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EFFECTIVENESS OF NEED-BASED TRAINING IN COLLEGES FOR STUDENTS ASPIRING FOR A CAREER IN IT COMPANIES HIRING FRESHERS FROM ERODE ZONE

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ABSTRACT

Information Technology sector is evolving with technologies emerging from nowhere. Technologies like the Internet of Things, Blockchain, Data Science, Digitization and Cloud are making sea changes in the way corporate are using Information Technology. These technologies did not evolve from the demand of customers but because of the curiosity of the engineers in Information Technology sector who would like to disturb the status quo with new technologies that are more beneficial than the existing ones in the long term. People who are involved in developing software applications and customers who are going to use the software are to be engaged in order to ensure productive use of the software. Productivity in a quick succession of time can become a reality only if the people are trained to use the software. Need-based training to become a norm in Engineering Colleges who prepare future workforce for the IT industry because of such extraordinary and compulsive factors. Companies that are aggressively growing have started engaging colleges for preparing their future workforce. Colleges are also taking up such tasks readily. These are businesses coming in apart from the existing line of business but companies find hiring trained resources as a model that suits these emerging verticals.

KEYWORDS: *Training in Engineering Colleges, Grooming Students in Emerging Technologies and Train While Learn*

INTRODUCTION

Training given to students at any point of time depends mostly on the recruiter's requirements because competencies gained through the training at college secure a job in a company that student aspires to work in. Along with the technologies on which the training is given, there are other training aspects a student should complete. Soft skill is first among the non-technical skill taught while it is followed by domain training that depends on the software or client. If it is an ERP then generally how business works will be taught while if the software has been specifically developed for a company then domain training will be about the sector-specific things of the client. Software quality standards necessary will be taught which actually various between companies, sector and software service provider.

An engineering student is expected to complete the above-said training before being assessed for skill specific hiring and joining a company. Starting from the day the engineering student is being allotted work in a project he is expected to be

in sync with his colleagues on all aspects and should not be seeking assistance to complete his job. He is expected to take decisions whenever and wherever needed. Only in the rare scenario, he will be given assistance that too when the situation really demands.

Companies have not changed the time of hiring and training they are also changed the mode hiring as well. Students will start learning one of the emerging technologies starting from say fifth semester onwards along with their academic papers. By the time they reach the seventh semester, companies conduct a series of assessments assessing them on aptitude, reasoning, communication skills, soft skills, programming skills and finally his easy of working on the emerging technology. If they find him good they will offer him an internship for a period of six months that is during their eighth semester. Candidates fit and his capability to meet the expectation of the company decides whether he is hired or not. Internship performance decides the pay range of the candidate.

Technologies like the Internet of Things, Blockchain, Data Science, Digitization and Cloud are making sea changes in the way corporate are using Information Technology. Companies are winning huge contracts in these areas. These technologies did not evolve from the demand of customers but because of the curiosity of the engineers in Information Technology sector who would like to disturb the status quo with new technologies that are more beneficial than the existing ones in the long term. People who are involved in developing software applications and customers who are going to use the software are to be engaged in order to ensure productive use of software

NEED-BASED TRAINING

Training can be defined as imparting of knowledge and skill for performing one's tasks. It will help the candidate to become more productive in his existing job. Training is more about performing today's task well without errors and defects. Once if the today's work is taken care of then the company can start thinking about future (William Fitzgerald, 1992). Development can be defined as the acquisition of new knowledge and skill that will help in performing a job that he may perform in the future. It is for grooming the candidate to perform his future role well as the organization grows. Development is looking beyond what is now and looking into tomorrow. Development is growth focused and orientated towards moving the workforce and organization towards achieving the future goal (William Fitzgerald, 1992).

IT INDUSTRY

Information Technology evolved as an Industry in the later part of the 20th century. It helped each and every industry in managing its business better and easier by its ability to monitor processes seamlessly, plan operations productively avoid resource leakages, saving cost, etc. Implementation of AB Costing or Activity Based Costing has become a reality after the advent of Information Technology. Software products are lean and agile. End User Companies and Service Providers are engaging more to ensure they come out with a software application both desktop and mobile that is more suitable for their case by opting for customizations as needed. Generalizing the products is not the choice of most of the IT users. Companies that map human resources with competency requirements are successful than its peers (Shippmann, J. S., Ash, R. A., Battista,

M., Carr, L., Eyde, L. D., Hesketh, B., Kehoe, J., Pearlman, K., & Sanchez, J. I,2000). So with each customization; there is new technology which is different from the previous one being developed and utilized. Software engineers train their human resource for using the newer software for serving their customers while they do support and train their customer resources in using the end user applications. Hence need-based training to become a mandatory process in softwareusage. A learning organization that is agile and lean will come effective and efficient so more productive than its competitors (Shandler, D, 2000). Reskilling employees is better than retrenching employees since it involves emotional values (Spencer, L M. in Cherniss, C. and D. Goleman, eds, 2001).

