Measurement of Employability Skills and Job Readiness Perception of Post – graduate Management students: Results from A Pilot Study

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Abstract

Level of employability skills determine job readiness of a student as he/she completes education. There is a critical need to formulate an instrument that measures employability skills and student perceptions of their level of preparedness across business and management sectors. The objective of the current study is to investigate perceptions of final year Post graduate Management students concerning their employability skills. This study focused on formulating and validating appropriate scales with questions (items) that measure graduating student perceptions of their current skill readiness in various categories suggested in the literature. The study used cross-sectional design with non-probability sampling technique(N=60).The study recruited Post-Graduate final semester Management students who were due to graduate in June 2017, from one of the reputed business schools in Bangalore city. Factor analysis identified five major scales(Communication Skills;Personal and professional advancement; Adaptation skills and flexibility; Intellectual and Technical skills; and Understand Organization's vision and development) and the Cronbach alphareliability was in the acceptable range (0.7-0.8). All item and scale means fell in the range suggesting that all students perceive themselves as definitely having these skills. Results from T-tests indicate no significant difference ($p<.05$) in any of the scale means between males and females. These scales can be further tested using a large sample size and other contributing factors that determine student readiness skills.The study findings help identify the gap between employability skills and competencies required for entry level positions in management.

Key words: Employability skills, Job readiness, fresh graduates

1. 0 INTRODUCTION

Employability Skills can be defined as the 'Transferable Skills' needed by an individual to make himself / herself 'employable'. Along with good technical understanding and subject knowledge, employers prefer a set of skills in an employee as these skills equip the employees perform their roles effectively. Employability skills are 'soft skills' (non-technical skills) and knowledge required for effective performance at work place. These skills include effective communication, self-management, problem solving, leadership qualities and teamwork. They are the enabling skills or key competencies. Besides, these skills and attitudes enable employees to make critical decisions, solve problems and develop competency, which in turn, reflect in their performance. These are a set of transferable skills that are not specific to one career path but are generic across all employment sectors (Stewart & Knowles, 2000a).

Raybold and Sheedy (2005) believe that there are transferable skills which refer to the for any profession in any stage of their careers. Davies (2000) defines transferable skills as the ability to use skills learned in one situation in other situations. The National Center for Research on Evaluation, Standards, and Student Testing (UCLA) identified and categorized workforce skills in five major studies (O'Neil, 1997).

Based on five studies, four categories of skills have been identified by the educators, business professionals, recruiters, and policy makers: (a) Basic academic skills – basic listening and speaking skills; (b) Higher order thinking skills – reasoning, problem solving, creativity, decision making skills and the ability to learn; (c) Interpersonal and teamwork skills – negotiation and conflict resolution skills, leadership skills and the ability to work with others from diverse backgrounds; and (d) Personal characteristics and attitudes – self-esteem, motivation and taking responsibility for own actions and growth.

1.1 Job Readiness – Summary from Literature Review

Level of employability skills determine job readiness of a student as he/she completes education. Job readiness refers to graduating students equipped with suitable skills and be prepared for work in the relevant field (Harvey, 2001). Nabi (2003) opines that graduating students must possess an appropriate level of skills and attributes to become employable. These skills are required in addition to the academic qualifications and the technical skills that the students possess. A significant percentage of fresh graduates face challenges in finding a suitable employment after completing their degree programs. Despite having academic and technical skills, they seem to be lacking specific basic skills referred as employability or job readiness skills. The Economic Times (2016),based on the responses of 750 employers, revealed that 60% of them strongly believe that soft skills are a significant factor while hiring and 30% stated that they are somewhat significant. About 75% expressed that soft skills are more essential for junior and middle level employees. Almost all (95%) of the employers expressed that it is hard to find desired level of soft skills in the employees. According to this study the employability skills, in the order of importance of are: (a) listening skills, (b) communication skills, (c) confidence, (d) team work, (e) positive attitude, (f) creativity, (g) persuasion, (h) flexibility, (i) alertness and (j) accountability.

