

# Challenges in Employing Fresh Graduates in Information Technology Companies

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## **Abstract**

There is a growing demand for professional education in India and the employability of graduates in outsourcing companies is a huge challenge. The primary challenge in current Indian Business Process Outsourcing scenarios are effective delivery and optimized on-time job completion, adoption of smart methods and solutions. The Indian Information Technology-Business Process Outsourcing sector has been one of the significant catalysts to the growth of economy which has improved the standard of living of its people. The present paper is based on how to engage fresh graduates in Information Technology companies' client projects. We have used factor analysis techniques to short list the most important factors that the companies look in the fresh graduates before employing them. Our results showed that mainly it is the engagement and employer-related attributes that play a major role in the employment of fresh graduates on IT client's projects. We have shown the factors that influence the companies to employ fresh graduates in IT sector in India. We offered useful implications for policy officials, market researchers, businessmen and students who are interested in pursuing management education.

**Keywords:** Information Technology, Business Process Outsourcing, India, fresh graduates, employability.

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## **I. Introduction**

The Information technology (IT) companies in India have emerged as the most powerful organizations in terms of increasing the employment ratio in the economy. These companies have paved the way for the top outsourcing clients fret against fresher's (a pass out graduate with no prior industry exposure) getting inducted into IT related projects (Luo & Bu, 2016). This has motivated the IT companies to emerge with the concept of outsourcing called "Global sourcing", which will meet the requirements in customer expectations by keeping the costs competitive. Most of the revenue for the IT

companies comes from exports and they face significant amount of risks in terms of time zones, exchange-rate volatility and cultural differences.

The primary challenge faced by the current Indian Business Process Outsourcing (BPO) are decrease in offshore hourly billing rates, client’s demanding expectations, day to day technical changes, changing government regulations, and limited domestic opportunities. The top outsourcing customers are now concerned over the increasing number of new/fresh graduates being employed by Indian firms in IT projects (Hopwood, 2018). These firms believe that a large proportion of fresh graduates may affect the quality of the deliverables of these projects mainly in the banking and financial services sector (Arora et al., 2001; Dubey et al, 2018). Over the years these outsourcing firms have hired thousands of fresh graduates, around 75% of their overall recruitment every year. These fresh hires, after six months of training, are pushed into client projects to ensure that off-shoring remains cost effective (this means companies have to pay higher salaries for people with more experience). Today even clients have become aware and are showing key interest in watching financial results of vendors to ensure the cash invested actually create new applications and value in their projects (Berriman, 2017). The concerns of large outsourcing customers have grown with respect to the profile of workers who have been assigned their projects. This is a warning for all technology firms to follow the 'pyramid model', which is based on a high proportion of fresh graduates recruited from campuses and managed by a few middle to senior-level managers at the top (Jusoh, Simun and Choy Chong, 2011). The experts feel that the challenge is to impart knowledge of business and not just technology. This paper therefore is an attempt to study the employability of fresher’s in IT projects.

**II. Literature Review**

In service based companies, the real assets are their employees and the value lies in delivering quality projects to their customers. There have been researchers who laid emphasis on hiring fresh professionals for doing their work in IT industry. The list of the researchers along with their work and contribution is presented in table 1.

Table 1: Literature review on IT industry and hiring the fresher’s for their work.

S No	Author(s)	Nature of work	Relevance of proposed work
1	Kathawala&Heeren (2009).	This work gave details regarding the emergence of china and its threat to Indian IT industry	This helped us to understand the strategies and business models adopted by china and to find out the relevancy in Indian context
2	Natovich (2003)	This work specified the vendor risks associated with IT projects	This work gave knowledge of the contract related issues that are faced in IT projects

