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Skill Sets Depicted by Fresh Graduates in Campus Hiring Process

Dr.M.Vijayakumar*
*Assistant Professor (SG),
SRM Business school, SRM University,
Vadapalani, Chennai,
Tamilnadu, India.

Abstract :- Unemployment and employability are challenges faced by present day graduates. Whatever may be the situation, the students do graduate in some discipline or the other as a cultural symptom of our country. This indicates that it is highly unusual to find young students in our country who would dare to quit studies in higher secondary unlike the western countries in which they opt for part-time studies from higher secondary onwards. Whatever, be the situation, unemployment of employability issues, hiring does go on as a part of every organization every year. It is the only way through which fresh blood can be introduced in the organization thereby leading to several other growth aspects of the organization. Of several traditional and modern methods exploited, campus hiring is one of the oldest methods which are still believed by most of the organizations. The researcher has taken efforts to study the skill sets that were identified in students who were hired through campus interviews. The significant findings have been discussed in the paper.

Key words: *Recruitment, hiring, skill sets, students, campus hiring, campus recruitments.*

I. INTRODUCTION

Challenge faced by present organizations is in terms of the quality of employees. The employability of the large number of graduates produced every year is a big question. Insufficient supply of quality skills is one of the main impediments to further economic growth in India. The researcher has done this study to find out the skills depicted by the fresh engineering graduates from colleges in Chennai, a major metropolitan in India. By doing this the recruiters may get an idea about the availing skills. It will also help to identify the real skill level of the Fresh Engineering Graduates. And it is also expected to help engineering colleges and trainees to train their students seeking employment in various domains, according to the industry expectations.

II. REVIEW OF LITERATURE

Relevant literature was collected to proceed with the proposed study. The need to identify the skills of the fresh graduates is significant and hence the proposed study was done in the same direction.

Andrew Dutta, Eldos M Punnose, (2012) – Factors Affecting Choice of First Employer- earlier studies from other countries identified factors which influence the final year management graduates' choice for their first employer. But there is lack of systematic study done with respect to the Indian management graduates aspiring for their first job. This article systematically studied how different educational and social variables influence the expectations of management graduates seeking their first job. Differences on account of gender, region, educational and parental backgrounds influenced the choice of first job.

Vijayakumar.M & Ramalingam.S (2012) conducted a study among 75 recruiters and 270 students by testing 16 attributes of which contributes to the quality of a fresh recruit for any chosen organization. Rank analysis was used to identify the highest contributing factor for the candidates' choice in the recruitment activity. The finding was that oral communication skills is the highest preferred factor by the recruiters. The remaining factors include team work, Problem solving, Self motivation, Decision making, Oral communication, Leadership, Human relations, Time management, Personal appearance, Written communication, Work experience, Creativity, Academic performance, Basic computer, Delegation, and Multilingual. However these factors were not studied under major classifications. The present study is pursued based on the major classifications of skills required unlike the study discussed herein.

Sangeeta Mohanty, (2011) – Recruiters priorities in placing MBA Fresher: An Empirical Analysis – Recruitment is of the most vital roles of the human resource professionals. The current trend demands a more comprehensive approach to recruit and utilize the valuable resources .MBA talent is in demand even at the time of recession. Inspite of this growing demand, MBA freshers are facing deadly competition amongst

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them. The purpose of this paper is to provide a more comprehensive statistical analysis of evaluating and appraising recruiters' priorities in regard to place the MBA fresher in the right place.

Andrea Blom & Hiroshi Saeki (2011) studied about the employers expectations from the graduates of engineering colleges in India. They found that three major skills were expected from the graduates. The skills can be classified as follows: (i) Core Employability Skills (attitudinal and affective skills, such as reliability and team-work); (ii) Communication Skills (Englishskills, written and verbal communication), and (iii) Professional Skills (which generally covers cognitive skills related to the engineering professions, such as ability to apply engineering knowledge; as well as design and conduct experiments and related data analyze and interpretation). These skill factors are similar to findings from other employer surveys. Core Employability Skills and Communications Skills are often referred to as soft skills. These three skill factors were therefore considered as appropriate to use for further analysis. Core skills means Integrity, Reliability, Teamwork, Willingness to learn, Entrepreneurship, Self-discipline, Self-motivated, Flexibility, Understand/take, directions and Empathy. Professional skills include the Use of modern tools, Apply Math/ Sci/Engg know, Creativity, Problem solving System design to needs, Contemporary issues, and Customer Service. Communication skills include Communication in English, Written Communication, Reading, Technical Skills, Experiments/data analysis, Verbal Communication, Basic computer and advanced computer.