According to Davies (2000)new employees are expected to perform satisfactorily and exhibit accountability. Employers assume that employees come with appropriate skills, knowledge, values and practical experience to the organization (Dymock& Gerber, 2002; Nabi, 2003). Jorgensen (2004) noted that "acquired skills from higher education do not necessarily lead to the competencies valued by the

labour market and many graduates are disappointed after completing studies and being unable to find a suitable job." Considerable disparity is noted between the opportunities available for those who have employability skills and those who do not (Addis, 2003). Several studies on graduate recruitment stressed the significance of transferable employability skills (Falconer & Pettigrew, 2003; Stewart & Knowles, 2000). Zinser (2003) expressed that organizations need graduates with academic, technical and non-technical skills (in effective management, communication and interpersonal skills, teamwork and problem-solving skills) to secure and retain a job. The basic skills required relate to personal development, occupational skills and information technology skills and are an element of competitiveness (Addis, 2003).

Hughey and Mussnug (1997) state it is important to teach thinking and analytical skills, rather than teaching specific skills. Doncaster (2000) agrees with this view and states that "learning how to learn rather than simply applying known solutions to problems is becoming an ever-more important ability". Better decision-making and problem-solving skills will help employees to enhance employability. Falconer and Pettigrew (2003) identified skills considered important in graduates and professionals as: team work, oral and written communication, problem solving, information handling, negotiation, listening, planning, resourcefulness and innovation. Stewart and Knowles (2000),Falconer and Pettigrew (2003) state that self-reliance, self-discipline, the ability to work harmoniously with others and the ability to apply knowledge to solve practical problems, as transferable skills, which should be incorporated into the curricula of University programmes.

Thus, several studies on employability skills have exposed large gap between skill requirements of different sectors and the level of those skills in the fresh graduates. Literature review reveals that this gap is significantly wide in: leadership skills, communication skills, negotiation skills, ability to supervise, coordinate, conflict resolution, have a clear vision, creative/innovate, adaptability to change, problem solving and decision-making skills.

1.2. Study Objective

It is clear from the literature that there are different viewson the skills required by fresh graduates who are ready for placements. Graduates are expected to be 'job ready'- possessing academic, technical qualifications, and employability skills. However, they do not seem to have a clear idea of which employability skills are crucial to perform in specific jobs. Research studies on perceptions and views of graduating students concerning required skills are sparse.

This study identified that there is a critical need to formulate an instrument that measures a) employability skills and b) student perceptions of their level of preparedness across business and management sectors. Hence, the objective of the current study is to investigate perceptions of graduating seniors concerning their employability skills in the management programs. This pilot study, specifically, focuses on formulating and validating appropriate scales with questions (items) that measure graduating student perceptions of their current skill readiness in various categories suggested in the literature. This will help identify the gap between employability skills and competencies required for entry level positions in management.

2. 0. METHODOLOGY

Cross-sectional survey design is used and data were collected using a questionnaire specifically developed to measure the perceptions and views of the students concerning the employability skills requirement. For the current research, these skills are defined as: effective communication, interpersonal relationship, reasoning, creativity, teamwork, problem solving, research and analytical abilities, planning and organizing, and learning skills.

2.1. Study Participants

For the survey on employability skills and student perceptions, convenience sampling technique was used to draw participants from one of the reputed business schools in Bangalore city. The study included Post-Graduate final semester Management students (both male and female) who were due to graduate in June 2017. Sixty students participated in this survey.

2.2. Survey Instrument:

The survey included demographic variables (gender, age, medium of study, academic degree) and items that represent each employability skill. Several individual items were considered to develop scales to measure each area of the employability skills. The items in the survey were developed based on relevant studies in the field (e.g. O'Neil,Allred., and Baker, 1992; Smith, Ferns, and Russel, 2014; Wardand Riddle, 2003)and adopted to suit the measurement of variables required for the study in the context of urban India. The dependent variables are perception of readiness of graduating seniors in a variety of employability skills required for entry level jobs. Each question was asked in a statement form and the students rated their agreement or disagreement on 4-point Likert scale (Strongly disagree=1;Somewhat Disagree=2;Somewhat Agree =3; and strongly agree=4).