3	Overby (2007)	This work illustrated the outsourcing lessons learnt from china	This work gave insights on the importance of quality deliverables.
4	Sharma et al. (2008)	This specified some of the best practices for communication between client and vendors	This helped to understand the current IT practices adopted by the organization for communicating between client and projects associated with multiple vendors
5	NASSCOM strategic Review (2011)	This review report brought insights about IT industry.	This report specified about the strong hiring plans of fresher's and trends in IT industry in general.
6	Ilavarasan (2007)	This study revealed about the workforce engaged in IT industry.	This helped to understand about workforce related problems that is faced by IT sector.
7	Oshriet al. (2007)	This specified some of the best practices for successfully delivering IT projects from top IT company- TCS.	This brought insights about standards and best practices for successful project implementation.
8	Nicholson & Aman (2008)	This gave information about the effective risk management system from offshore accounting outsourcing.	This work let us realize about vendor's cognizance regarding outsourcing contracts.
9	Weijun Zheng, Stephen Hawk (2009)	This portrayed various emerging models that are used for Indian offshore infrastructure management outsourcing.	This article was useful in knowing various outsourcing models that is used by the Indian companies.
10	Moore & Barnett (2004)	This document elaborated the best practices for outsourcing and the importance of agile methodology to deliver projects.	This was helpful to evaluate the companies about the usage of agile methodologies in their organizations and to identify details of agreement documents.
11	Bhatnagar (2013)	This study showed the training methodologies adopted by companies and how training is instrumental in developing fresh graduates.	This work was useful to identify the training programs followed in the company, minimum training hours, and kinds of training provided (technical, domain etc.)
12	Goel (2006)	This paper deliberates about the changes in the educational system in IT specific areas.	This work was helpful to know about how the improvement in education sector can help IT industry to make huge contributions to an organization.

13	Ulaga, W., & Eggert., (2006)	This work briefed about the pitfalls in multi-vendor outsourcing.	This work was helpful to identify how companies handles multi-vendor contract agreements and what differences they see in comparison to normal contracts.
14	Yiu& Saner (2014)	This study revealed some of the challenges faced by organization related to attrition, talent retention etc.	This was useful to identify whether attrition makes organization to fill skills with people of same experience or with a fresh graduate.
15	Kogut&Metiu (2001)	This detailed various pricing models that are used and also about the new "Free cycle development model".	This was helpful to identify emergence of new pricing models.
16	Jaloteet al. (2000)	This specified about the various quality control process like statistical process control and quantitative quality management techniques for improving the software quality.	This made to ask the companies about adopting such kind of process followed and the effectiveness of it in today's scenario.
17	Koh, Ang& Straub (2004)	This research showed the need of customer- supplier relationships for delivering quality deliverables.	This helped us to understand from the firms regarding involvement of the clients during inducting fresh graduates into their projects.
18	Thiagarajan&Renugadevi (2011)	This empirical study revealed about the employee engagement practices used by the industry for its employees.	This work was useful to know about the techniques employed by companies for motivating employees.

Although there are several factors that contribute to the employee's performance like challenging career opportunities, good team, senior-management interests in employee's well being etc. But we are interested to know the employability and the performance of the students who have just graduated (we call them fresh graduates) in the IT companies in India, mainly targeting the BPO sector. As fresh graduates need to be well groomed, it is also important to consider employer's activities like training methodologies adopted, recruitment patterns etc. Also, we consider engagements which the employer agrees with the client for delivering projects and the main focus would be on pricing and contractual agreements. Contractual agreements deal about resource metrics that is specified, renewal related issues and the outsourcing model that they use.

Many IT industry research firms namely Forrester Research, Gartner and Mckinsey Global Institute have extensively studied the outsourcing practices being adopted and thus have greatly contributed to defining the outsourcing models. We mainly focus on the contract management practices followed widely in the companies. The need for an effective and beneficial relationship between the vendors and customer arises from laying a strong foundation to the collaboration by means of laying out an effective term.

### *2.1. Perspective from an Outsourcing Company*

McCarthy (2004) shows that there were not much of challenges in terms of quality or business process knowledge during those times. During early years of IT outsourcing, the focus was just to reduce the cost, but it has new dimensions in today's world. The challenges of doing faster at a lower cost and strategic benefits are changing the rules of the game. There were around 43% respondents that believed that their company lack's in project management skills and 10% of them believes that it's a major challenge for the organization. 31% of the respondents believed that the company does not have a good process for specifying the work to its fresh employees and 20% believes that the company needs to deal with this major challenge. 35% of the respondents believed that there is some challenge to find the right performance metrics for managing the firm's offshore providers. Almost 47% of the respondents said that there is some challenge when working with the offshore providers in terms of lack high level business and industry process knowledge. 37% of the employees believe that some challenge when working with offshore providers lies due to the cultural difference between the staff and their own company. Almost 57% of the respondents believed that the quality of project management process does not support large project when working with the offshore providers.

