DOI 10.21844/16202013102 PURSHARTHA, Vol. XIII, No. 1 March -August, 2020

Measuring Employers' Satisfaction with Expectation Satisfaction Matrix

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Abstract

This paper examines whether employers' expectations and perceptions influence their satisfaction with the skill competencies of fresh engineering graduates (FEGs) in India. Using the expectation satisfaction matrix, we have also explored whether such skill competencies adequately satisfy employers. Data on employers' expectations and perceptions were collected through a survey of employers' representatives using a structured questionnaire. Expectations from various skillsets under consideration were categorized with exploratory factor analysis. We thus got three latent factors. The regression of these three factors was found to be significantly predicting employers' satisfaction. The indices of expectation and satisfaction of these skillsets were then plotted in the expectation satisfaction matrix to understand their relative positions. Most of the skills fell short of satisfying employers' expectations. Our results prompt us to infer that industry-academia partnerships need to be an integral feature of any curriculum to bridge the gap between course curricula on one hand and employers' expectations and satisfaction on the other. This study would help higher education institutions and FEGs in enhancing employability of the latter.

Keywords: *Employers' Satisfaction, Employers' Expectations, Skill Competencies, Employability, Fresh Engineering Graduates, Expectation Satisfaction Matrix*

Introduction

Since the past few years, the Indian economy has shown remarkable growth and was globally the sixth-largest before the onset of the worldwide pandemic named the Coronavirus disease (COVID). The Indian gross domestic product (GDP) is estimated to fall below three per cent in the post-pandemic scenario. Many employees on payrolls are losing their jobs as businesses are conceding losses amidst the series of lockdowns imposed by the Government of India. The employment scope for fresh and inexperienced engineering graduates is anticipated to reduce further as the turnaround from this slowdown cannot be ascertained, at least for now.

Engineering always has remained a vital sector of the Indian economy and has significantly contributed to both the service and industrial sectors. More than 15 lakh fresh engineering graduates (FEGs) pass out every year in the country, which is one-fourth of the global figures. In the Indian labour market, the balance is always tilted towards the supply side. Despite the rising demands generated in the service and industrial sectors, employers' expectations about the skill proficiency of FEGs of these two sectors are not met because of the low employability of job-seeking FEGs. This issue has been reported in various employability surveys by agencies like KPMG (*meity.gov.in*) and Aspiring Minds.

The reasons behind such low employability could be many. Some of them are improper grooming of

graduates at the university level, a wide gap between industry expectations and the offerings by course curricula, mushrooming of engineering institutes with below-par infrastructural capabilities and teaching & learning resources, and high-grade scoring orientation of students with less emphasis on learnability. However, our paper does not aim to judge the reasons behind the low employability of FEGs. Instead, we have focussed on understanding employers' satisfaction from the gap in their expectations and satisfaction about the employability of FEGs, and proposing a suitable model for the same. We have then designed an expectation perception matrix, based on the importance-satisfaction matrix (ISM) proposed originally by Yang (2003).

Focus of the Study

As per Belwal et al. (2017), the higher education system is crucial for improving employability in the ever-volatile job market. Higher education helps in honing graduate attributes and various employability skills. The role of knowledge transfer and skill development by encouraging students to participate in corporate competitions, live projects, internships, and industrial projects has been emphasized in extant literature. However, developing students' skill competencies from the perspective of employability and employer satisfaction is an under-researched domain (Jackson, 2013, c.f. Augar et al., 2016).

In light of the above argument, we would like to elaborate on the employability quotient (EQ). EQ indicates how an employee or a job aspirant is employable. In other words, employability quotient is the relative ability and skill competencies of an employee or job seeker to perform a job in a manner that fulfils employers' expectations. It can also be understood as the extent of any gap between expectations and satisfaction. EQ may be construed to be a definitive measure in elucidating any stunted magnitude of mismatch unemployment. The term 'mismatch unemployment' refers to a situation when the available job seekers outnumber the available job vacancies.

