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A Study on Employers Perception on the Engineering Graduates Employability Skills in Telangana State

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I. Introduction

Engineering graduates have not acquired the skills necessary for the workforce and, as such, are not prepared for the demands of industry careers (Peddle, 2000). Today's college students are expected to learn content at a faster rate than ever before. In doing so, they are expected to develop the "hard" technical skills as well as the "soft" people skills necessary to be successful in the workplace (Hofstrand, 1996; Shivpuri & Kim, 2004). Candy and Crebert (1991), Martin, Milne-Home, Barrett, Spalding, and Jones (2000), and Tanyel, Mitchell, and McAlum (1999) recognized the difficulties post-secondary educators have in preparing graduates for the technical skills needed in industry because graduates begin careers in specialized positions, "it is difficult for universities to prepare students in a way that meets all employers' needs" (p. 209). Therefore, "hard" technical skills are job specific and best suited to be taught by industry professionals on the job. However, "soft" skill development is needed by all college graduates (Mullen, 1997). The purpose and role of higher education has been widely debated for years. Morley (2001) stated that the debate is centered on whether higher education should exist for the sole purpose of providing capitalistic achievement or in-depth liberal education. Heldrich (2005) asked if the purpose of higher education was to train students for specific careers or to prepare students for the general skills needed for the workforce. Espinoza (1999) proposed that the purpose of higher education should be to disseminate productive citizens into the workforce. Peddle (2000) agreed that educators were responsible for preparing students for general skills, while Atkins (1999) suggested that education is not the end-all and that the focus should be on making students lifelong learners.

Morley (2001) concluded that the role of higher education has been widely influenced by industry. While there are differing views on the intent of higher education, one emergent theme appears to surface; to a degree, higher education should prepare students for future employment (Cole & Thompson, 2002; Evers et al., 1998; Martin et al., 2000; McLaughlin, 1995; Peddle, 2000). "Employers depend on educators to provide job-ready and training-ready entry-level employees" (Carnevale, Gainer, & Villet, 1990, p. 236). Teichler (1999) posited that higher education should serve three functions when preparing students.Dunne and Rawlins (2000) stated that students often undervalue the need to possess transferable skills. Instead, they deem that mastery of disciplinary content is more important than transferable skills to employers. Employers desire graduates who can think on their feet and determine ways to accomplish tasks. Schmidt (1999) stated that graduates entering the workplace must "solve complex, multidisciplinary problems, work successfully in teams, exhibit effective oral and written communication skills, and practice good interpersonal skills (p. 31). Billing (2003) stated that the employability skills most desired by employers were those that were transferable to a variety of situations; specifically the skills of "problem-solving, communication, teamwork, and critical thinking…" (p. 335). Hofstrand (1996) and Robinson (2000) stated that these transferable, employability skills are considered very basic and generic in nature and should assist every person entering the workforce.

Researchers have noticed a "skills gap" occurring in society (Andrews and Wooten, 2004; Askov & Gordon, 1999; Atkins, 1999; Evers et al., 1998; Kivinen & Aloha, 1999; Kivinen & Silvennoinen, 2002; Morley, 2001; Robinson, 2000; Shivpuri & Kim, 2004). There is a disconnect between the demands of employment and the level of educational preparation of graduates (Understanding Employers, 1998). Employers do not feel as though higher education is succeeding in the role of adequately developing the employability skills of graduates (Peddle, 2000). Evers et al. (1998) stated that "the skills most in demand are least in supply" (p. 16). Candy and Crebert (1991) stated that graduates are simply not prepared in the areas of "problem solving, decision making, working in a team, or learning for themselves" (p. 572). Morley (2001) stated that "graduates are hardly thought to require emotional intelligence, political skills, or self-care in the face of occupational stress" (p. 135). Brown, Hesketh and Williams (2003) noted that employers regularly state that graduates are not prepared for the workforce. As a result, hiring college graduates becomes a risky venture for employers

(Morley, 2001). To a degree, colleges and universities are failing in their role to properly prepare graduates for the expectations of the workforce.