2.3. Data Analysis:

All statistical analysis was carried out using SPSS version 24.0. Descriptive analyses were conducted on demographic variables to understand the distribution and the final version of demographic variables was computed by regrouping categories to ensure enough sample in each category. Age was regrouped into 3 categories (22 years, 23years, and 24+ years).

2.4. Item Development and Scale Construction

The first step in the scale construction was the collection of items (item pool) to represent scales from various sources and published research in the field (e.g., Harvey, 2001; Nabi, 2003;O'Neil, 1997) The number of items under each scale was modified after each of the processes during development and led to a refined scale. Through the development process, items were re-worded or removed by the research team.

In the second step, the Pearson's correlation coefficient was used to determine the relationship between the items for each of the scales. Those items that did not correlate strongly with the total score were eliminated. Factor analysis was performed using correlation matrix. Factor analysis was conducted using principal component analysis. The methods used for retaining factors were keeping those factors that had Eigen values above 1.0, and had more than four items that loaded onto a single factor. Varimax rotation was used to obtain rotated factor loadings. We considered factor loadings greater than 0.5 for variables to be included in a factor. Using this criterion, items that did not load on any factor were eliminated.

The following scales were formulated that used items after screening of items based on item-total corrected correlation. Items that had item-total corrected correlation less than 0.2 were deleted. Once the items in each scale were determined, Cronbach's alpha reliability was computed to determine the overall consistency of the scale, that is, how closely related a set of items are as a group. Cronbach's alpha is widely believed to indirectly indicate the degree to which a set of items measures a single unidimensional latent construct (Cronbach, 1951).

Scale mean scores were computed to be used in the further analyses.

i. **Communication Skills:** This skill is measured using seven items that referred to skills related to written and verbal communication including command on English language, business presentation, conveying information orally one-to-one and in group situations.

ii. **Skills required for personal and professional advancement:** This scale includedeight items that measured self-motivation, self-confidence, mature attitude, supervisory skills, commitment, and ability to work independently and timely completion of tasks.

iii. **Adaptation skills and flexibility Interpersonal and social skills**
This scale consists of two subscales:

a) *Adaptation and interpersonal skills*:seven items including positive attitude, Self-motivation forsuccess, adapting to changing situations at workplace, relating well with superiors, maintain effective relationships with colleagues and superiors, ability to function effectively in a team, and leadership skills expected in the job.

b) *Leadership skills:*Seven items that represent empathizing and understanding the needs of others, positive response to constructive criticism, and work delegation work to peers and subordinates.

iv. **Intellectual and Technical skills***:*Six items including computer technical skills to perform daily tasks, numeracy/computational skills, identify and solve problems, decision making skillsbased on thorough analysis of the situation.

v. **Understand Organization's vision and development:** Four items representing the ability to understand organization functions, support organization's success, understand external influences on the organization and the ability to visualize their role in response to those changing strategies.

Demographic variablesinclude age, gender, study field, study medium (English or local language) geographical area (rural/urban), full or part-time job experience.

3. 0. RESULTS

3.1 Participants

Of the 60 respondents, 42% were females (n=25). For more than three-quarters (78%), English language is the medium of instruction in high school and almost all students (98%) completed their college degree in English medium. The mean age of the participants was 23 years (SD=1.12years).

3.2. Scale Descriptives:

Each question was asked in a statement form regarding each skill and the students rated their agreement or disagreement on 4-point Likert scale (Strongly disagree=1; Somewhat Disagree=2; Somewhat Agree =3; and strongly agree=4). Higher mean scores indicate higher level of agreement with each statement.

i. **Communication Skills:** This skill is measured using seven items that referred to skills related to written and verbal communication including command on English language, business presentation, conveying information orally one-to-one and in group situations.
Item statistics (Table 1) are presented below.All item means in this scale suggest that all students perceive themselves as definitely having these skills.

