Impact of New Normal on Industrial Training while On-boarding College Fresher's in Indian IT Industry

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Abstract: Pandemic situation has impacted industries globally. Industries adapted to the situation and aligned their operations to "New Normal" and made sure their day-to-day business has minimal impact to sustain in new way of working. IT Industry had existing culture of partial workforce working remotely and still deliver to their commitments, but this pandemic enforced their operations that entire services are delivered remotely. "People Capability" is backbone of Indian IT industry and hence right skilling and upskilling by means of continuous training is ongoing activity of IT Industry. To cope up with global demands Indian IT Industry has large dependency on recruiting college graduates and train them to the organizational needs. Indian IT Industry realized the necessity of transforming the "Training" function and quickly rolled out virtual digital platform. In real short time span, Industry revamped training modules, trained their trainers / subject matter experts to deliver trainings on virtual platform and invested largely on the technologies like Augmented Realities and Virtual Realities. Industry could largely get their desired output but still environmental factors like required IT Infrastructure at remote places in India hinders effectiveness while IT Industry continuous their focus on further enhancements in the training function.

Keywords: New Normal, Training, College Freshers, Indian IT Industry, On-Boarding Training

I. INTRODUCTION

The pandemic of COVID-19 outbreak resulted in widespread concern and economic conditions for businesses, consumers, and communities globally [1]. Pandemic impacted adversely across industry segments globally. Most of the industries adapted to work from home due to rising public health concerns and impacted IT industry significantly due to economic fall. Various travel restrictions imposed by various countries and public health alerts on meetings / conferences resulted in cancellation of several technical conferences resulting in approximate US $ 1 Billion loss [2]. When it comes to IT Industry global impact resulted in serious economic conditions. Most of the IT companies had to realign their budgets to the changing environmental and business conditions.

As predicted by PWC, top-5 consulting company, lowered IT budgets will impact on recruitment, a slowdown in recruiting resulting from the crisis could affect a future pipeline of skilled workers and advised to shore up IT workforce. Indian IT industry restricted hiring of senior roles but considering spike in required capacity post pandemic did not reduce their college fresher's recruitment drastically. Indian IT industry today largely depends on the fresher's recruitment to cope up with their requirement to deliver the services to their clients. Indian IT industry had large dependency of recruiting engineering graduates across

streams. India is known for producing highest calibre graduates who have great ability in potential in computer / IT domain globally after China and USA when enrolment is concerned and is ranked third in education provisioning [3], [4]. UGC data as of February 2017 indicates, "India had 789 universities, 37,204 colleges and 11,443 stand-alone institutions" one of the highest globally when number of education institutes are considered. Since globalization, India is well respected globally and is key competitor in providing information technology space. Skill requirements are changing so rapidly that employees need to always work on upskilling throughout their professional career so as to make sure that they have competitive advantage.

To make any college pass-out productive "Training" is the most suitable platform which is always used as proven methodology to create capability to sustain growth. As the industry strive for talent, most of the corporates have dedicated Learning and Development (L&D) cell which focuses on driving capability across resources by leveraging latest technologies and using continual improvement model. On a conceptual level there are various models designed aimed at improvising efficiency of learning like - Kirkpatrick Learning and Training Evaluation Model, CIRO Model of Evaluation, Cost-effectiveness Analysis, Jack Phillips Model, Robert Brinkerhoff Model etc [5]. Effectiveness of outcome post deploying these models is yet to be determined clearly.

For IT Industry which is relies on "Skilled Man-Power" and where attrition level is high effective training model is key to sustain. Organization gets benefited out of "Repetitive and sustainable" training model to produce skilled resources for sustainable growth. IT industry contributes significantly towards the growth of Indian economy. Expectations are increasing day-by-day from Indian IT industry, a prodigious pressure driving industry to excel by means of deploying innovative solutions making use of state of art technology [6]. Employee capability, their commitment and quality of delivery helps IT Industry growth [7].