The need to improve the employability skills of the workforce has been an issue across all phases of education. Steps have been taken to define and address key skill areas needed for improvement, specifically at the secondary level. In 1990, the Secretary's Commission on Achieving Necessary Skills (SCANS) report was initiated to define the skills needed by high school graduates in the workforce. The focus of the report was to determine how high schools could best mirror industry in an effort to make the transition from school-to-work less difficult for secondary graduates. In addition to aiding in an easier transition for graduates, unemployment was also a concern. Therefore, by teaching the skills required by industry, the goal was to ease the transition from school-to-work; thus, increasing employment rates of high school graduates.

II. Theoretical Framework

Swanson (1994) conceptualized a Systems Model for Performance Improvement (SMPI). This model was developed as a vehicle for industry to assess employees on their performance within the company (figure 1). The SMPI was designed to increase individual performance and productivity.

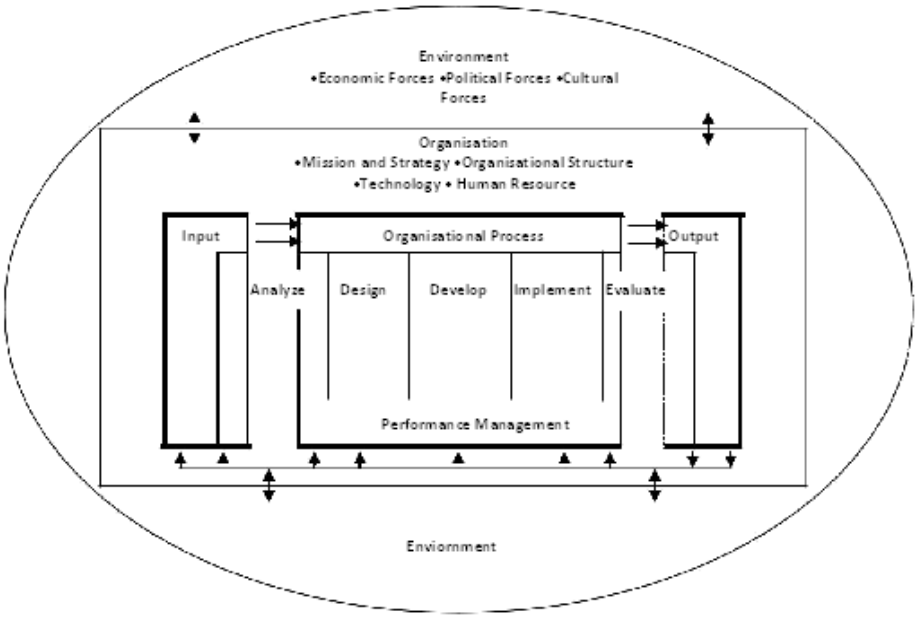

Figure: Swanson's (1994) Systems Model for Performance Improvement (SMPI).

2.1 Need For The Study

Due to a "skills gap" occurring in society (Askov & Gordon, 1999; Atkins, 1999; Evers et al., 1998; Kivinen & Silvennoinen, 2002; Morley, 2001; Robinson, 2000; Shivpuri & Kim, 2004) there is a need for higher education to place a greater emphasis on preparing graduates for the demands of industry (Martin, et al., 2000). This skills gap is most notable with college graduates, as they are not equipped with the desired skills needed to be successful. Employers believe higher education is failing by not adequately developing the employability skills of graduates (Evers et al., 1998). Therefore, more emphasis is being placed on college graduates to possess employability skills. In essence, college graduates need to be more creative and social in the workforce (Brown et al., 2003). Brown et al. (2003) concluded that employers often state that college graduates are not being properly prepared for industry jobs. Therefore, a need exists for higher education institutions to investigate ways in which they can assist graduates in being better prepared for the workforce once they leave the university setting. Evers et al. (1998) stated that higher education can assist in this effort by having college faculty include general, employability skills into the student curriculum. For this to occur, higher education has to develop a relationship with industry personnel to determine what skills employers are seeking in college graduates (Kivinen & Silvennoinen, 2002). Furthermore, once these skills have been identified,college faculty must be willing to incorporate the skills into the curriculum.employability skills of graduates has been well documented. While graduating students may be enhancing their employability opportunities by achieving a college degree, they may not be realizing the payoff of achieving a job upon graduating from college (Brown et al., 2003). This problem could be due to lacking, crucial employability skills needed to find employment and be successful. While this argument is valid, it does not necessarily hold true for

the participants of this study. It is unknown if graduates of the Engineering colleges in Telangana state, possess the employability skills needed in the workplace. Therefore, these college graduates should be assessed in an effort to shed light on the issue.