KanagaluruSai Kumar, (2011) - Expectations and Perceptions of Students in Engineering Education – A Study- the Purpose of this qualitative study is to ascertain the expectations and perceptions of students studying in private engineering colleges. A sample of 175 respondents has been selected for conducting the study. The various dimensions that are considered for the study include placement, infrastructure, extracurricular activities, education, student's development, educational material and college environment. The study reveals that there is a highest gap in education dimension and lowest gap in placement and college environment dimensions.

VathsalaWickramasinghe, LasanthaPerera, (2010)- Graduates', university lecturers' and employers' perceptions towards employability skills- The purpose of this study is to explore employability skills that employers, university lecturers and graduates value to bring to the workplace, when graduates are applying for entry-level graduate jobs in the field of computer science in Sri Lanka. Although a considerable amount of the literature addresses employability skills, much of the information is theoretical in nature and offers policy recommendations and prescriptive advice.

The above discussed studies highlight that employability issues exist with respect to the present employees in the workplace. Hence identifying the skills possessed by the students before or while hiring them will help to understand if matching them with the organization will be possible in future.

III. RESEARCH METHODOLOGY

The objective of the researcher was to study the skills possessed by the fresh engineering college graduates in Tamilnadu. The corporate that hire fresh graduates from the Engineering Colleges were identified using non-probability purposive sampling method. The purposive sampling by non-probability method adopted to obtain the responses from the recruiters hiring from the engineering colleges in Tamilnadu. Purposive sampling, also known as judgmental, selective or subjective sampling, reflects a group of sampling techniques that rely on the Judgement of the researcher when it comes to selecting the units (e.g., people, cases/organizations, events, pieces of data) that are to be studied. A scale consisting 116 items was constructed to measure the Employers' expectation from engineering college students in Tamil Nadu. An attempt was made to identify the available skill of the fresh graduates.

IV. ANALYSIS AND DISCUSSION

A. Factors of Skill Sets of Candidates Recruited From Engineering College through Campus Interview

Factor analysis through principle component method was exploited on the 116 items, and finally 22 skills were identified with respective items.

The data reduction process is indispensable to establish a concise research consistently comprising all the characteristic features of variables involved in this study. The data reduction process is an ingenious method to represent the variable in the form of predominant factors with proper mathematical support. In social science research the research gap generates numerous variables to be examined in the research and they emerge in the form of well framed interview schedule. In particular, the perceptional studies depend upon the responses of the respondents in Likert five point scales. The assignment of numerical values in Likert five point scales for each variable creates co-variances and the variables in the same domain. These co-variances and co-efficient of correlation are useful statistical parameters to group likely variables to form an innovative factor. This is achieved through factor analysis by Principal component method. It reduces the numerous variables into major factors; each factor comprises likely variables with nearest co-variance and correlation value. In this study factors of skill sets of candidates recruited from Engineering College through campus interview has been identified. Skill sets of candidates were measured by 116 items. Based on the agreement given

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by the recruiting professionals, Factor analysis with principal component method using varimax rotation was applied to group the variables in to factors.

Table 1. Initial Eigen values of skill sets of candidates

Factors	Initial Eigen values		
	Eigen Value	Percentage of Variance	Cumulative Percentage
1	3.812	8.25	8.25
2	1.854	5.86	14.11
3	1.712	5.39	19.5
4	1.701	5.31	24.81
5	1.629	4.22	29.03
6	1.602	4.01	33.04
7	1.523	3.98	37.02
8	1.512	3.63	40.65
9	1.469	3.21	43.86
10	1.401	3.06	46.92
11	1.396	2.96	49.88
12	1.378	2.63	52.51
13	1.302	2.52	55.03
14	1.296	2.44	57.47
15	1.274	2.21	59.68
16	1.612	2.02	61.7
17	1.548	1.99	63.69
18	1.512	1.89	65.58
19	1.402	1.78	67.36
20	1.203	1.68	69.04
21	1.112	1.59	70.63
22	1.017	1.23	71.86

The variables (116) are reduced into fewer factors by analyzing correlation between variables (skill sets). In this case 116 variables are reduced in to 22 factors which explore the much of the original data. From the cumulative percentage column, the 22 factors extracted together accounts for 71.86% of the total variance (information contained in seventeen variables). The 22 factors extracted with their components are represented in the table 2.

