I believe that if you work hard enough, you can accomplish anything. *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

102. I strive to attain perfection in every job *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

103. I tend to lose interest in doing something when the work gets dragged or challenging *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

104. I believe that my future will work out. *

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

Last Section !

Yes, You have reached the last section of the test. Just a few more questions and we are done!

105. Where did you do your school education? *

Mark only one oval.

- Rural Areas (In a Village /Town)
- In a Suburban (larger Town/ near to a city)
- In a Large city

106. **What is the profession /job of your mother?**

*

If she is a homemaker, please mention the same

107. **Your Mobile number ***

108. **Please select your category ***

Mark only one oval.

- MBA
- MBA (IB)
- PGDM/PGDBM
- Other PG in Management

109. **Where did you do your college education before MBA? ***

Mark only one oval.

- Rural Areas (In a Village /Town)
- In a Suburban (larger Town/ near to a city)
- In a Large city

110. **Your email id ***

111. **Have you taken any Employability Test or similar Psychometric Test to assess your softskills? ***

Tick all that apply.

- Yes , as part of Softskills Training
- Yes, as part of recruitment process
- I am not sure whether I had taken such a test.
- No, I havent taken any such tests
- No, I havent even heard of any such tests
- This is the first test i have taken

112. **Name of College ***

113. **Your Location ***

Write your place of doing your MBA (City, district , State)

114. **Your Name ***

115. What is your Career Goal? *

Write your long term career plan / ambition in life.

116. What is your average marks in percentage for MBA curriculum? (Approximate range only is needed) *

Mark only one oval.

- 40-50%
- 50-60%
- 60-70%
- 70-80%
- >80%

117. Have you got any placement offer before leaving campus? *

Mark only one oval.

- Yes
- No

118. What is the profession /job of your father? *

119. How many approximate days of external trainers have handled soft skills sessions during your entire 2 years of management education *

Consider all your external training days for Two years.

Mark only one oval.

- < 5 days
- 6- 10 days
- 11-20 days
- 20 - 30 days
- 30 - 40 days
- >40 days

120. **Name of your University ***

Mark only one oval.

- Kerala University
- MG university
- CUSAT
- Calicut University
- Kannur University
- KTU
- Other: _____

121. **Have you attended any placement interview in the past one month? ***

Mark only one oval.

- Yes
- No

122. **Do you think that your project work or Internship helped you in increasing your soft skills? ***

Mark only one oval.

- Yes , To a great extent
- Yes, To a considerable extent
- Unsure
- No, Not as much as what I had expected
- No, I dont think any great change has happened

123. **Do you think that your soft skills has improved in the past two years of management education? ***

Mark only one oval.

- Yes , To a great extent
- Yes, To a considerable extent
- Unsure
- No, Not as much as what I had expected
- No, I dont think any great change has happened

127. **Please select the frequency of such trainings internally (Handled by internal faculty) from the below list ***

Select all applicable

Mark only one oval.

- 0-2 hours per week
- 3-6hours per week
- 6 - 10 hours per week
- No such Trainings internally

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LIST OF PUBLICATIONS

- [1]. Farzana S Hussain, **Chandra Vadhana R**, Zakkariya K.A, “Are women leaders breaking the gender-stereotype? A study on emerging androgynous leadership style among women in the context of globalization.” *International Journal of Physical and Social Sciences (IJPS)* ISSN: 2249, Citations - 4, 2012.
- [2]. **Chandra Vadhana R**, Zakkariya K.A., H Ramanathan , “Soft skills competencies of fresh management graduates : Expectations of the Indian Corporate World” (Book Chapter). *Human Capital, Employability and Competency Building* 1, 170-182.
- [3]. **Chandra Vadhana R**, Zakkariya K.A “Management Education - Can we bridge the gap? - A Qualitative Study on Employer's Perception of soft skills of Management Graduates”. UGC Sponsored National Seminar on Management Education in India -Changing Role and New Strategies. (Conference proceedings)
- [4]. KA Zakkariya, **Chandra Vadhana R**, “Changing Scope of Organisational Behaviour-The need for focusing on the Organisational Milieu and the Emerging Importance of Training in People Skills” *Asian J. Management* 4 (3), 165-171.
- [5]. **Chandra Vadhana R**, KA Zakkariya, 2012. “Does “Soft Skills” Matter For Indian B-Schools? (A Content Analysis of the Advertisements of Indian B-Schools to Identify the Major Focus Areas, With Specific Reference to Soft Skills of fresh management graduates” *International Journal of Business and Management Tomorrow* ISSN: 2249-9962.
- [6]. **Chandra Vadhana R.**, Zakkariya K.A., Hareesh Ramanathan 2012. “Interpersonal Styles Assessment- A Feedback tool for management students” *Commerce and Management Explorer*, ISSN 2230-9187, Pages: 235-249.