2.2 Purpose of The Study

The purpose of this study was to assess the employability skills of graduates of the Engineering colleges in Telangana state. The study sought to assess graduates' perceptions regarding level of importance of identified employability skills and their self-perceived level of competence at performing those skills. In addition, graduates' immediate supervisors assessed the importance of the identified employability skills for their graduate employee's respective field of work and assessed the competence level of the graduate at performing those skills.

III. Research Objectives

1. Describe the demographics of the graduates.
2. Describe graduates' perceptions of the importance of the employability skills needed for the workforce.
3. Describe graduates' self-perceived level of competence at performing the employability skills.
4. Prioritize the employability skills, according to graduates, in need of curriculum enhancement using the Borich needs assessment mode.
5. Prioritize the employability skills, according to supervisors, in need of curriculum enhancement using the Borich needs assessment mode.

3.1 Hypothesis

For this study, the following assumptions were made:

1. Graduates objectively reported their perceptions of the importance of the employability skills and their competence level at using the skills.
2. Graduates were willing to provide the contact information of their immediate supervisors.
3. Employers (graduate supervisors) responded to the questions truthfully and without bias.

3.2 Limitations

4. The study was limited to engineering graduates in the Telanagana State.
5. Time and resources limited the study to a sample of the population of all graduates and their immediate supervisors.
6. Employer selection was limited to a manageable sample population; therefore, analyses were also limited due to the size of the sample.

IV. Literature Review

Graham (2001) conducted a three-year study to determine the preparation of entry-level agriculture graduates for employment as perceived by employers. The findings of this study implied that employers placed a strong emphasis on the skill areas of teamwork, leadership, dedication, and initiation. In terms of communication skills, employers rated listening as the most important. Character traits such as honesty, dependability, and integrity were also valued by the employers in this study.Cress et al. (2001) found that developing leadership programs in higher education was important because all students who participate in leadership programs increase their leadership skills and abilities. Therefore, it is imperative that institutions provide leadership programs to further develop this potential and meet the needs of industry. Developing leadership programs nationwide must become a priority (Cress et al., 2001).Individuals are continuously challenged to solve problems that arise in the workplace (Collis, Waring, &Nicholson, 2004). "Problem-solving is a skill that can be learned, and success can be achieved when this skill is utilized" (Sproull, 2001, p. 7). Sproull stated that some people do not possess the skills needed to solve problems. Perhaps this is because they have never experienced success at solving problems or feel threatened when they are asked to solve problems.

Cohen and Cohen (1984) formulated a six step approach to problem-solving. The six steps were to: "1) define the central problem, 2) list the relevant factors, 3) list alternative courses of action with their advantages and disadvantages, 4) analyze the relative merits of each alternative, 5) draw conclusions, and 6) make the decision" Carnevale, Gainer, and Meltzer (1990) stated that "problem-solving skills include the ability to recognize and define problems, to invent and implement solutions, and to track and evaluate results…and that "unresolved problems create dysfunctional workplace relationships"Coplin (2003) stated that time management involves being able to "handle multiple assignments over a two- or three- week period, as well as to not miss highly routine activities, such as submitting weekly reports…"

Coplin (2003) stated that time management involves being able to "handle multiple assignments over a two- or three- week period, as well as to not miss highly routine activities, such as submitting weekly reports…"

Employers must be willing to foster an environment conducive for risk taking to occur (Evers et al., 1998). "Risk Taking is taking reasonable job-related risks by recognizing alternative or different ways of meeting objectives while recognizing the potential negative outcomes and monitoring progress toward the set objectives" Geoff Mason, Gareth Williams & Sue Cranmer(2009), The present paper makes use of detailed information gathered at university department level, combined with graduate survey data, to assess the impact of different kinds of employability skills initiative on graduate labour market performance. We find that structured work experience and employer involvement in degree course design and delivery have clear positive effects on the ability of graduates to secure employment in 'graduate-level' jobs. However, a measure of departmental involvement in explicit teaching and assessment of employability skills is not significantly related to labour market performance.