The relevance is that the opportunities that exist in the IT sector are multifold: they are largest recruiters in comparison to other sectors, good pay-masters and the importance of IT related products in any industry is paramount in today's world. With china and other emerging countries competing with India from all sides in terms of lower wage rate, English proficiency, and technical knowledge skills, the current study becomes more relevant. The benefits gained by performing this study would figure out the deficiencies in the education system, training methods employed by the company and the flaws in the outsourcing models and contractual agreements used by the employer for executing IT projects. Therefore, this study focuses on the employability of fresh graduates in delivering IT projects taking into consideration employee's education, employer methodologies and engagement practices.

India's shining sector is currently IT and is in strict competition with other emerging economies. With larger employee base in these sectors are fresh graduates,

the need is to work out the solution to deliver high quality products which translates into repeat business from the clients. The top customers today complain about the quality of the deliverables by the Indian IT companies and blame the companies for employing lot of fresh graduates in their engagements. Already customers have started to scrutinize the ratio of fresh graduates employed in critical projects and are also penalizing them for such activities. Companies in turn are increasing fresh graduates training periods and are providing incentives and other rewards for motivating them to improve their qualities. Amidst all this, the standards are not up to the expected level of the customers.

The goals of the study are to identify important employee attributes for engaging in IT projects; employer methods for successful execution of projects; contractual practices adopted between vendor and client for deliverables; secondary engagement techniques adopted by the company and, validate the factors arrived with the available data. The study attempt to identify the basic skills that fresher's needs to have to become employable in client projects and methods used by employers to manage fresh graduates getting engaged in client projects.

### **III. Research Methodology**

#### **3.1. Research design**

The research is primarily qualitative in nature. The literature survey is carried out to know the current practices adopted within the organization to deliver quality software products along with importance of contractual agreements. The focus group interviews were conducted with managerial and higher position people to understand the real picture in the organization and the changes that happened in the recent times. The approach carried out resulted in the formulation of critical success factors which are required for delivering quality deliverables. The research process followed the following steps - first the literature study to identify the importance of delivering high quality software products; second discussion with managers to identify contractual practices followed in the organization; third informal discussion with the developers, leads and quality members regarding the activities in software deliverables; fourth formulating the critical success factors for it; and lastly validating the factors by conducting interviews with managers, client associates etc. were conducted.

#### **3.2. Data Collection procedure**

The data collection includes personal and telephonic interviews with top industry executives, case studies and white papers from top outsourcing providers and research firms. A total of 11 questions were formulated and was sent to companies asking for

their responses. The respondents were at the top managerial positions in the organizations. The data was gathered during the period Aug-Oct 2018. The companies included for data collection are medium and large sized IT and ITES companies in India. The total number of samples collected was 60 and out of which 5 were found improper and so the valid sample was 55. The samples eliminated are for the reasons like less fresher's in their projects, small-sized organization etc.

The focus of the data collection was as follows:

- Company best practices and general practices adopted across the industry
- Contractual agreements
- Performance/deliverable metrics
- Recruitment, attrition, training and performance of fresh graduates

Sampling technique followed was quota sampling in which following are the approximate quota for different types of customers: BA/Consultants/Leads = 25%; Project/Business Managers = 45%; Account/Senior Managers = 20%; and General Managers = 10%.

### *3.3. Factors determining quality deliverables*

The critical success factors that are important for delivering high quality deliverables considered in the study are:

#### *3.3.1 Quality of the education*

*Scenario of current educational system*—The quality of education is stimulus in India through there are Indian Institute of Technology (IIT's), Indian Institute of Management (IIM's), there is still the dearth in the quality of students. NASSCOM (2011) and other agencies have underrated some skills such as spoken English, creativity and team working across the IT industry. Moreover we need to analyze what kind of skills that fresh graduates possesses, the relevancy of curriculum in today's world and check whether the education provide ready-made employability in this high octane world.