In this cutting edge of technology, it is always critical for an organization to induct / train employees with appropriate knowledge and skills to be competitive [8]. Tailored / customized training programs align to individuals job role will make sure resources have required capability to meet up the organizational expectations [9]. To cope up with changing technologies and increased competition, it has become critical that employees sustain to grow with trending technology and environmental changes and contribute to business benefits [10]. Customized Training aligned to the job profile will facilitate a smooth transition of employees to meet organizational expectations [11].

Narendra Agarwal carried out study to evaluate employability for graduate engineers. The study revealed that lack of interpersonal and technical skills lowers the employing probability while recruiting engineering graduates by IT industry. Understanding the limitations, Indian IT industry provides on-the job / classroom-based training by utilizing Learning and Development team. Considering the need of continual up-skilling and re-skilling requirement, Indian IT industry have deployed dedicated training centres which are also referred as "Knowledge / Training" University where resources get trained to make them ready-to-deploy on projects [12].

Most of the big Indian IT players (like Infosys, TCS, Wipro, HCL etc.) have dedicated Learning & Development department who are engaged in running training programs throughout the year. Most of these companies have dedicated training cell which drive training and onboarding of college freshers into industry which is also well known as "Campus to Corporate" / "Induction" program. These training programs are focused to bridge the academic and industry skill gap and develop campus recruits for company specific skills and knowledge. There is a continual evaluation process deployed while during the training to validate training effectiveness and make sure they are productive from the Day-1 after deployment on the projects. Industry is driving various measures like Campus Connects to minimize training efforts before individuals are put on actual projects [13]. Study by Agarwal has proposed to develop the customized training plan for the employees based on the job role they are expected to perform [13].

Reasons for the needs of training while onboarding college fresher's:

In IT Industry skill requirements and capacity required dynamically changes based on the market demands hence it is difficult for IT Industry to predict / forecast the needs upfront. Technology is rapidly changing which results on Industry to constant change and adapt to the changing demands. With the market competition and necessity to use cutting edge technology and tools it is imperative that Industry needs those skills. At the same time Indian academic syllabus is very much static and adaptability to change is very slow as compared to market needs. Considering overall numbers required, IT industry does not limit their recruitment to IT / Computer Science stream but recruits across engineering branches largely. Most of the campus recruitment happens almost a year before. With all these dynamics campus recruits will not necessarily have the industry required skills. Today's IT industry is unable to predict or forecast their skills requirement in advance and which is creating a challenge to academics to adapt largely. With increasing competition day-by-day industry has tremendous cost pressure and hence always have to think on innovative approach to bridge the skill gap. Technical capabilities are very much in high demand and are becoming crucial for knowledge-based industry.

Looking at the number of Universities and colleges across India, certainly there is sufficient capacity available to meet overall demand of the IT industry, but quality of education and facilities available to students are different locations / colleges differs substantially which results in reduced number of employable students. While considering academic institutions, it is observed that some of the private colleges / universities makes their own decision on aligning the syllabus to the industrial trends whereas institutions which are under government control are dependent on changes to be decided centrally and normally ends up in substantial time lapse from proposal to actual changes. Academician needs to think out-of-box and work out on strategy on how they can align to market needs and develop right skilled capacity from graduation level itself. To achieve this there is a strong collaboration required between Industry and Academics.

Considering both aspects from Industry as well as Academics perspective it is imperative that Industry must work on specialized training while onboarding graduates in the organization.

Impact of Pandemic on IT Industry and alignment to "New Normal":

IT industry was the first one to respond to the pandemic situation and adapted to the situation. Though work from home / remote working has been ongoing culture for IT Industry but still many organizations had customer contracts where project execution needs to be under close monitoring and dedicated area(s). India also had software export zones from which there were too many legalities to cope up with

the situation. Some of the IT industry segment needed to do substantial changes in the telephony system to facilitate employees work remotely. Industry reacted to the situation around mid-March-20 and focused on making all efforts to enable remote working for entire employee base. Travel freeze impacted largely Sales / Pre-Sales capabilities, but industry adopted to various online-collaborative tools to connect with customers and prospects. While industry could settle with adapting to remote working, they got into another challenge for onboarding college freshers which they had hired few months ago. Right from all the administrative challenges to complete joining formalities to providing necessary infrastructure for individual and then conducting entire training program remotely. Most of the organization coped up well in time to make sure there are no delays.