Cassidy, (2006), examining graduate employment issues suggest that employers are concerned by the lack of employability skills exhibited by entry-level job applications. It is also suggested that employers consider it the responsibility of educational institutions to develop such skills. The current study seeks to identify peer assessment as a potential strategy for developing employability skills and aims to examine – from a students' perspective – the process of introducing peer assessment into higher education teaching programmes. Lorraine Dacre Pool, Peter Sewell, (2007), The purpose of this paper is to introduce a straightforward, practical model of employability that will allow the concept to be explained easily and that can be used as a framework for working with students to develop their employability.Vathsala Wickramasinghe, Lasantha Perera, (2010), 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.Lorraine Dacre Pool, Peter Sewell, (2007), The purpose of this paper is to introduce a straightforward, practical model of employability that will allow the concept to be explained easily and that can be used as a framework for working with students to develop their employability.

IV. Research Design

The design of this study was survey research. The purpose of survey research is to gather data from groups of people by way of questionnaires (Ary, Jacobs, & Razavieh, 2002). Gall, Gall and Borg (2003) stated that "the purpose of a survey is to use questionnaires or interviews to collect data from a sample that has been selected to represent a population to which the findings of the data analysis can be generalized" (p. 223).Survey research can be used to assess needs. Gall et al. (2003) stated that needs assessment research is used to "measure the precise extent of discrepancy between an existing state and a desired state" (p. 558). For a needs assessment to occur, a clear and obvious need has to be identified. Upon identifying a need, judgments can be made as to what exists and what is desired (Gall et al., 2003).

4. 1population And Sample

The population for this study was graduates Engineering Colleges in Telangana State. The size of sample is (N=80000) and randomly selected sample is (n=290). The frame for the graduates was obtained from the engineering colleges enrolled for Academic Programs. Due to time constraints, a random sample of the population was established

V. Findings of The Study

5.1 Respondents by Academic Major

Table - 1

Academic Major	Stratified Sample	Undeliverable	Number of Respondents
Computer Science	15	0	9
IT	19	1	14
ECE	15	0	11
EEE	22	0	13
Chemical	15	1	13
Civil	31	2	15
Mechanical	22	2	10
Electronics and Computers	15	1	8
Bio Technology	15	3	5
Production	36	5	10
Communication	15	0	10
Thermal	17	2	7
Structural	15	0	6
Earthquake	23	0	5
Transportation	15	1	5
Total	**290**	**18**	**141**

However, upon the data collection process, it was realized that the minimum number of responses needed to compare graduates across academic major was not realized. In addition to the lack of responses needed to compare graduates across academic major, eighteen graduates' addresses could not be obtained resulting in frameerror.

Table – 2 Graduates' Perceptions of the Importance of the Employability Skills (n=**141)**

	Gender					
	Male		**Female**		**Percent**	
Academic Major	f	%	f	%	M	SD
Computer Science	6	66.7	3	33.3	3.17	0.36
IT	4	28.6	10	71.4	3.18	0.52
ECE	4	36.4	7	63.6	3.34	0.4
EEE	10	76.9	3	23.1	3.25	0.49
Chemical	12	92.3	1	7.7	3.38	0.39
Civil	2	13.3	13	86.7	3.18	0.49
Mechanical	2	20	8	80	3.47	0.24
Electronics and Computers	0	0	8	100	3.2	0.45
Bio Technology	4	80	1	20	2.56	0.54
Production	5	50	5	50	2.84	0.46
Communication	7	70	3	30	3.31	0.56
Thermal	3	42.9	4	57.1	2.77	0.21
Structural	4	66.7	2	33.3	3.47	0.28
Earthquake	2	40	3	60	2.97	0.31
Transportation	1	20	4	80	2.92	0.45
Total	**66**	**47**	**75**	**53**	**3.18**	**0.47**