#### *3.3.2 Employer's training methods*

*Current training methods* - A NASSCOM (2011) reveals that on average, IT-BPO organizations in India spend a significant amount on training on new recruits, which is equivalent of 3% of their salary bills. Analysis also says that the training spent per employee in this industry is highest among the organized services sector. With

multinational companies increasing its presence rapidly there is competition for the best talent. This study evaluates the minimum training hours engaged in fresh graduates, the training methods employed and validates the impact in the quality of the deliverables. Bhatnagar (2006) found that human resource development is critical in software companies where 95% have formal training divisions and learning needs analysis programs. The minimum number of hours to be allocated for employee training is 40 hours. This covers both behavioral and technical training and the proportions vary between managerial and technical positions.

### *3.3.3 Recruitment strategies*

Since the attrition is prevalent in fresh and mid level categories, this study evaluates whether the fresh graduates are substitute for experienced people. This helps the company to preserve their bottom line and gives a better picture to the outside world, when their results are declared on quarterly basis. Nagadevara et al (2008) corroborate the findings of this survey with their own study suggesting that younger employees are more likely to turnover than older employees in early stages of recruitment process. They also suggested that high labor turnover of the young (2-5 years of experience) is a particularly acute problem in the IT industry where firms employ large numbers of young professionals who might have exaggerated job expectations which IT companies cannot fulfill.

### *3.3.4 Contractual agreements used by the employer for the execution of projects*

*Current contractual agreements*-The client-vendor relationship is extremely important for successful execution of projects and our focus of study is from the perspective of vendors. Many times, important terms and conditions are not explicitly incorporated in the legal contract; contractual parties rely, instead, on the spirit of the contract as embodied in a handshake. Generally legal contracts are never complete and will have to be supported by unwritten promises. The emergence of multi vendor outsourcing is quite fashionable these days but the contracts needed for it are not quite easy. The due diligence process that is carried out by the clients includes evaluation of fresh graduates employed in the projects and comfort level in working with them. The contingency created in the contracts generally are favorable towards clients and there comes an importance of specifying the fresh graduates employed in the projects by some vendors. The current study deals with the contents of master service contract and the practices that are followed in implementing the projects.

### *3.3.5 Current practices employed by vendor*

### 3.3.5 Current practices employed by vendor

The pricing models widely used today are: fixed pricing, time and material (T&M), and service based. For fixed pricing model, the number of resources employed need not be mentioned unlike T&M or service based pricing model. Free cycle model which is mostly part of T&M says that the free time available after delivering the projects can be put to use for some value added services. As clients have option of multiple vendors, it is important for the vendor to value add on the project that they implement. But agile practices prescribe regular updates to the client where the free hours available are open to questions from clients. This research figures out what are the risks faced in outsourcing and what models are best used in today's scenario.

### 3.3.6 Client's expectations

Today's client knows the importance of IT in improving their business and most of them have in-house IT teams which interacts with vendors. They expect their vendors to be competitive, collaborative and cost conscious in delivering projects.

### 3.7 Estimating measures

Factor analysis – In order to determine the minimum number of factors that would account for the maximum variance in the data collected, we used factor analysis. It is employed in our study for the purpose of analyzing the data. Results of eight factors being extracted from the data collected. Only factors with Eigenvalue(s) greater than 1 were retained and others were ignored. By comparing the Varimax Rotated Factor Matrix with Un-rotated Factor Matrix (entitled as component matrix), rotation has provided simplicity and has enhanced interpretability. From the rotated factor matrix the factors have been extracted and listed.