Table 1. Individual Item Statistics (N=56)

Number	Item	Mean	(SD)
1	Excellent oral communication skills including making effective business presentations to a group	3.38	.590
2	Conveying information orally one-to-one	3.46	.602
3	Communicating ideas verbally to groups	3.30	.784
4	Listening skills - Listening attentively	3.61	.562
5	Responding to others' comments during a conversation	3.21	.680
6	Excellent written communication skills including writing external or internal reports	3.23	.572
7	Good command on the language – English Ability to use proper grammar, spelling, and punctuation	3.23	.687

ii. **Skills required for personal and professional advancement:** This scale included8 items that measured self-motivation, self-confidence, mature attitude, supervisory skills, commitment, and ability to work independently and timely completion of tasks.

Item statistics (Table 2) are presented below. All item means in this scale suggest that all students perceive themselves as definitely having these skills.

Table 2. Individual Item Statistics (N=60)

Number	Item	Mean	(SD)
9	Self-motivation and commitment are essential for the job	3.84	.368
10	Mature attitude	3.54	.709
11	Self-confidence	3.82	.384
12	Monitoring progress against the plan	3.44	.655
13	Revising plans to include new information	3.44	.627
14	Setting priorities	3.54	.683
15	Ability to work independently	3.68	.602
16	Independently manage time to complete the tasks	3.56	.598

iii. Personal Qualities: Adaptation, Flexibility, Interpersonal and Social skills

A total of 20 items were used to conduct factor analysis to identify subscales that comprise personal qualities and Varimax rotated solution indicated two subscales which are listed below.

a) *Adaptation and Flexibility* – These skills include seven items: positive attitude, self-motivation for success, adapting to changing situations at workplace, relating well with superiors, maintain effective relationships with colleagues and superiors, ability to function effectively in a team, and leadership skills expected in the job. Item statistics (Table 3a) are presented below. All item means in this scale suggest that all students perceive themselves as definitely having these skills.

Table 3a. Individual Item Statistics (N=59)

Number	Item	Mean	(SD)
20	Maintaining a positive attitude	3.83	.422
21	Adapting to changing situations at workplace	3.68	.539
29	Self-motivation play a role in the success	3.71	.559
33	Relating well with superiors	3.39	.766
34	Develop and maintain effective relationships with colleagues and superiors	3.56	.623
39	Ability to function effectively in a team	3.71	.589
40	Leadership skills are expected in the job	3.68	.600

b) *Interpersonal and Leadership Skills:*Seven items that represent empathizing and understanding the needs of others, positive response to constructive criticism, and work delegation work to peers and subordinates. Item statistics (Table 3b) are presented below.All item means in this scale suggest that all students perceive themselves as definitely having these skills.

Table 3b. Individual item statistics

Number	Item	Mean	(SD)
17	Recognizing alternative routes in meeting objectives	3.49	.653
19	Meeting deadlines	3.61	.695
22	Initiating change to enhance productivity	3.58	.649
32	Empathizing and Understanding the needs of others	3.46	.652
35	Responding positively to constructive criticism	3.41	.790
37	Delegating work to peers	3.37	.740
38	Delegating responsibility to subordinates	3.34	.685

iv. **Intellectual and Technical Skills -**These skills include **s**ix items: computer technical skills to perform daily tasks, numeracy/computational skills, identify and solve problems, decision making skills and making decisions based on thorough analysis of the situation. Item statistics are presented below (Table 4). All item means in this scale suggest that all students perceive themselves as definitely having these skills.

Table 4. Individual item statistics

Number	Item	Mean	(SD)
41	Use a computer to execute daily tasks	3.57	.593
42	Ability to identify problems related to job	3.45	.622
43	Ability to solve problems related to job	3.57	.647
44	Making decisions based on thorough analysis of the situation	3.60	.616
45	Understand cause-and-effect relationships	3.43	.673
46	Numeracy and computational skills	3.45	.699

v. **Understand Organization's Vision and Development:** These skills include four items: ability to understand organization functions, support organization's success, understand external influences on the organization and the ability to visualize their role in response to those changing strategies. Item statistics (Table 5) are presented below. All item means in this scale suggest that all students perceive themselves as definitely having these skills.