In terms of gender, 66 (47%) of the respondents were male and 75 (53%) were female. The mean Percentage was 3.18 with a standard deviation of .47. The academic major with the greatest response from graduates was Chemical Engineering (87%), followed by IT (74%), and ECE (73%). The lowest response rates came from graduates with degrees in Earthquake Engineering (22%), Production Engineering (28%), and Biotechnology and Transportation Engineering (33%). The academic majors having the highest PERCENTAGE was Mechanical Engineering and structural (PERCENTAGE = 3.47). The academic major having the lowest PERCENTAGE was Biotechnology (PERCENTAGE = 2.56).

Table – 3 Graduates' Perceptions of the Importance of the Employability Skills (n=141)

Rank	Employability Skill	M	SD
1	Solving problems	2.87	0.38
2	Ability to work independently	2.84	0.45
3	Functioning well in stressful situations	2.84	0.38
4	Maintaining a positive attitude	2.81	0.46
5	Listening attentively	2.79	0.43
6	Identifying problems	2.77	0.47
7	Working well with fellow employees	2.77	0.49
8	Setting priorities	2.77	0.5
9	Allocating time efficiently	2.76	0.52
10	Relating well with supervisors	2.75	0.54
11	Functioning at an optimal level of performance	2.74	0.53
12	Managing/overseeing several tasks at once	2.69	0.51
13	Gaining new knowledge from everyday experiences	2.67	0.58
14	Establishing good rapport with subordinates	2.67	0.67
15	Meeting deadlines	2.66	0.63
16	Prioritizing problems	2.65	0.51
17	Responding positively to constructive criticism	2.65	0.61
18	Communicating ideas verbally to groups	2.64	0.61
19	Recognizing the effects of decisions made	2.63	0.54
20	Conveying information one-to-one	2.63	0.59
21	Adapting to situations of change	2.62	0.63
22	Identifying essential components of the problem	2.57	0.55
23	Using proper grammar, spelling, and punctuation	2.57	0.71
24	Keeping up-to-date on developments in the field	2.56	0.68
25	Responding to others' comments during a conversation	2.55	0.58
26	Making decisions on the basis of thorough analysis of the situation	2.54	0.63
27	Maintaining a high energy level	2.51	0.66
28	Assessing long-term effects of decisions	2.5	0.66
29	Understanding the needs of others	2.49	0.66
30	Establishing the critical events to be completed	2.49	0.74
31	Making decisions in a short time period	2.46	0.64

32	Giving direction and guidance to others	2.46	0.71
33	Combining relevant information from a number of sources	2.43	0.74
34	Revising plans to include new information	2.4	0.71
35	Initiating change to enhance productivity	2.4	0.79
36	Knowing ethical implications of decisions	2.39	0.82
37	Recognizing alternative routes in meeting objectives	2.36	0.68
38	Sorting out the relevant data to solve the problem	2.34	0.63
39	Providing novel solutions to problems	2.33	0.67
40	Gaining new knowledge in areas outside the immediate job	2.3	0.77
41	Resolving conflicts	2.3	0.82
42	Contributing to group problem solving	2.27	0.68
43	Identifying potential negative outcomes of a risky venture	2.27	0.86
44	Keeping up-to-date with external realities to company's success	2.27	0.95
45	Empathizing with others	2.25	0.79
46	Supervising the work of others	2.25	0.89
47	Monitoring progress against the plan	2.21	0.75
48	Assigning/delegating responsibility	2.17	0.76
49	Integrating information into more general contexts	2.14	0.74
50	Delegating work to subordinates	2.14	0.91
51	Coordinating the work of subordinates	2.14	0.96
52	Applying information to new or broader contexts	2.11	0.74
53	Taking reasonable job-related risks	2.11	0.77
54	Making effective business presentations	2.11	0.93
55	Identifying sources of conflict among people	2.09	0.83
56	Delegating work to peers	2.09	0.87
57	Monitoring progress toward objectives in risky ventures	2.05	0.83
58	Coordinating the work of peers	2.01	0.88
59	Writing internal business communication	2.01	0.91
60	Integrating strategic considerations in the plans made	2	0.74
61	Writing reports	1.98	0.95
62	Conceptualising a future for the company	1.94	0.93
63	Providing innovative paths for company's future development	1.9	0.95
64	Making impromptu presentations	1.88	0.96
65	Writing external business communications	1.87	1
66	Reconceptualising your role to changing corporate realities	1.84	1.01
67	Identifying political implications of the decisions to be made	1.53	0.9