## **IV. Discussion and findings**

### 4.1. Companies perspective to engage the fresh graduates in the client's project

a. Trainings to be undergone before engaging in client projects –In order to identify the list of criteria's that an organization do before engaging fresh graduates in client projects, the frequency information is being gathered. Trainings to fresh graduates before joining the client's project has been categorized as technical training, domain training, short term assignment projects and technical certifications. The data collected infer that technical training (48.2% of the respondents) is mostly undergone before a fresher joins a client project. There has been an emphasis on short term assignment projects (31.8% of the respondents) also nowadays as client demands are getting higher. Hence the frequency of training period also has

increased. This short term projects are mostly confined to in-house projects. There has been a greater emphasis on short term domain training (11.8% of the respondents) and lots of companies have also started preparing candidates for domain certifications. From the conversations we did we found that the domain training is mostly within a project. Very rarely they are part of training modules. Companies have also tie-ups with training institutes and do use experts for giving such trainings. Most of the companies spend a large portion of their revenues for these trainings. Many companies also have compulsory quota of training on yearly basis as part of their appraisal system too.

b. Form of outsourcing engaged by the vendors – The different forms of outsourcing engaged by the vendors include out tasking (sourcing certain tasks such as payroll services), selective outsourcing (sourcing a selected part of larger business unit), transitional outsourcing (sourcing for technology upgrade), complete outsourcing (sourcing complete business unit), and business transformation outsourcing (a combination of consulting and outsourcing). The most preferred form of outsourcing that the vendor gets from the client is depicted through frequency information. The most prominent being transitional outsourcing (36.6% of the respondents) followed by complete outsourcing (21.1% of the respondents). The out tasking (16.9%) and selective outsourcing (18.3%) are almost having the equal share. India being the hub of skilled-technology-labors this is not a surprise. Indian vendors have also started getting into consulting projects which shows the need for extra skills in the manpower that they recruit.

c. Measures adopted by the organization before deliverables by the fresh graduates - Here an attempt is to find out the process adopted by the companies before their releasing the projects to the fresh graduates. This includes external quality checks (outside the project but within the company), follow compliance standards like CMMI or BS 7799, Internal reviews, and any other project. If an organization can have strong practices, it will be easier for all (including fresh graduates) to ensure quality deliverables are done. The companies are now focusing a lot on quality measures (41.3% of the respondents) so as to ensure a defect free product to their customers. Dedicated quality teams are available and are involved in creating process to be followed throughout the organization in executing the projects. They also create documents to be used for appropriate phases of the software development and also review the procedures regularly as an outsider. Some big projects are also allotted a separate quality team so that the focus can be specific to that particular project. Also, external quality checks (28.3%) are done in many of the companies and they also follow certain industrial standards.

d. Contract type and renewal period - Cross tabulation is used to identify the preferred contract type and the frequency of renewal for each of the categories (table 2). The type of contracts given to fresh graduates are fixed price, time material, and service based pricing. The frequency of the contracts renewed or reviewed includes less than one year, one to two years, or more than two years.

Table 2: Cross tabulation for the type of the contract and the frequency of renewing or reviewing the contracts

		Type of contracts given to fresh graduates			
		Fixed Price	Time & Material	Service based pricing	Total
How frequently the contracts are renewed or reviewed	0-1 years	0	17	2	19
	1-2 years	6	12	2	20
	More than 2 years	12	4	0	16
	Total	18	33	4	55

The time and material contracts are widely used in the industry (total 33 out of 55) and most of them are renewed less than two years (total 20 out of 55). As many projects are now maintenance based, this is appropriate billing strategy as the entire scope of the project is not known in early stages. Service based billing is newly evolved model where the pricing is based on the performance i.e. the product delivered by the vendor is effective in addressing client's needs and helps in improving their profits. As organizations are slowly moving from being called as "vendor" to "partner", this model would be most appropriate as it shares equally the client's risk and rewards.