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Table 2 Factor scores of skill sets of candidates

Factor	Components	Factor Scores
Factor1: Learning skills	Willing to put in time to learn	0.785
	Improve skills that need development	0.722
	Strengthen skills that are already good to become outstanding in them	0.681
	Focus on goals	0.621
	Manage own learning	0.575
	Develops own way to manage knowledge	0.521
	Learning in a variety of ways - IT self help, peer, coach, courses	0.516
	Capacity to learn	0.509
	Information management skills	0.506
Factor 2: Investigating, Analysing and Problem solving skills	Identify problems and solve them quickly	0.742
	Clarifying the nature of a problem before deciding action	0.711
	Collecting, collating, classifying and summarizing data systematically	0.628
	Analyzing the factors involved in a problem & being able to identify the key ones	0.602
	Recognizing inconsistencies in reasoning	0.595
	Using creativity / initiative in the generation of alternative solutions to a problem	0.546
	Differentiating between practical and impractical solutions	0.529
	Solve problems - identify problem and suggest options	0.514
	Evaluating best option to go with	0.508
Factor 3: *Flexibility skills*	Keeping calm in the face of difficulties	0.712
	Planning ahead, but having alternative options in case things go wrong	0.686
	Thinking quickly to respond to sudden changes in circumstances	0.654
	Persisting in the face of unexpected difficulties	0.641
	Capacity to adapt to new situations	0.612
	Ability to work in an interdisciplinary team	0.603
	Ability to adapt to any situation or constant changes	0.591
	Flexible and cope with changes	0.562
	Ability to manage pressure	0.523
Factor 4: Verbal Communication skills	Listening carefully to what others are saying.	0.625
	Able to clarify and summarise what others are communicating	0.602
	Helping others to define their problems	0.578
	Being sensitive to body language as well as verbal information	0.559
	Making the right impression by making effective use of dress, conduct and speech	0.548
	Keeping business telephone calls to the point	0.521
	Thinking up an interesting way to put across message to groups	0.508

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	Successfully building a rapport with audience when speaking to groups	0.501
Factor 5: Written Communication skills	Thinking through in advance what is to be said	0.678
	Gathering, analyzing and arranging information in a logical sequence	0.654
	Developing argument in a logical way	0.635
	Being able to condense information/produce concise summary	0.598
	Adapting writing style for different audiences	0.545
	Avoiding jargon	0.521
Factor 6: Team work skills	Working cooperatively towards a common goal	0.751
	Contributing own ideas effectively in a group	0.643
	Listening to others' opinions	0.621
	Taking a share of the responsibility	0.584
	Being assertive – rather than passive or aggressive	0.561
	Accepting & learning from constructive criticism. Giving positive, constructive feedback	0.512
Factor 7: Planning and organizing skills	Putting points across in a reasoned way	0.632
	Emphasizing the positive aspects of argument	0.622
	Understanding the needs of the person dealt with	0.609
	Handling objections to arguments	0.541
	Making concessions to reach agreement	0.531
	Using tact and diplomacy	0.514
Factor 8: Developing Professionalism	Accepting responsibility for your views and actions	0.701
	Showing the ability to work under your own direction and initiative	0.651
	Making choices based on your own judgment	0.622
	Paying care and attention to quality in all your work	0.564
	Taking the opportunity to learn new skills	0.529
	Developing the drive and enthusiasm to achieve goals	0.502
Factor 9: Computing skills	Word – processing skills	0.631
	Using databases	0.609
	Using spreadsheets	0.582
	Using the internet and email	0.514
	Designing web pages	0.509
	Programming skills	0.502
Factor 10: Persuading	Putting points across in a reasoned way	0.684
	Emphasizing the positive aspects of argument	0.653
	Understanding the needs of the person dealt with	0.603
	Handling objections to arguments	0.594
	Making concessions to reach agreement	0.562

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	Using tact and diplomacy	0.512
Factor 11: Leadership skills	Taking the initiative	0.654
	Organizing and motivating others	0.632
	Making decisions and seeing them through	0.584
	Taking a positive attitude to failure	0.532
	Accepting responsibility for mistakes/ wrong decisions.	0.519
Factor 12: Personal skills	Planning and time management	0.693
	Critical and self-critical abilities	0.653
	Will to succeed	0.584
	Resume Writing skills	0.526
	Presentation Skills	0.511
Factor 13: Positive work ethics	Honesty and integrity	0.642
	Reliability and commitment	0.612
	Loyalty	0.532
	Ethical Commitment	0.522
	Concern for Quality	0.511
Factor 14: Confidence	Ambitious	0.601
	Competitive	0.589
	Risk taker	0.561
	Self awareness	0.532
	Change agent	0.502
Factor 15: Numeric skills	Multiplying and dividing accurately	0.632
	Calculating percentages	0.582
	Using a calculator	0.529
	Reading and interpreting graphs and tables	0.512
	Using statistics	0.503
Factor 16: Inter personal skills	Problem solving	0.603
	Decision-making	0.563
	Teamwork	0.542
	Leadership	0.501
Factor 17: Domain skills	Basic general knowledge in the field of study	0.781
	Grounding in basic knowledge of the profession in practice	0.651
	Project design and management	0.535
Factor 18: Technology Savvy	Good basic IT skills	0.634
	Using PC for internet, emails and WORD	0.582
	Using IT to organize data – eg tables, spreadsheets	0.512