II. RESEARCH METHODOLOGY

Research was conducted by means of Primary Data collection from the IT organizations while secondary data was collected from reputed journals / books / articles published recently related to the topic. Primary data related to Training impact under New Normal is collected by rolling out survey. Survey was rolled out to 15 IT organizations based on selective sampling. The criteria for selecting the organizations were the IT companies who have more than 2000 employees and are engaged in campus recruitment. The survey inputs were requested from Human Resource / Learning Development functional head. Survey response was received from 12 IT organizations qualifying the criteria which had multiple locations within India and Pune was one of their offices. The survey was focused to understand IT companies training approach prior to pandemic and after the pandemic. Survey was the combination of Qualitative and Quantitative data and was focused on understanding how training function is organized in New Normal and how are the trainings conducted and its effectiveness. The changes in the training approach prior to the pandemic and after the pandemic were understood. Collected survey data was analysed to evaluate how organization responded to the training function under New Normal.

Secondary data was collected from various papers published in the journals of repute and recent articles published by big-5 consulting firms as well as market research firms. Contextual analysis was done from the survey data as well as the data points collected from secondary data source.

Key Findings from Survey Data Analysis:

Based on the survey data collected, 83.3% of the organizations reported that their overall elapsed time of the onboarding training duration reduced by about 2 weeks, which is largely due to online mode of training. Reduced in training duration for process and soft skills training had largely contributed to reduced elapsed time. About 66.7% of those who responded reported that their Process training approach moved from Face-to-Face to CBT based training, while 91.7% respondents reported that Soft Skills training

approach was changed to Audio / Video mode. 83.3% of the organizations responded that technical training approach was changed from Face-to-face to Online – instructor-based training. 33.3% organizations took an approach to outsource the training as interim measure while 66.7% had revamped their training platform into digital mode. Apart from training, IT organization also adopted change in approach of evaluation, 66.7% survey respondent reported that their evaluation approach changed from "Test" to "Quiz". Based on the response received 25% of the organizations had to train their trainers to adopt to online training delivery approach. No organization were able to capture effectiveness of the training approach in New-Normal.

Trainings prior to New Normal:

As per the National Association of Software and Service Companies (NASSCOM) report, only about 25% of the college graduates are qualified for employable by the Indian IT industry. Most of the companies have to put efforts in training these freshers before actually deploying to the projects [14]. These freshers need to be oriented with software engineering processes and practices to groom them as software professionals. Human Resource / Learning & Development team constantly needs to design and refine training modules considering future requirements and growth areas of the organization [15].

IT Industry always had very structured approach of training and most of the large companies have inhouse Learning & Development department while some have tie up with external training institutes to drive the training. In IT industry training is not limited to college pass-outs but at all stages on individuals' career everyone is expected to undergo trainings either based on their role / job profile and changing market needs for upskilling. Survey was limited to understand training programs for engineering graduate pass-outs.

Training Structure:

- Onboarding training programs are typically executed in initial 2-3 months (varied from organizations) duration.

- There are dedicated faculty members and many companies classified this as "university" and many have off-campus facilities dedicated for this purpose.

- Overall training is structured into 4 streams:

  o Organizational awareness: As part of this, new joiners are briefed about Key Stakeholders of the organization, organization chart, Organization Vision, how's business is structured, HR Policies and common tools which are used organization wide. This is classroom-based training, and no evaluation is done at the end of training. These training helps new joiners to understand organization, it's culture and various tools which they have to use while working.

  o Soft Skills: There are different modules as part of this training which is conducted in combination of

Computer Based Training (CBT), Classroom-based as well as Role Play based. These are imparted to all new joiners. At the end of each module there are exercises and evaluation process.

o Technical Training: There are various technical trainings conducted, depending on the business forecast and requirements, new joiners are split into various groups and assigned to training tracks. These trainings are classroom-based and hands-on experience is provided to the new joiners. These trainings provide in-depth knowledge and make new joiners ready to start work on projects.

o Process Training: This is one of the mandatory training which all new joiners need to undergo before starting actual work on the project. This is combination of classroom based as well as CBT based. This training covers organizational processes individual needs to follow while working on the project. Security and compliances related trainings are also covered as part of these trainings. Individual performance is evaluated and internal certificate of course completion is awarded.