#### 4.2. Theoretical implications in engaging the fresh graduates in the client's project

A large number of companies even though start with training modules for the fresh graduates, but the skills to match the project requirements are not in tune with it. The blame has to be shared with the quality of the education imparted by the college institutes. The courses are not getting updated on regular basis and the calibers of faculties are also not the best in most colleges. Several articles and surveys support these instances. Moreover, the outsourcing contracts are getting renegotiated at regular intervals and the emergence of multi vendor outsourcing models are providing competition among vendors. The time span of contracts has moved away from long term (supposed to be of 6 to 10 years) to shorter contracts (of 3 to 5 years). With agile methodologies being largely preferred by the customers, where developer/customer interactions happen on a regular basis and are posing challenges for the companies. Every off-shoring project by definition deals with partners from different jurisdictions, and needs a solid contractual framework. It is important to be precise enough to deal

with various legal, technical and operational issues and at the same time flexible enough to leave room for development.

The soaring attrition in most of the companies made them realize the importance of recruiting fresh graduates in large compared to laterals. This helped them to improve their profit margins and bid projects at lower billing rates. As technology updates are happening faster, the need to adapt to new technology are easy for fresh graduates rather than shifting experienced people from one technology to another. As most of the projects are migration or maintenance related projects, so the knowledge to understand the business and technology is a must to improve the quality of the deliverables. But the skills are not in par with the need. Also the domain skills are imparted neither by the companies nor by the institutes to a large extent and this act as a deteriorating factor in making good quality deliverables to the clients.

In many large projects, fair amount of fresh graduates is employed as a billable resource and are involved in almost all the stages of software development life cycle process. Since the clients nowadays expect more from less, the need for innovation and transformation are important for good deliverables. The fresh graduates are not capable enough to make themselves adjusted to such stringent quality deliverables. Since the time to deliver the products to market is also reducing, there is an increased pressure to accommodate client's expectations every time. With billing sometimes attached to the quality of the deliverables, the need for bug-free software is vitally important for an organization to sustain in this competitive world.

#### *4.3. Empirical Results*

The correlation between college curriculum and the frequency of training period in the companies is found to be negatively correlated (-0.521). It is significant at 1% level of significance. This implies that if the college course curriculum is in line with the industrial needs, then it reduces the training period and the employer can readily use in client projects. The average training period adopted in the companies is greater than 4 months (mean is 4.09). There are organizations where training period is more than 6 months (almost a semester) which shows the state of education in our country in producing employable graduates.

With rising cost of capital, decreasing margins, stagnant billing rates and increasing competition, the company's bottom line depends heavily on fresh graduate's intake every year. The correlation between contractual agreements of mentioning details of fresh graduates against usage of fresh graduate as a substitute resource when an experienced employee leaves the company has been drawn and it is found to be negatively correlated (-0.545). The contracts do not have mentioning of the fresh

graduate details, there is an increasing possibility that substitute may be a fresh graduate. The mean value (2.25) implies that the most of the agreements do not mention fresh graduate details and many times a replacement for an experienced resource would be a fresh graduate.

However, when any resource with more than two years of the experience leaves the company project, then the substitute for them is found in the fresh graduates.

In order to find the most important factors that influence the engagement of the fresh graduates in the IT client's projects in India we have used factor analysis test. Cronbach alpha indicated that the scale was reliable ( $\alpha = .671$ ). Factor analysis is a statistical method used to describe variability among observed variables in terms of fewer unobserved variables called factors.

The information gained about the interdependencies can be used later to reduce the set of variables in a dataset. The respondents result for factor analysis (table 3) was extracted by the Principal component method. The total of 56.1% of variations has been explained by the model.

After looking at the rotated component method we have considered eight important factors (factor values greater than 0.7 are considered). They are (1) service based pricing contracts, (2) availability of knowledge management repositories, (3) mentioning of fresh graduate's details in contracts, (4) availability of external quality checks, (5) increase profits, (6) domain training, (7) technical training, and (8) T&M contracts.

The list shows mostly contains "Engagement" attributes and few "Employer" related attributes. The above factors do not have any "Employee" attributes. If you go little deeper and create a second list, then employee learning adaptability skills and technical skills do come into picture.

After extensive research with the managers of the IT industry we find that this skill is extremely important as fresh graduates needs to be flexible enough to move around to grasp learning new and different things. "Employee" skills and "Employer" needs are mostly disconnected which goes on to say that organizations have learnt to groom their employees rather than being dependent on education that a fresher gain.