Employability quotient, along with few other factors like volatility in the job market induced by socio-political factors, wage rigidity (Kim, 2017), and uncertainties caused by pandemics or wars, acts as determinants of mismatch unemployment (Ay et al., 2014). Employability quotient as a construct is calculated in two steps: first, the level of employers' satisfaction is objectively measured, and then its subjective difference with the level of employers' expectations with the skill competencies of their employees is evaluated.

Skill gaps as a domain of research have garnered plentiful mentions in literature across various countries (e.g., Abbasi et al., 2018). However, employers' expectations from FEGs regarding their job-readiness and skill competencies do not seem to have earned much attention of researchers in the Indian context. A few studies, however, stand as exceptions.

For example, the skill gaps among Indian engineers have been explored by Blom and Saeki (2011). They have found a direct relationship between skill gaps evident among engineering graduates and the perceptions employers have about the skill proficiency. Sirat (2010) has also studied gaps between skill proficiencies employers expect from FEGs and how proficient these FEGs are in real life (c.f. Chavan and Carter, 2018).

In this paper, we have addressed the existing research gap by exploring the relationship of employers' expectations from the skill competencies of FEGs, and how their satisfaction with the skills of FEGs are derived in the Indian context. We have further tried to propose a model

suitable for singling out the skillsets which deter the cognitive process of derivation of satisfaction. Our primary research contribution is the expectation perception matrix.

Using the perspective of the knowledge supply chain, Courtney and Courtney (2006) have argued that employers are the end-users of the knowledge imparted to the students of higher education institutions (HEIs). Employers can hence be viewed as customers of these institutions (c.f. Sinha et al., 2019). As another contribution to literature, we propose that employees (i.e., FEGs in this study) are the product in the knowledge supply chain. We have explored if this relationship can be viewed through the lens of consumer behaviour. From there, we offer to assess the individual skillsets for which employers' satisfaction is not met, and they feel the need for improvement.

The outlook of Indian HEIs is changing drastically with the advent of the National Institutional Ranking Framework (NIRF). The NIRF is conceptualized and promoted as a university ranking method free from various biases by the Ministry of Human Resource Development, Government of India. NIRF's basic objective is to build world-class academic institutions in the country (Aithal et al., 2016). The ranking framework considers Graduation Outcome (GO) as a critical indicator of performance for universities and technical institutes offering engineering education (Morley, 2001).

Among the five parameters employed in this ranking framework, GO serves as the prime indicator of the final manifestation of the core teaching activity of engineering institutes, which is nurturing the talent pool to produce industry-ready and employable engineers. To objectively measure the outcome, GO takes into account the percentage of a batch graduating from an institution in an academic session, and the combined percentage of students who secure jobs in the industry and those who are going to pursue higher studies.

GO has been assigned a weightage of 20 per cent of the total score in the NIRF ranking methodology. It has been categorized into four sub-segments, each of which is assumed to be of different importance and has been allocated with varying weights. Two of these four parameters are 1) 'median of the salaries secured by the students during one academic session' and 2) the 'percentage of all such students, who either have secured placements or have opted for higher studies in an academic session', are objective indicators for the employability of the student pool. The total of the weightages allocated to these two sub-categories is 65 per cent of the total score of GO *(nirfindia.org)*. Thus, it is noteworthy that these two parameters, which are solely indicative of students' employability, have been assigned 13 (0.65*0.20) per cent of weightage in the overall ranking framework, which happens to be the highest among all individual parameters considered in NIRF. Such high weightage speaks volumes about the importance of employability.

Review of Literature

Employability

The conceptual perspective of employability has expanded and transformed over the decades. From its earlier definitions in absolute terms, it is now viewed as a relative term. Lefresne (1999) has defined employability as the “probability of getting a job or emerging from unemployment for a given group at a given time” (pp. 465-466). Harvey (2001) explained employability as a graduate's ability to secure employment. With a similar perspective, Forrier and Sels (2003) opine that a job aspirant's employability is his/her probability of obtaining employment.