Table 5. Individual item statistics

Number	Item	Mean	(SD)
47	Understand how an organization functions in relation to its competitors	3.50	.651
48	Keeping up-to-date with external realities related to your company's success	3.57	.647
49	Understand external influences, if any, (such as demonetization, Brexit etc.) on the organization and its strategies accordingly	3.58	.591
50	Visualize your role in response to those changing strategies	3.65	.481

3.3 Scale Statistics and Reliability:

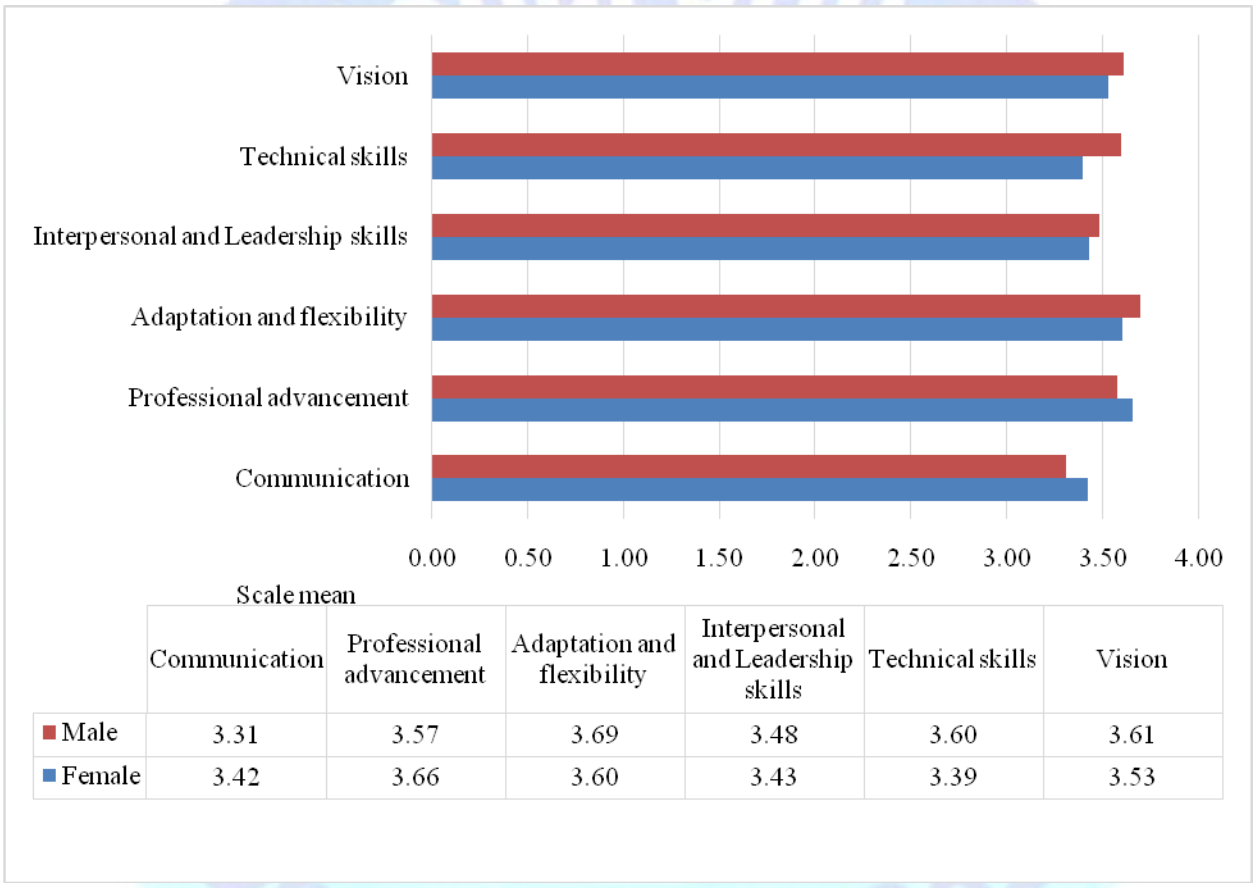
All scale means in this scale suggest that all students perceive themselves as definitely having these skills (Table 6). Reliability assessment for all scales indicate that Cronbach's alpha is in the acceptable range (0.73-0.83) indicating item consistency. The alpha coefficient for the items under each scale is higher than 0.70, which is considered "acceptable" in most social science research situations.