QUEUING THEORY

Queuing Theory helps companies in scheduling their workforce supply in such a way that it can manage planned and unplanned manpower requirements. It makes an organization agile and lean (Tijms, H.C, 2003). Software companies are more dynamic because of its unique nature of being in the emerging and mature segment. Mature segment come up with human resource requirements for filling openings arising out of voluntary attritions and retirement in some cases retrenchment. The emerging segments comes up with adhoc requirements to meet the human resource needs where a well-trained resource can be hired from the market or a fresh resource has to be hired and trained accordingly. So the workforce requirements arising out of voluntary attritions and adhoc requirements for lateral resources are dynamic and can never be predicted. There could be the possibility of loss of productivity due to unfilled openings arising out of these cases. Creating models that project competency requirements of the future and keep our resources ready for the future is a significant part of the company's future readiness program (Spencer, L. M, 2004). Competence of the human resource decides the competence of the company and hence their success in their business (Spencer, L., & Spencer, S, 1993). Queuing theory helps companies in meeting their requirements in all probable cases (Sundarapandian, V, 2009). The effectiveness of the company and its systems increases by leveraging queuing theory (Harchol-Balter, M, 2012).

Corporate Companies follow Queuing theory to handle the above scenarios. They will be keeping two parallel queues. They can be called buying queue and making a queue. Buying queue is one where the company will keep human resources in each stage of recruitment and selection pipeline where the resources will be hired from the market. There will be job applicants, interview completed applicants, results pending applicants, joining date pending applicants. Making queue is one where the company trains existing human resources in additional areas where they don't have sufficient employees backup if there is an unforeseen absence of existing employees. In this case, employees will have one primary responsibility or deliverable is given a secondary responsibility to learn. Companies invite applications from existing employees for internal job openings and keep a queue as mentioned above. Buy queue comes with an overhead that hired employee will fit into new company's culture and behavior pattern of colleagues (Schmidt, F.L., & Hunter, J.E. 1998). Value Proposition of HR aligned with company decides whether to buy or make suits the company (Ulrich, D. and Brockbank, W, 2005). Competency-based recruitment and selection model helps recruiters in meeting their business requirements and help their internal customers to achieve their performance metrics (Wood. R., & Payne, T, 1998).

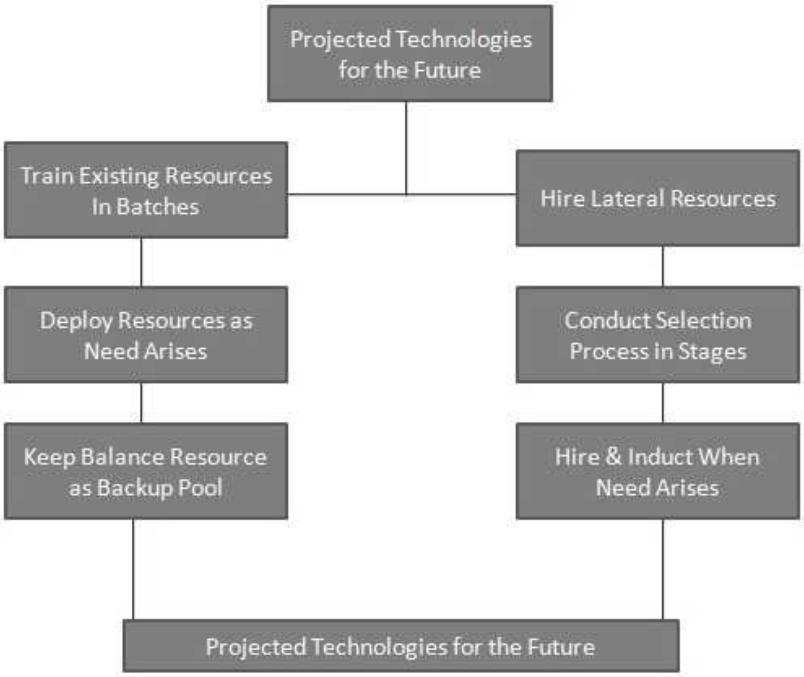

Figure 1: Queueing Theory for Making & Buying Model

CONCEPTUAL MODEL

Companies that hire trained resources based on the need are more successful in meeting customer commitments. After developing a pool of trained resources in latest technologies by engaging engineering colleges and keeping those in a queue for the expected job opening help them meet the customer demands in a timely manner. Companies that follow make queue are most successful in meeting the customer requirements than the one that follows buy queue.

HYPOTHESIS

H1: Companies that engage Colleges for developing the future workforce in emerging technologies are meeting their customer commitments

H2: Preparing and keeping a pool of trained resources helps in serving the customer better.