Sanders and de Grip (2004) elaborate on employability as "the capacity and the willingness to be and to remain attractive in the labour market, by anticipating changes in tasks and work environment and reacting to these changes in a proactive way". Employability, as defined by Little (2004), is "a set of achievements, understandings, and personal attributes that make individuals more likely to gain employment and be successful in their chosen occupations" (c.f. Gokuladas, 2011, p.1).

The shift from defining employability in absolute terms was first made by Brown and Hesketh (2004, p. 25). Their definition of employability as "the relative chances of getting and maintaining different kinds of employment" brought the relative aspect in the concept. According to these authors, employability can be viewed as a subjective concept, and various contextual factors act as its antecedents.

From the perspective of employers who employ fresh engineering graduates, employability has been viewed as "a student's capacity to demonstrate a range of personal, performative and organisational skills rather than the possession of traditional academic, theoretical knowledge and skills" (Stiwne and Alves, 2010, p. 36 c.f. Lopez et al., 2015).

Movement Capital of FEGs in India

The movement capital of an employee is determined by his/her academic degree(s) earned in relevant education, work experience that could be of advantage in discharging the job assignments, and the cognitive ability and transferable skills warranted by employers. The higher is the movement capital better is the scope of employability, and vice versa (Wei-Ming, 2004).

There seems to be a shortage of studies on the employability of Indian FEGs, from the perspective of their skill competencies. The skill gaps evident among Indian FEGs taking various employability skills into account have been measured by Jeswani (2016). An alarmingly wide gap between employers' perception and their expectation levels has been reported in this study. Gokuldas (2011) surveyed 559 engineering students of one technical institute. The results revealed that proficiency in English and knowledge of the core engineering domain are significant indicators of employability as far as selection processes of IT service organizations are concerned.

Sinha et al. (2019) have tested whether employers' satisfaction with skill competencies of Indian FEGs is influenced by their expectations and perceptions. Applying the expectation confirmation theory (ECT), the authors have confirmed that two variables related to employers' expectations and one to employers' perception significantly influence employers' satisfaction, with (dis)confirmation as a mediator. In another study, Sinha et al. (2020) established the association of employers' expectations and perceptions with employers' satisfaction with new hires. Positive disconfirmation mediates these relationships. The age of employers' representatives moderated the effect of their expectations and perception of disconfirmation.

Customer Satisfaction

There always have been two schools of thought in extant literature about customer satisfaction. One school believes that it is a cognitive process, where the other considers customer satisfaction as a manifestation of an emotional state (Yüksel et al., 2008). Hence there is no definition of customer satisfaction, which could be universally accepted (McCollough, 2000). Satisfaction is defined by

Howard and Sheth (1969) from a cognitive state perspective, as an adequate or inadequate reward for the sacrifices made in the transaction involved in getting a product/service. Another definition of satisfaction is that it is "an evaluation (cognitive) that the chosen alternative is consistent with prior beliefs with respect to that alternative" Engel and Blackwood (1982). Thus, satisfaction may be construed as a phenomenon arising out of "complex extensive cognitive, affective and other undiscovered psychological and physiological dynamics" (Oh and Parks, 1997).

Consumer Behavioral Studies on Customer Satisfaction

Early research on customer satisfaction was mostly based on the dissonance theory postulated by Festinger (1957). This theory suggests that if the value perception a customer has *before* receiving a product does not match with that *after* receiving, it manifests in cognitive dissonance. As postulated in the dissonance theory, "post exposure ratings are primarily a function of the expectation level because the task of recognizing disconfirmation is believed to be psychologically uncomfortable. Thus, consumers are posited to perceptually distort expectation-discrepant performance so as to coincide with their prior expectation level" (Oliver, 1977, p. 480). Although this theory has not been accepted much as satisfaction cannot be measured completely applying its tenets, it laid the foundation of the dynamic nature of satisfaction.