Table 6. Scale means and reliabilities

Skill domain (scales)	Number of items	Cronbach's Alpha Level	Scale Total score mean (SD)	Scale Mean (SD)
1, Communication skills	7	0.76	23.43 (2.90)	3.35 (0.14)
2. Personal and professional advancement	8	0.76	28.88 (2.88)	3.61 (0.16)
3. Personal Qualities:				
3a. *Adaptation and flexibility*	7	0.83	25.56 (2.94)	3.65 (0.14)
3b. Interpersonal and leadership skills	7	0.79	24.25 (3.23)	3.46 (0.10)
4. Intellectual and technical skills	6	0.78	21.07 (2.66)	3.51 (0.08)
5. Understand organization's vision and development	4	0.73	14.3 (1.8)	3.58 (0.06)

3.4 Gender Differences in Employability Skills:

Figure 1 represents the comparison of scale means between female and male students. Results from T-tests indicate no significant difference ($p<.05$) in any of the scale means between males and females.



	Communication	Professional advancement	Adaptation and flexibility	Interpersonal and Leadership skills	Technical skills	Vision
Male	3.31	3.57	3.69	3.48	3.60	3.61
Female	3.42	3.66	3.60	3.43	3.39	3.53

Figure 1. Scale mean comparison of female and male readiness skills

4. 0. DISCUSSION

The present study, which is one of its kind to measure student perceptions of readiness, utilized pilot data collected from graduating students in the Post-graduate management programmes. These data helped to create measures that are reliable in assessing students' perceptions of their readiness skills.The concept of employability and readiness has been studied from the employers' perspective, but not from the students' perspective. Using the existing measures in the field, this study attempted to construct scales to assess self-perceptions of students in various aspects of employability skills.Based on the pilot data, all scales have a good reliability in the range that is acceptable. These scales can be further tested using a more representative sample and large sample size.

There are concerns, however, about the extent to which universities and colleges are able to adequately prepare graduates for employment. This article reports on the perceptions of students who are ready to graduate from Post Graduate business and management fields.

Higher education stakeholders have expressed concern about teaching and learning performance and outcomes in business and management education. The emerging gap between graduate attributes and what industry requires not only refers to the lack of employment readiness of students, but also their generic skills (Jackson, 2015).One technique that can assist in improving students' development of generic skills is work-integrated learning(McLennan & Keating, 2008).

The study suffers from certain limitations which might have affected the conclusions of the study. In this study, students rated their agreement or disagreement on 4-point Likert scale for each item and mean of each skill indicated a good level of confidence. However, the scores represent self-reported perceptions of their skill level, which could have been inflated. Thus, the actual level of readiness might be hard to estimate.The sample was not randomly chosen to participate in the study. Further, sample of 60 students may not represent the student community given the variation in the college size, environment, and geographical location. Other variables that may contribute to the employability skills include family socioeconomic status,location of the college, training opportunities available in the community or colleges, must be considered in further studies.

5. CONCLUSION

To be able to promote employability as a worthwhile and sensible outcome of higher education, it is necessary to be able to determine what cluster of abilities should be taken to constitute employability.This study reveals student perceptions of readiness in terms of employability skills. Based on the pilot data, five major areas (scales have been identified and all scales have a good reliability. The scale means indicated good confidence level of for all scales. No gender differences were found in the perceptions of their readiness skills. These scales can be further tested using a large sample size and other contributing factors that determine student readiness skills.

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