- CBT based trainings are online trainings and individuals cab go through at their pace and their completion is typically tracked online.

- Individual performance is closely monitored / tracked with higher benchmark. Those who do not meet minimum qualifying criteria do not get deployed to projects.

- Trainings are conducted in classroom environment with dedicated LAB for hands on

Trainings Adaptation to "New Normal"

Study revealed that even though IT Industry had all necessary infrastructure for remote operations, but situation forced to adapt to changing needs quickly. Most of the IT companies had prior experience in rolling out digital transformation across their customers but situation forced them to revamp internal systems / processes to enable organizations organization to achieve capability, capacity, or quality expectations. The changes initiated were not limited to training platform / processes but also to Learning & Development team members who were involved in delivering the training. Some of the key changes initiated by organization to react to the situation are:

- Overall budget for Learning & Development activities had to be increased to introduce new technologies, content creation and necessary changes for the trainers.

- All the training programs which were "Face-to-face" or "In-Person" were deployed "virtual"

- Prior to "New Normal" training used to be delivered by means of CBT / Classroom-based or e-Learning sessions which changed to eLeraning programs, virtual

assisted training and hands-on training which is being done on the job.

- New contents were created in the digitized forms which can be reused for training.

- Use of Augmented Reality (AR) and Virtual Reality (VR) for the training content.

- Trainers / SME's were trained on new technology to deliver training virtually.

- There was a big shift and change management required with Trainers / SME's to adapt to conduct training virtually.

- Use of games and Quiz as part of training to make it more interesting.

- In case of Fresher's training, for Hands-on / on-the-job training each trainee was assigned a mentor to make sure individual attention and help is provided.

All these adjustments were done on overall learning and development function from training perspective. But when it comes to how college freshers were onboarded and how effective was the training, survey results reported some of the very good dimensions:

- Adaptability and understanding of new team members have been good, for most of the college pass-outs moving away from classroom-based learning and get into virtual learning was completely new.

- Freshers' adaptability and understanding was good for technical training as compared to processes.

- Various environmental aspects at rural places in India had direct or indirect impact on training effectiveness like:

  o Virtual video-based trainings utilize high amount of network bandwidth and many of remote places do not have adequate infrastructure hence all those who were at remote places they had tough time to cope up with trainings.

  o Disruptions in electricity supply impacted trainees

  o Availability of laptops / desktops and their repairs due to global impact of supply chain on electronic items predominantly from China impacted on loss of training hours.

Organization could not share any specific qualitative data which could corelate to overall impact on the trainings in terms of either loss productive hours or impact on effectiveness of the trainings.

- Virtual assisted trainings had limitations for a trainer / SME to understand and gauge the level of understanding from body language of the trainees.

- Effectiveness of Hands-on / On-the job training resulted much better from the project deployment perspective.

The process of training is enhancing and maturing over a period of the pandemic but from the survey there was overall good satisfaction about the level of capability that freshers could get from the revised approach adopted since new normal.

III.   CONCLUSION

Pandemic had significant impact on the industrial trainings that IT organizations provides while onboarding college freshers. Most of the large Indian IT organizations have their in-hour training function which designs the onboarding training program which are organization specific and customized to their business needs. Organizations created their own training material and trained their trainers to deliver the training. Prior to Pandemic most of the training courses used to be face-to-face where trainers used to gauge the trainees grasping and comfort and could make alteration to way of delivery. Post pandemic – New Normal changed entire scenario and IT industries had to adapt to the changes. IT Industry transformed quickly to the digital platform by means of revamping contents, mode of delivery and utilizing latest technological trends. Revamp digital platform helped industry to sustain with capacity and capability building while onboarding college fresher's talent into IT industry effectively. Some of the IT organizations adopted the approach of outsourcing the training to eLearning providers while they built their inhouse capability and platform to take care of the training. While campus freshers need to align to the changing platform for training, industry will have to further improve and enhance their digital or e-Learning platform to cope up with New Normal which will continue to evolve.

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