Most of the Engineering Colleges are visited by IT companies for recruiting and selecting fresh engineering graduates. They will be trained in technology, business, and soft skills during their induction. They hire students from across the stream not limiting themselves to IT related courses. Erode city has over a dozen Engineering Colleges and the companies visited for recruitment were a survey to understand how they use need-based training and queuing theory. They have started engaging with colleges and collaborating to ensure that colleges are training students in future technologies so that the students can more productive and help achieve their goals.

87% of them opinioned that hiring a trained fresher have enabled them to serve their clients better. They may be of different geography, economy, demography, culture, business, etc. but once if they are trained on the technologies,

business, quality, and soft skills aspects then they fit into live project delivering mode the moment they join the company. Even companies operating in a same or similar geography, economy, demography, culture, business, etc. are different most of the aspects but above said aspects of training eliminates such difference between an existing productive resource and a fresher. So the engineering students have to be trained in technological aspects. Doing so has helped them serve their clients better and get repeat business opportunities. Competitions are history going by this formula to serve clients. H1: Companies that engage Colleges for developing the future workforce in emerging technologies are meeting their customer commitments is valid.

81% of the companies opinioned that business proposals are never ending the matter. They remain with a customer for scrutiny and we keep enhancing it. No one will be able to exactly say when a business proposal will get approved and when we may have to start working on the project. Hence keeping the workforce ready in the emerging technologies is important to reduce turnaround time and we can start the project immediately. This will avoid unnecessary overworking by a workforce which leads to burnouts and reduction in productivity. Faster turnaround time, quick launching of projects and employee satisfaction are possible because of queuing theory. H2: Preparing and keeping a pool of trained resources helps in serving the customer better is valid.

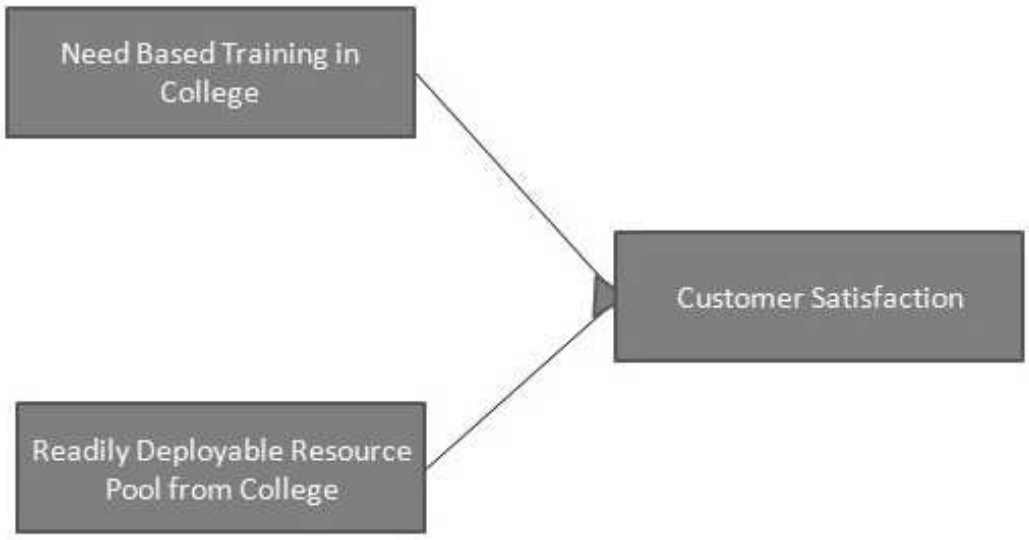

Figure 2: Conceptual Model

Table 1: Hypothesis

Assessment Area	% of Participated Companies
Preparing future workforce at College	87
Keeping trained resource queue at College	81

KEY FINDINGS

Customer satisfaction is a key for the success of a candidate, self-employed person, businessman, and investors. Every customer or a client is unique and they will have unique requirements. Unique requirements can never be meet with generalized software and generically trained workforce. To ensure we delight a customer we must train their workforce specific to their business and culture. So need-based training improves customer satisfaction when training starts at the college level.