Table 3: Factor analysis

<i>KMO and Bartlett's Test</i>						
Kaiser-Meyer-Olkin Measure of Sampling Adequacy:	0.561					
Bartlett's Test of Sphericity	Approx. Chi-square:	438.990				
Df:	143					
		Sig:	0.000			
<i>Rotated Component Matrix</i>						
	1	2	3	4	5	6
Fixed billing contracts	-.812					
Service based pricing contracts	<b>.803</b>					
Availability of knowledge management repositories	<b>.754</b>		-.332			
Contracts having option to renew frequently	.548	-.485	.350			
Mentioning of fresh graduates details in contracts		<b>.847</b>				
Fitment of fresh graduates in trained (domain) specific projects		.658				
Employee's Innovative skills		-.646		.431	.332	
Engaging fresh graduates in short term projects before client assignments	.300	.464		-.440		
Availability of external quality checks			<b>.882</b>			
Compliance standards like BS7799, CMMI etc	-.432		<b>.722</b>			
Employee's Domain knowledge		.308	-.496		.355	.488
Increase profits				<b>.809</b>		
Domain training				<b>.758</b>		
Technical training	-.329				<b>.803</b>	
Fitment of fresh graduates in trained (technical) specific projects				.338	-.776	
Employee's Technical skills			.399	.365	.468	.366
T&M contracts						<b>.804</b>
Employee's Learning adaptability skills	.508					.549

## V. Conclusion and Recommendations

The following conclusions and recommendations may be made for the IT industry in engaging fresh graduates:

5.1. The most important attribute for a fresh graduate is the learning adaptability skills as employers feel that they are potential investment for future and not for present. So willingness, flexibility, learn new things quickly, are needed for fresh graduates. Technical, domain skills are also important but they keep on changing hence

they are classified under secondary categories. As the survey points out that there is a need for improving curriculums in colleges, collaborative methods need to be put in place between employer and educational institutions especially in engineering educational institutes to bridge this gap.

5.2. Service-based pricing contracts are second most important factor that an employer looks into when engaging a fresher in projects as the rewards are based on the quality of the deliverables. So as per the survey, they are not prevalent because of the risk mentioned above. But it also highlights the fact that there is deficiency in the resource strength in executing such kind of projects. Hence improvement in college curriculums or training techniques adopted by the organization or a combination of both can be useful in bidding projects with this kind of pricing techniques.

5.3. Availability of knowledge management repositories and external quality checks are needed when fresh graduates are engaged in client projects. Knowledge management repositories can be extremely useful as the contents shared across the organization will be a source for learning different things from single place. A good quality practices when followed also ensures that the projects does not deviate from important project attributes.

5.4. The other important factor that has come out of the survey is the mentioning of fresh graduate details in the contractual agreements. This will prevent a project to add any additional fresher when any senior resource leaves. As we have seen from the survey, increasing profits is also one of the factors for recruiting large fresh graduates, the substituting of fresh Vs experience happens in organizations. Hence if this practice is followed, it can improve trust relationship between the vendors and clients.

5.5. Domain and Technical training also are important factors that an employer should provide in organization. Technical trainings are given by most of the organizations and the survey points out they are very important when engaging any fresh graduates in client deliverables. Short term assignment projects are also related to technical training and it is the second most important parameter pointed out by the survey. Domain training is third important factor, but the survey points out that they are not as important when engaging fresh graduates. It is becoming important as the companies have slowly moved into consulting space where this skill is extremely handy.

## VI. Limitations and the future work of the study

Though this research outcome is very important for industry, the main limitation is lack of sample size, secondary grade managers have not been taken into consideration. Quality of other contributors (project managers, leads etc.) in successful execution of project is also not considered which may vary from case to case. There is a scope for further study in this area. There can be focus toward specific sector (finance, health care, legal etc.) related IT projects where the knowledge usage would vary. The scope for evaluating projects based on their type (new, migration or maintenance) can also give some insightful results. The project size can also be considered and the result may vary accordingly. This work would serve as knowledge sharing for IT projects and their stakeholders.

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