The 67 employability skills were ranked in order of importance based on their mean importance (Table 3). Four employability skills were found to have a mean importance greater than 2.80. These four items consisted of "solving problems" (M = 2.87), "ability to work independently" (M = 2.84), "functioning well in stressful situations" (M = 2.84), and "maintaining a positive attitude" (M = 2.81). In addition, seven items possessed a mean importance of less than 2.00. These seven items were "writing reports" (M = 1.98), "conceptualizing a future for the company" (M = 1.94), "providing innovative paths for the company to follow for future development" (M = 1.90), "making impromptu presentations" (M = 1.88), "writing external business communications" (M = 1.87), "reconceptualizing your role in response to changing corporate realities" (M = 1.84), and "identifying political implications of the decisions to be made" (M = 1.53).

Table – 4 Graduates' Perceptions of their Level of Competence at Performing the Employability Skills (n=141)

Rank	Employability Skill	M	SD
1	Ability to work independently	2.69	0.56
2	Relating well with supervisors	2.65	0.55
3	Working well with fellow employees	2.65	0.58
4	Listening attentively	2.55	0.64
5	Setting priorities	2.53	0.65
6	Maintaining a positive attitude	2.52	0.59
7	Establishing good rapport with subordinates	2.52	0.66
8	Meeting deadlines	2.51	0.67
9	Functioning well in stressful situations	2.49	0.61
10	Gaining new knowledge from everyday experiences	2.49	0.66
11	Managing/overseeing several tasks at once	2.45	0.65
12	Using proper grammar, spelling, and punctuation	2.43	0.77
13	Functioning at an optimal level of performance	2.42	0.65
14	Identifying problems	2.4	0.53
15	Responding to others' comments during a conversation	2.4	0.67
16	Solving problems	2.39	0.57
17	Understanding the needs of others	2.39	0.67
18	Conveying information one-to-one	2.36	0.71
19	Maintaining a high energy level	2.34	0.71

20	Prioritizing problems	2.32	0.64
21	Allocating time efficiently	2.31	0.71
22	Adapting to situations of change	2.3	0.7
23	Giving direction and guidance to others	2.28	0.7
24	Recognizing the effects of decisions made	2.27	0.66
25	Empathizing with others	2.27	0.77
26	Combining relevant information from a number of sources	2.24	0.65
27	Making decisions in a short time period	2.24	0.69
28	Supervising the work of others	2.24	0.7
29	Responding positively to negative criticism	2.24	0.75
30	Knowing ethical implications of decisions	2.24	0.77
31	Identifying essential components of the problem	2.22	0.61
32	Making decisions on the basis of thorough analysis of the situation	2.22	0.64
33	Communicating ideas verbally to groups	2.22	0.75
34	Writing reports	2.21	0.76
35	Resolving conflicts	2.19	0.68
36	Keeping up-to-date on developments in the field	2.19	0.7
37	Establishing the critical events to be completed	2.19	0.7
38	Revising plans to include new information	2.19	0.75
39	Assigning/delegating responsibility	2.17	0.76
40	Contributing to group problem solving	2.14	0.63
41	Assessing long-term effects of decisions	2.14	0.65
42	Initiating change to enhance productivity	2.14	0.72
43	Coordinating the work of subordinates	2.14	0.83
44	Sorting out the relevant data to solve a problem	2.12	0.59
45	Identifying sources of conflict among people	2.12	0.77
46	Gaining new knowledge in areas outside the immediate job	2.11	0.8
47	Integrating information into more general contexts	2.09	0.69
48	Providing novel solutions to problems	2.08	0.66
49	Delegating work to subordinates	2.08	0.81
50	Recognizing alternative routes in meeting objectives	2.07	0.69
51	Making effective business presentations	2.04	0.78
52	Identifying negative outcomes when considering a risky venture	2.04	0.8
53	Taking reasonable job-related risks	2.02	0.79
54	Monitoring progress against the plan	2.01	0.74
55	Delegating work to subordinates	2.01	0.75
56	Coordinating the work of peers	1.98	0.78
57	Writing internal business communication	1.96	0.82
58	Applying information to new or broader contexts	1.95	0.59
59	Keeping up-to-date with external realities of company's success	1.93	0.77
60	Writing external business communication	1.91	0.85
61	Making impromptu presentations	1.89	0.87
62	Integrating strategic considerations in the plans made	1.87	0.71
63	Monitoring progress toward objectives in risky ventures	1.87	0.81
64	Conceptualizing a future for the company	1.66	0.83
65	Reconceptualizing your role to changing corporate realities	1.63	0.86
66	Providing innovative paths for a company's future development	1.61	0.78
67	Identifying political implications of the decisions to be made	1.46	0.8