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Factor 19: Multi cultural skills	Appreciation of diversity and Multi- Culturality	0.712
	Ability to work in an international Context	0.632
	Understanding of cultures and customs of other countries	0.512
Factor 20: Personal appearance	Personal hygiene	0.546
	Hair clean and nails	0.527
	Tasteful jewelry	0.507
Factor 21: Enthusiasm and Motivation	Willingness to help	0.519
	Wanting to do things, saying this will be easy	0.504
Factor 22: Creativity skills	Capacity for generating new ideas (creativity)	0.608
	Initiative and entrepreneurial spirit	0.523

From the table 2 it is inferred that factor 1 is a combination of 9 variables such as "Willing to put in time to learn", "Improve skills that need development", "Strengthen skills that are already good to become outstanding in them", "Focus on goals, Manage own learning", "Develops own way to manage knowledge", "Learning in a variety of ways - IT self help, peer, coach, courses", "Capacity to learn and Information management skills" which is named as **Learning skills** factor.

From the table 2 it is inferred that factor 2 is a combination of 9 variables such as "Identify problems and solve them quickly", "Clarifying the nature of a problem before deciding action", "Collecting, collating, classifying and summarizing data systematically", "Analyzing the factors involved in a problem & being able to identify the key ones", "Recognizing inconsistencies in reasoning", "Using creativity / initiative in the generation of alternative solutions to a problem", "Differentiating between practical and impractical solutions", "Solve problems - identify problem and suggest options" and "Evaluating best option to go with" which is named as **Investigating, Analyzing and Problem solving skills** factor.

From the table 2 it is inferred that factor 3 is a combination of 9 variables such as "Keeping calm in the face of difficulties", "Planning ahead, but having alternative options in case things go wrong", "Thinking quickly to respond to sudden changes in circumstances", "Persisting in the face of unexpected difficulties", "Capacity to adapt to new situations", "Ability to work in an interdisciplinary team", "Ability to adapt to any situation or constant changes", "Flexible and cope with changes" and "Ability to manage pressure" which is named as **Flexibility skills** factor.

From the table 2 it is inferred that factor 4 is a combination of 8 variables such as "Listening carefully to what others are saying", "Able to clarify and summarize what others are communicating", "Helping others to define their problems", "Being sensitive to body language as well as verbal information", "Making the right impression by making effective use of dress, conduct and speech", "Keeping business telephone calls to the point", "Thinking up an interesting way to put across message to groups" and "Successfully building a rapport with audience when speaking to groups" which is named as **Verbal Communication skills** factor.

From the table 2 it is inferred that factor 5 is a combination of 6 variables such as "Thinking through in advance what is to be said", "Gathering, analyzing and arranging information in a logical sequence", "Developing argument in a logical way", "Being able to condense information/produce concise summary", "Adapting writing style for different audiences" and "Avoiding jargon" which is named as **Written Communication skills** factor.

From the table 2 it is inferred that factor 6 is a combination of 6 variables such as "Working cooperatively towards a common goal", "Contributing own ideas effectively in a group", "Listening to others' opinions", "Taking a share of the responsibility", "Being assertive – rather than passive or aggressive" and "Accepting & learning from constructive criticism" which is named as **Team work skills** factor.

From the table 2 it is inferred that factor 7 is a combination of 6 variables such as "Putting points across in a reasoned way", "Emphasizing the positive aspects of argument", "Understanding the needs of the person dealt with", "Handling objections to arguments", "Making concessions to reach agreement" and "Using tact and diplomacy" which is named as **Planning and organizing skills** factor.

From the table 2 it is inferred that factor 8 is a combination of 6 variables such as "Accepting responsibility for your views and actions", "Showing the ability to work under your own direction and initiative", "Making choices

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based on your own judgment", "Paying care and attention to quality in all your work", "Taking the opportunity to learn new skills" and "Developing the drive and enthusiasm to achieve goals" which is named as **Developing Professionalism** factor.