Hovland and Sheriff (1961) proposed the assimilation-contrast theory, which was further studied by Olshavsky and Miller in the year 1972. This theory relies on an opposite paradigm of the dissonance theory in explaining satisfaction. Oliver (1977, p. 81) explains that "outcomes deviating from expectations will cause the subject to favourably or unfavourably react to the disconfirmation experience in that a negative disconfirmation is believed to result in a poor product evaluation, whereas positive disconfirmation should cause the product to be highly appraised". According to the assimilation-contrast theory, poor performance will be negatively magnified, whereas a good performance will be positively magnified and thus result in a higher level of satisfaction.

Oliver (1977) suggested the expectation confirmation theory in explaining customer satisfaction. Oliver took queues from the adaptation level theory of Helson (1964). These theories broadly apply a comparison between cognitive states before and after the transaction is experienced (Oliver, 1980).

Westbrook and Reilly (1983) offer another proposition through the value-precept theory. These authors proclaim that what is expected from a transaction does not necessarily map with what is desired, that is the value to be derived from a product. They argue that value might offer a better comparative standard as against expectations from a product or service.

The other theories that evolved eventually include the evaluative congruity model proposed by Sirgy (1984). This framework captures the varying states of satisfaction from a mix of expectations and the actual transaction outcome. Other consumer satisfaction theories developed in the recent past are the attribution theory and the equity theory.

Narrowing down from satisfaction to employers' satisfaction, we find it pertinent to talk about Lang and Zha (2004). These authors explain employers' satisfaction as a qualitative outcome of a technical school offering engineering courses. Employers generally consider knowledge, skills, and abilities (KSAs) to be the indicators of the quality of task delivery of an employee (Noe and Hollenbeck, 2007). Recruiters generally assign lesser

preference to the "knowledge of an academic subject" in employers' satisfaction surveys, while "transferable skills" have been cited as more preferential qualities (Srikanthan and Dalrymple, 2004. p. 268). Shah et al. (2015) propose that graduate quality can be measured through the assessments made by employers (c.f. Sahney and Thakkar, 2016).

The value-percept disparity model (Locke, 1967, 1969) expresses satisfaction as "an emotional response triggered by a cognitive-evaluative process in which the perceptions of (or beliefs about) an object, action, or condition are compared to one's values (or needs, wants, desires). The smaller the disparity between precepts of the object, action, or condition, and one's values, the more favourable the evaluation, and the greater the generation of positive affect associated with goal attainment, i.e., satisfaction" (Westbrook and Reilly, 1983, p. 258). This model postulates that users, more than meeting their expectations, prefer to fulfil their wants. Thus, users try to match their perception about any transaction object (either a product or a service), with the degrees of fulfilment of their wants through the object's usage.

Customer Satisfaction from the Perspective of Employers as Customers

Students can be considered as the customer to the higher education institutions as they are the primary source of revenue to the latter (Courtney and Courtney, 2006). Ruben (1995) has observed that the parents of the students and the employers who recruit these students are viewed as customers of higher education institutes. Zaharim et al. (2009) have shown that many recruiters who hire graduates find the skill competencies of these hires at an acceptable level, and hence they are satisfied. Marzo-Navarro et al. (2008) proposed that in addition to the course curriculum, various skillsets like methodological skills, inter-personal skills, and participation skills impart a significant impact on employers' satisfaction, though with unequal weightage. One-fourth of the world population is from India, and its economy is in promising state. We have stumbled upon the fact that there is not enough research on the satisfaction of Indian employers (Sinha et al., 2020). Our paper attempts to explore this scenario.

Employers' Expectations vis-a-vis their Satisfaction: The gap in expectation of employers and their satisfaction regarding the employability skills of graduates finds its place in the existing literature. For example, Abbasi et al. (2018) have shown that the employers' satisfaction with employability skill of graduates working in the Pakistan banking industry falls short of the expectations of their superiors. Employers usually prefer to hire employees with transferable skillsets (Davies, 2009; Crebert et al., 2011). Employers assign more importance to personal qualities and soft skills than academic knowledge, reflected through grades scored in examinations (McMurray et al., 2016) and subject-specific skills (Finch et al., 2013; Saeed, 2015). The reason behind such a mindset is that what employees can do matters more to the employers than to what extent they are knowledgeable (Jackson, 2010) (c.f. Abbasi et al., 2018).