Eight employability skills had a mean competence of greater than 2.50. The eight items were "ability to work independently" (M = 2.69), "relating well with supervisors" (M = 2.65), "working well with fellow employees" (M = 2.65), "listening attentively" (M = 2.55), "setting priorities" (M = 2.53), "maintaining a positive attitude" (M = 2.52), "establishing good rapport with subordinates" (M = 2.52), and "meeting deadlines" (M = 2.51). In addition, twelve employability skills had means of less than 2.0. These three consisted of "integrating information into more general contexts" (M = 2.09), "providing novel solutions to problems" (M = 2.08), and "delegating work to subordinates" (M = 2.08).

Table – 5 Overall Level of Graduate Job Satisfaction (n = 141)

Variable	M	SD
Level of Job Satisfaction	3.93	0.73

Assessing graduates' level of job satisfaction within their respective career choice. The job satisfaction section consisted of 14 questions on job satisfaction and dissatisfaction factors and used a five-point response scale (Table 5). The summated mean for the level of job satisfaction of graduates in the Engineering College was 3.93 (SD = .73).

Table – 6 Assessing supervisors' perceptions of the importance of the employability skills needed by graduates.

Rank	Employability Skill	M	SD
1	Working well with fellow employees	2.93	0.26
2	Functioning well in stressful situations	2.9	0.3
3	Ability to work independently	2.9	0.3
4	Solving problems	2.88	0.34
5	Maintaining a positive attitude	2.88	0.4
6	Setting priorities	2.85	0.36
7	Allocating time efficiently	2.85	0.36
8	Meeting deadlines	2.83	0.38
9	Identifying problems	2.8	0.4
10	Recognizing the effects of decisions made	2.8	0.4
11	Responding positively to constructive criticism	2.8	0.41
12	Adapting to situations of change	2.78	0.57
13	Functioning at an optimal level of performance	2.76	0.44
14	Listening attentively	2.76	0.44
15	Prioritizing problems	2.73	0.45
16	Managing/overseeing several tasks at once	2.73	0.5
17	Gaining new knowledge from everyday experiences	2.73	0.51
18	Conveying information one-to-one	2.71	0.46
19	Relating well with supervisors	2.71	0.51
20	Responding to others' comments during a conversation	2.68	0.47
21	Identifying essential components of the problem	2.68	0.52
22	Sorting out the relevant data to solve the problem	2.66	0.48
23	Keeping up-to-date on developments in the field	2.66	0.53
24	Maintaining a high energy level	2.66	0.53
25	Decisions on the basis of thorough analysis of the situation	2.63	0.54
26	Establishing the critical events to be completed	2.63	0.54
27	Recognizing alternative routes in meeting objectives	2.61	0.54
28	Communicating ideas verbally to groups	2.59	0.63
29	Understanding the needs of others	2.58	0.5
30	Identifying potential negative outcomes of a risky venture	2.54	0.6
31	Knowing ethical implications of decisions	2.54	0.6
32	Using proper grammar, spelling, and punctuation	2.54	0.75
33	Making decisions in a short time period	2.51	0.6
34	Assessing long-term effects of decisions	2.49	0.6
35	Initiating change to enhance productivity	2.49	0.71
36	Combining relevant information from a number of sources	2.46	0.75
37	Gaining new knowledge in areas outside the immediate job	2.45	0.68
38	Contributing to group problem solving	2.41	0.63
39	Resolving conflicts	2.41	0.84
40	Identifying sources of conflict among people	2.37	0.77
41	Keeping up-to-date with external realities of a company's success	2.37	0.77
42	Establishing good rapport with subordinates	2.34	1.02
43	Monitoring progress toward objectives in risky ventures	2.33	0.77
44	Revising plans to include new information	2.29	0.75
45	Taking reasonable job-related tasks	2.28	0.65