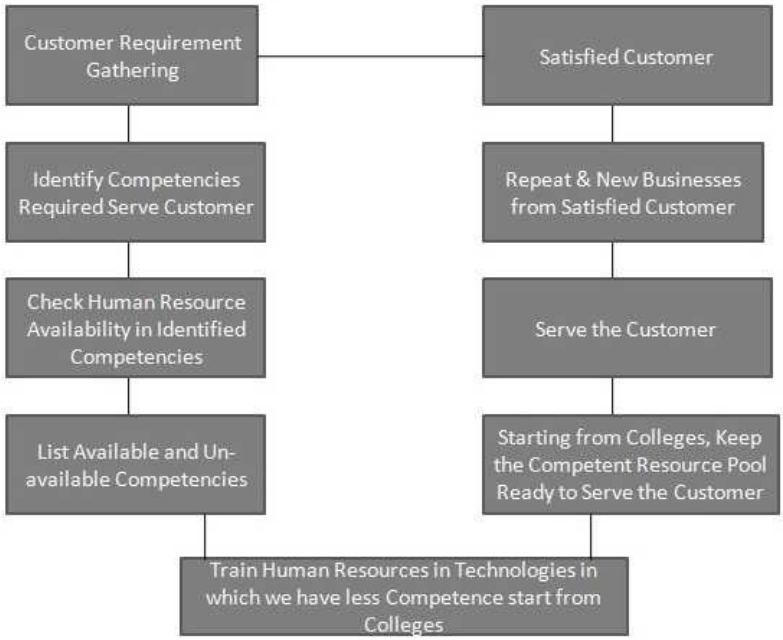

Figure 3: Customer Satisfaction Framework

There are many software products and software development tools available for usage. Based on customer's requirements in his business, software products currently being used, vendors, customers, and future prospects we can very well extrapolate the customer's software needs of the future. With such predictions and economic surveys, companies can train and develop human resources for future requirements by engaging colleges for developing the future workforce. It can help in the seamless and easy transition of software products being used as well as workforce competency requirements. Once the workforce is kept lean and agile then the company can easily become lean and agile and hence they can ensure their customers is lean and agile. So by engaging colleges for keeping a pool of trained resources will help in serving the customer better.

For unforeseen requirements which cannot be predicted by extrapolation, companies can go for hiring from the market. Lateral hires culture fit and personality traits being taken care, lateral hires bring in variety and bring best practices from across the industry. Taking care of unforeseen requirements from customers at a quicker pace will help your customer's business moving without losing steam. Following queuing theory will help in meeting the unforeseen workforce requirements. So, make a queue improves customer satisfaction.

Table 2: Collaboration Activities

Assessment Area	% of Participated Companies
Hiring Fresher Trained in Emerging Technologies	83
Collaborating with Colleges for Preparing Students in Emerging Technologies along with Academics	84
Use Surveys and Economic Trends to understand future technological trends	86
Utilizing Competency Mapping for understanding competency and workforce availability	87
Follow Queuing Theory in Fresher Hiring Training Fresher	91
Follow Queuing Theory in Lateral Hires	91

IMPLICATIONS

Companies that collaborate with colleges and follow need based training and hiring are better off than their competitors in retaining the client and ensuring the satisfaction of the customer. Make queue is complementing the need-based training and both strategies should always be in sync. Companies in Information Technology sector can use need-based training for developing a workforce for projects at the same time they can utilize Queuing theory to keep a pool of trained workforce already deputed in different projects but has a backup ready to relieve them when there is a requirement. There are companies that have at least sizable number of the workforce working out of colleges for training the future workforce and also to de-risk the geographic dependency. It will also help in bring down the cost as they share the college resources and added to it is the benefit low-cost location Erode when compared to the cost of living in bigger cities.

LIMITATIONS

Above study is limited to Information Technology companies operating out of Chennai and recruiting fresher from Engineering in Erode region. This study cannot be generalized to other sectors, companies in other geographies.

SUGGESTIONS

Information Technology companies in Chennai region and Hiring Workforce from Erode-based Engineering Colleges can look at leveraging requirement based training for meeting their workforce requirements for their projects. It is also suggested that they follow queuing theory to pool trained workforce by starting training for the prospective employees when are in college to leverage them when the need arises.

Technologies like the Internet of Things, Blockchain, Data Science, Digitization and Cloud can be utilized for meeting the customized needs has become the need of the day. Information Technology sector can collaborate with Colleges for grooming students i.e. their prospective employee to meet their technological requirements that are projected to evolve in the time to come.

Information Technology Sector predicts that by 2025 the Internet of Things, Blockchain and Data Science are going to absorb other technologies being used now. So they can join hands with colleges where the students are going to spent good four years and utilize the college ecosystem to impart necessary skills in a structured and time-bound manner.

This will ensure and help in developing a larger pool of capable workforce that will ensure the company as well as the industry benefits out of the available workforce. In the Information Technology sector projects are taken over and completed by more than one software company based on the complexity of the project so if the ecosystem is ready then that ecosystem will help individual companies succeed by utilizing the core competencies of each other.

CONCLUSIONS

Our study conclusively says that need or requirement based training by collaborating with the colleges is the right way of training for serving the customer requirements. Keeping a pool of trained workforce in the queue at the college level will help in bringing down the cost, meeting the urgent workforce requirements easily and at the same ensure customer satisfaction. Customer satisfaction and retaining the customer are important for succeeding in business. Need or requirement based training and queuing the trained workforce at the college level are complementary for success in business.

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