Nuijten et al. (2017) have reported that extracurricular activities are more relevant to employers than an employee's academic performance. The thought process of students was the opposite. High KSAs are warranted in any interview process; qualifications never overshadow KSAs as far as relevance to the job role is concerned (Van Vianen and Kmieciak, 1998). During any recruitment process, an employer prefers to hire FEGs with potential leadership qualities (Harvey and Knight, 1996). Burgess and Aitken (2004) mention functional skills, computer skills, ability to tackle conflict,

and good attributes as warranted from employees in the hospitality industry. Malaysian employers prefer to hire FEGs with better non-technical attributes (Abdullah et al., 2007).

Factorization of KSAs

Verma and Bedi (2008) have asserted that a fresh graduate in engineering who possesses generic or non-technical skills has better employability. The success of an engineer is fortuitous upon the proper application of non-technical skills like speaking and writing skills, though the core of engineering warrants applied technical knowledge and skills (Watson and Alexander, 2005 c.f. Gokuladas, 2011). It is crucial for FEGs to possess soft skills, which is accepted by prospective job seekers and employers (Nuijten et al., 2017).

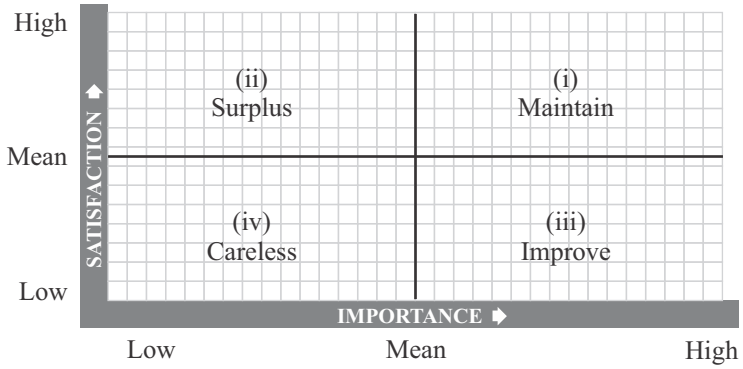
Fourteen such core categories of skills possessed by FEGs have been classified by Balaji and Somashekar (2009), which are perceptually important to the recruiters. These skills are "interpersonal skills, written & oral communication skills, futuristic thinking, teamwork, self-management skills, continuous learning capacity, flexibility, presentation skills, decision making capacity, listening skills, leadership, creativity/innovation and problem-solving capacity" (Sinha et al., 2020, p. 51).

Blom and Saeki (2011) have included thirty skills and factored them into three classes based on the underlying latency. The first type has been named as core employability skills, which are generic skills required across all engineering domains. The second category is termed as technical skills which are related to a specific field of work. The third type is a group of soft skills and is collectively termed as communication skills. The same scale has been used by Jeswani (2016) in a model to determine the skill proficiencies required by FEGs. The results of this research have manifested into three factors, named as technical skills, management skills, and communication skills. Jeswani has further postulated that while technical and communication skills positively impact employer satisfaction, management skills and employer satisfaction share no statistically significant relationship. KSAs of FEGs have been classified under three categories in both the studies. We have adopted this typology in this paper and have been named these skills as communication skills, technical skills, and core employability skills.

Expectation Satisfaction Matrix

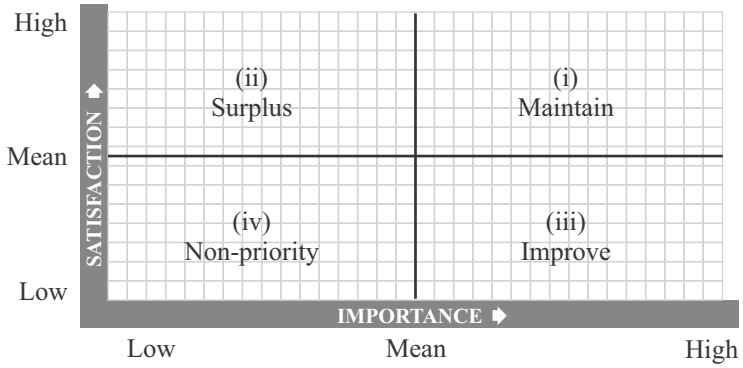
Yang (2003) had suggested the importance-satisfaction matrix with (2*2) four quadrants, plotting satisfaction with consumer attributes on the vertical axis and importance on the horizontal axis. Both the axes are marked from low to high, with the mean at the center (see Figure 1).