From the table 2 it is inferred that factor 9 is a combination of 6 variables such as "Word – processing skills", "Using databases", "Using spreadsheets", "Using the internet and email", "Designing web pages" and "Programming skills" which is named as **Computing skills** factor.

From the table 2 it is inferred that factor 10 is a combination of 6 variables such as "Putting points across in a reasoned way", "Emphasizing the positive aspects of argument", "Understanding the needs of the person dealt with", "Handling objections to arguments", "Making concessions to reach agreement" and "Using tact and diplomacy" which is named as **Persuading skills** factor.

From the table 2 it is inferred that factor 11 is a combination of 5 variables such as "Taking the initiative", "Organizing and motivating others", "Making decisions and seeing them through", "Taking a positive attitude to failure" and "Accepting responsibility for mistakes/ wrong decisions" which is named as **Leadership skills** factor.

From the table 2 it is inferred that factor 12 is a combination of 5 variables such as "Planning and time management", "Critical and self-critical abilities", "Will to succeed", "Resume Writing skills" and "Presentation Skills" which is named as **Personal skills** factor.

From the table 2 it is inferred that factor 13 is a combination of 5 variables such as "Honesty and integrity", "Reliability and commitment", "Loyalty", "Ethical Commitment" and "Concern for Quality" which is named as **Positive work ethics** factor.

From the table 2 it is inferred that factor 14 is a combination of 5 variables such as "Ambitious", "Competitive", "Risk taker", "Self awareness" and "Change agent" which is named as **Confidence** factor.

From the table 2 it is inferred that factor 15 is a combination of 4 variables such as "Multiplying and dividing accurately", "Calculating percentages", "Using a calculator", "Reading and interpreting graphs and tables" and "Using statistics" which is named as **Numeric skills** factor.

From the table 2 it is inferred that factor 16 is a combination of 4 variables such as "Problem solving", "Decision-making", "Teamwork" and "Leadership" which is named as **Inter personal skills** factor.

From the table 2 it is inferred that factor 17 is a combination of 3 variables such as "Basic general knowledge in the field of study", "Grounding in basic knowledge of the profession in practice" and "Project design and management" which is named as **Domain skills** factor.

From the table 2 it is inferred that factor 18 is a combination of 3 variables such as "Good basic IT skills", "Using PC for internet, emails and WORD" and "Using IT to organize data" which is named as **Technology Savvy** factor.

From the table 2 it is inferred that factor 19 is a combination of 3 variables such as "Appreciation of diversity and Multi-Culturality", "Ability to work in an international Context" and "Understanding of cultures and customs of other countries" which is named as **Multi cultural skills** factor.

From the table 2 it is inferred that factor 20 is a combination of 3 variables such as "Personal hygiene", "Hair clean and nails" and "Tasteful jewelry" which is named as **Personal appearance** factor.

From the table 2 it is inferred that factor 21 is a combination of 2 variables such as "Willingness to help" and "Wanting to do things, saying this will be easy" which is named as **Enthusiasm and Motivation** factor.

From the table 2 it is inferred that factor 22 is a combination of 2 variables such as "Capacity for generating new ideas" and "Initiative and entrepreneurial spirit" which is named as **Creativity skills** factor.

It is illustrative from the above table 2 that, Factor analysis through principle component method was exploited on the 116 items, and finally 22 skills were identified with respective items. They are listed as follows: Personal skills, Domain Skills, Written Communication, Verbal Communication, Interpersonal Skills, Flexibility, Persuading Skills, Teamwork, Leadership, Planning & Organizing, Investigating, Numeric Skills, Computing Skills, Developing Professionalism, Multicultural Skills, Personal Appearance, Positive Work Ethics, Confidence and Self Esteem, Enthusiasm & Motivation, Technology Savvy, Learning, Creative Skills.

V. CONCLUSION

It is highlighted from the present study that the recruiters were able to visualize 22 types of skills as listed above from the fresh engineering graduates. This makes it clear that the fresh graduates are found with certain skills as above. This serves as an understanding for the recruiters about the students' actual competencies. When this gets identified the recruiters are aware of the skills that are lagging with the fresh graduates which the corporate seeks. In addition, this

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also serves as source of information for the engineering colleges, which can henceforth concentrate on the demands of the industries based on the suggestions given by the corporate. For this purpose, the educational institutions take massive efforts to collaborate with industries in terms of but not restricted to "Industry Institute Interaction", and collaborations. In this process the industry is able to communicate their expectations from students to the colleges and also the college gets an opportunity to develop their students' quality in future. It is also an added advantage for the corporate to understand the skills of the fresh graduates so that they may be exploited suitably in those areas.

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