46	Monitoring progress against the plan	2.28	0.72
47	Reconceptualising your role to changing corporate realities	2.25	0.81
48	Providing novel solutions to problems	2.24	0.7
49	Empathizing with others	2.2	0.79
50	Applying information to new or broader contexts	2.15	0.82
51	Integrating information into more general contexts	2.15	0.88
52	Giving direction and guidance to others	2.07	0.96
53	Making effective business presentations	2.05	0.97
54	Integrating strategic considerations in the plans made	2.02	0.69
55	Coordinating the work of peers	2	0.95
56	Writing reports	2	1.04
57	Supervising the work of others	2	1.16
58	Providing innovative paths for the company for future development	1.97	0.99
59	Identifying political implications of the decisions to be made	1.95	0.87
60	Making impromptu presentations	1.93	0.85
61	Assigning/delegating responsibility	1.93	0.88
62	Conceptualizing a future for the company	1.9	1.01
63	Writing internal business communication	1.85	0.99
64	Coordinating the work of subordinates	1.82	1.1
65	Delegating work to peers	1.8	1.04
66	Delegating work to subordinates	1.79	1.13
67	Writing external business communication	1.68	1.08

The 67 employability skills were ranked in order of importance based on their mean importance (Table 6).Eleven employability skill items were found to possess a mean importance of 2.80 or higher. The eleven skills were "working well with fellow employees" (M = 2.93), "functioning well in stressful situations" (M = 2.90), "ability to work independently" (M = 2.90), "solving problems" (M = 2.88), "maintaining a positive attitude" (M = 2.88), "setting priorities" (M = 2.85), "allocating time efficiently" (M = 2.85), "meeting deadlines" (M = 2.83), "identifying problems" (M = 2.80), "recognizing the effects of decisions made" (M = 2.80), and "responding positively to constructive criticism" (M = 2.80). In addition, eight employability skill items had means lower than 1.95. These items consisted of "making impromptu presentations" (M = 1.93), "assigning/delegating responsibility" (M = 1.93), "conceptualizing a future for the company" (M = 1.90), "writing internal business communication" (M = 1.85), "coordinating the work of subordinates" (M = 1.82), "delegating work to peers" (M = 1.80), "delegating work to subordinates" (M = 1.79), and "writing external business communication" (M = 1.68).

V. Conclusion

This study laid the foundation for assessing skills needed in the workforce. This study should be replicated in an effort to uncover additional knowledge about what skills are needed by entry-level employees in the workplace. The current study and future investigations should be used to shed light on each department. By having information on graduates of each department, the skills could be assessed more directly.

Furthermore, skills perceived to be of less importance to graduates on the whole could be more important to independent departments. Therefore, census studies should be performed on each academic department.

Because a relatively high level of variance existed between graduates on job satisfaction, it is recommended that further investigation be made to determine why some graduates are not satisfied with their chosen careers. Finally, it is recommended that the results of this study be shared with future students and faculty in an effort to shed light on the skills needed in the workplace. Furthermore, higher education institutions should continue to collaborate with industry professionals in an effort to equip future graduates with the appropriate skills needed for success in the workplace.

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