Figure 1: Importance-Satisfaction Matrix (Yang, 2003)



The four quadrants are named as i) excellent (high satisfaction – high importance), ii) surplus (high satisfaction – low importance), iii) to be improved (low satisfaction – high importance), and iv) careless (low satisfaction – low importance). The ISM is applied for understanding the relative positions of the attributes necessary for satisfaction. We have used the same matrix, with 'expectations' in place of 'importance' on the horizontal axis. We have named the quadrants as i) maintain, ii) surplus, iii) improve, and iv) non-priority (see Figure 2).

Figure 2: Expectation Satisfaction Matrix



Following Hung et al. (2003), we have used standardized indices I_S (index of satisfaction) and I_E (index of expectation) to plot the attributes instead of actual mean values. Thus, in our matrix, I_S has been plotted on the horizontal axis and I_e on the vertical axis.

Research Methodology

Research Design, Data Collection, and Procedure

From a list of organizations that hire FEGs, 500 recruiters who employ FEGs from college campuses were identified. These recruiters were from diverse functional domains, information technology, strategy & consulting, and HR, to name a few. The constraint on the selection of respondents was employed to ensure that the respondent should either be a supervisor of FEGs or a senior manager or was associated in the process of performance appraisal of the FEGs. This ensured that the respondents have experience hiring or supervising of FEGs. We conducted the survey with the previously identified 500 respondents. The questionnaire was shared with them either through a Google form or through hard copies.

Our primary research questions were: what are the levels of expectation regarding the skill competencies of FEGs which recruiters have, and to what extent they are satisfied with these skill competencies. To address these questions, the relative positions were plotted in the expectation satisfaction matrix. Then we explored in which quadrant the individual skills were positioned.

Demographics-wise 67 per cent of the respondents were male. 49.3 per cent were in the age group below 45 years. The majority (67 per cent) were post-graduates. Among the functional domains, the maximum representation was from HR (30 per cent).

Measures

A seven-point Likert-type scale with anchors 1 (Strongly Disagree) to 7 (Strongly Agree) was used

to measure all the constructs.

Employers' Expectations:

We measured this construct with twenty-seven items used by Blom and Saeki (2011) and Jeswani (2016). Sample items include "Engineering graduates are expected to be conversant with advanced computer knowledge" (technical skills); "Engineering graduates are expected to be flexible" (core employability skills); "Engineering graduates are expected to be competent in verbal communication" (communication skills).

Employers' Satisfaction:

The level of satisfaction for all the twenty-seven items were measured from the same set of respondents. sample items are "Competency level of engineering graduates in communication skills is satisfactory" and that of employers' perception is "Engineering graduates are competent in communication skills."

Data Analysis

We received responses from 343 representatives of employers. In the next step, we exercised checks for missing values and unengaged responses. In the final stage of data cleaning, Mahalanobis distance square was computed for outliers. 59 responses falling outside the p value of 0.5 were eliminated, and the final sample was of size 284.

With this cleaned sample, we conducted an exploratory factor analysis in SPSS with twenty-seven observed items which predicted satisfaction of employers. The observed items were loaded into three latent factors. Out of twenty-seven items, five, eight and five items with factor scores more than 0.60. loaded on the three respective latent factors. The classification of observed variables in three factors was in compliance with the previous studies. Following the naming convention used in the studies of Jeswani (2016), we named these factors as *expectation with communication skills, expectation with technical skills* and *expectation with core employability skills*. To arrive at the score of these three independent latent variables and the score of the dependent latent variable *overall customers' satisfaction,* the mean scores of the respondents were considered.

We then conducted regression analysis with three independent and one dependent variable in our proposed research model (see Figure 3). The results showed that all three regressions were statistically significant (see Table 1 and Table 2).

Figure 3: Research Model

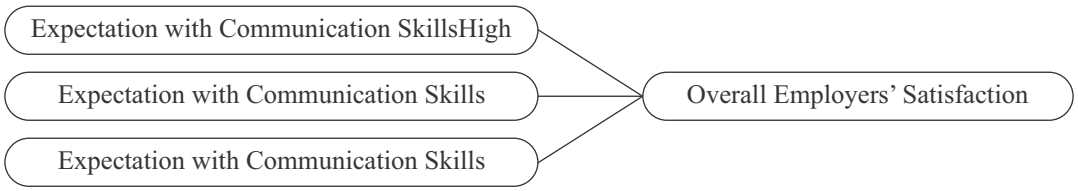


Table 1: Regression Model Fit Summary

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.686a	.471	.236	.81461957	.343	48.819	3	280	.000	1.818

a. Predictors: (Constant), Zscore(Percvcomm1), Zscore(PercvTech), Zscore(PercvCore)
b. Dependent Variable: REGR factor score 1 for analysis 1

Table 2: Statistical Significance of Regression Coefficients

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	4.710E-016	.048		.000	1.000	-.080	.080
Communication skill	.193	.073	.193	2.638	.009	.072	.313
Technical skill	.141	.056	.141	2.516	.012	.048	.233
Core employability skill	.355	.068	.355	5.208	.000	.243	.468

a. Dependent Variable: REGR factor score 1 for analysis 1

Based on the above findings, we further analyzed the data with eighteen observed items with loadings of 0.6 or higher in the factor analysis. In the final step of the analysis, these eighteen observed items were plotted in the expectation satisfaction matrix. To plot the items in the matrix, their respective indices of satisfaction and indices of expectation were measured with the following formulae:

$$\text{Index of satisfaction } I_{si} = \frac{\mu_{si} - \text{Min}}{\text{Range}} \qquad \text{.....(a)}$$

$$\text{Index of satisfaction } I_{ei} = \frac{\mu_{ei} - \text{Min}}{\text{Range}} \qquad \text{.....(b)}$$

Where, μ_{si} = mean of satisfaction scores of all respondents for of i^{th} skill
μ_{ei} = mean of expectation scores of all respondents for of i^{th} skill
Min = Minimum score of Likert scale i.e., 1
Range = Range of the Likert scale i.e., 7-1 or 6.

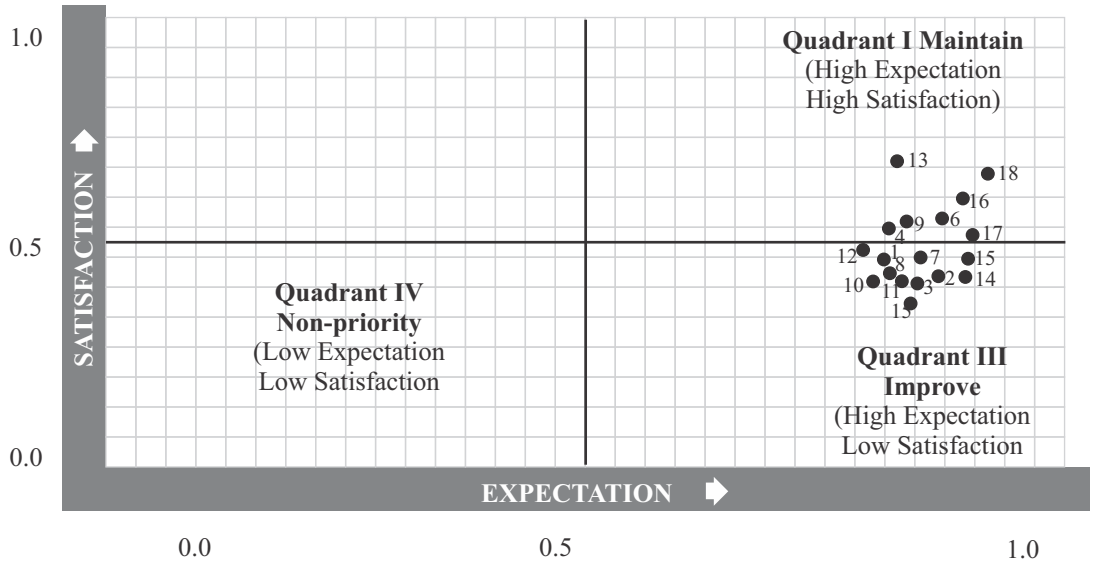
The value of the indices, by this formula, should have a range between 0 to 1. Thus, both vertical and horizontal axes of the matrix were assigned with a range of 0 to 1. The four quadrants were demarcated at 0.5, which is the mean of 0 and 1. In Table 3, we have shown the eighteen items with their respective I_e and I_s values. Each item has also been assigned a code for better comprehension in the plot.

Table 3: Indices of Satisfaction and Expectations

Code	Name of the items	Loading into the latent factor	Ie	Is
1	Well groomed	Communication skill	0.743	0.472
2	Verbal communication	Communication skill	0.810	0.437
3	Communication in English	Communication skill	0.784	0.421
4	Written communication	Communication skill	0.749	0.533
5	Comprehension skills	Communication skill	0.777	0.383
6	Customer centricity	Technical skill	0.814	0.552
7	Ability to solve problems	Technical skill	0.788	0.473
8	Creativity	Technical skill	0.751	0.445
9	Ability to comprehend and interpret data	Technical skill	0.770	0.547
10	Empathy	Technical skill	0.728	0.427
11	Ability to use appropriate tools	Technical skill	0.765	0.427
12	Knowledge of contemporary issues	Technical skill	0.718	0.488
13	Knowledge of basic computer	Technical skill	0.759	0.668
14	Teamwork	Core Employability skill	0.844	0.437
15	Integrity	Core Employability skill	0.847	0.472
16	Adaptable	Core Employability skill	0.840	0.591
17	Reliability	Core Employability skill	0.854	0.520
18	Flexibility	Core Employability skill	0.871	0.643

In the next step, these items were plotted into the expectation satisfaction matrix (see Figure 4) with the index values shown in Table 3.

Figure 4: Expectation Satisfaction Matrix



To summarize, recruiters are not satisfied with four out of five skillsets of *communication skills*. The satisfaction levels are also not met with five out of eight skillsets falling under the category of *technical skills.* Only with *core employability skills,* the number of skillsets with which recruiters are satisfied are more than the number with which they feel improvement is necessary.

Implications of the Study

Our findings clearly validate the concern reflected in various surveys regarding the low employability of FEGs in India. The employers' satisfaction levels are not met for eleven skillsets out of a total eighteen we have taken for the final analysis. More importantly, all of these skillsets carrying higher levels of expectations, need improvement.

Our study acts as a guide to the higher education institutes for deciding on specific areas where training is necessary. Students should also try to ascertain their levels of competencies on these skillsets and must hone skills through a proper methodology to enhance their employability. For the employers, we offer a model to judge the skill competencies of the fresh hires. They may design the training modules at the time of induction based on their requirements and the skill competency levels of the new hires.

Conclusion

The Indian job market is currently passing through a phase of pandemic-induced volatility and uncertainty. The scope of employment for fresh engineering graduates, which has been already plagued by the issues of chronic low employability, would remain uncertain as long as the economy does not turn around. Thus, understanding the expectations of employers, properly nurturing the talent pool to enhance their employability, and thus ensuring recruiters' satisfaction with the skill proficiency of FEGs, are of paramount importance for both FEGs and the higher education institutes. The matrix that we have proposed may help both the stakeholders of the knowledge supply chain in meeting the demand for industry-ready engineering graduates.

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