The Emerging Skill Gap Among Employees-An Evidence from Indian IT Industry

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Abstract

The Indian IT industry is facing complex, competitive, dynamic and fast changing environment under globalization. Problems relating to the talent flow, multiple generations in the workforce and deficiency of required competencies add to the plight of the industry. Also the highly competitive market forces the business to have a sound human resource management system. Considering the increasing diversity of people and employment relationships it is very important to create unity within diversity by emphasizing shared organizational value. This paper examines the emerging skill gap among the employees which needs to be bridged by talent management. By talent management the researcher aims to align the three magic bullets namely intelligence acquired through hiring, variety of experiences and continuously learning to do something different.

Key words: Talent, Talent management, Talent magnetism

1. **Introduction**

The Indian IT industry contributes 7.7 percent to India's GDP as reported by India brand equity foundation. The top 5 IT firms contribute over 25 per cent to the total industry revenue, indicating the market is fairly competitive. There has been a wide gap in the demand and the supply of the required talent in the industry. There is a need to bridge the gap between supply and demand, considering the growth in the IT sector. Work force retention and motivation, attracting best talents, aligning HR system with business strategy, up gradation of skills through ret-training are the major challenges faced by IT sector HR (*Panchanatham, Vinitha, & Dhanabhakyam, M.D).(Al Cascio & Paauwe,2014*) pointed that there is global abundance but local scarcity of talent in the IT industry. There are more differences across generations at work as well as similarities. The Indian IT industry is much diverse with virtual workforces and different attitudes. A new method of working and changing relationship between the workers and suppliers of talent necessitates the practice of talent management in the IT industry. Talent management, the current hot topic in the market is the best palette that answers the skill gap or the capability gap *(Bolander, Werr, & Asplund, 2017)*. The organizations are running for creating and nourishing talent magnetism. The industry is putting its every sweat in creating a passionate workforce with greater visionaries and makes the working place a better home

to live in (Roberta Chinsky Matuson, 2014). The organizations should use innovative measures to retain existing talent. For unleashing the full potential of the employees the organization must acknowledge their retention problem , should try to understand what their employees are thinking ,give space to the new employees and monitoring their opinion ,revisit the reward plans and should encourage the employees to make them go beyond the call (Baker, Kubal, & O'Rourke, 2006). What works for one generation does not work for another generation. The industry consisting of more millennial workforce increases the divide between their old counterparts which poses a major challenge to the organizational leaders (H. J. Anderson, Baur, Grif, & Buckley, 2017). The generational divide requires the reconsideration of even the most frequently used HR practices, and talent management is the major rescue. The millennial have outpaced other generations in the workforce and became majority in 2015. Talent management has substantial implications on the millennial generation. This generation brings in innovative ideas, latest technologies and different and simple approaches to issues that were major concerns earlier. In fact the millennial are significantly different from their predecessors which call for talent management as a better adaptation technique. The 2015 age pyramid consist of 74 million baby boomers between the age of 51-69 and 83 million millennial in the age group of 19-37 who differ in attitude ,behavior, loyalty etc. (Arellano & Arellano, 2015). Generally agreed timeline of generations in the workforce is illustrated in the table below.

Table 1 -Timeline of Generations (2008) (Arellano & Arellano, 2015)

World war II generation	Born before 1945	7 million-4% of workforce
Baby boom generation	Born 1946-1964	60 million- 35% of workforce
Generation X	Born 1965-1980	51 million- 29% of workforce
Millennial generation	Born 1980-2000	55 million- 32% of the workforce

The above table depicts the scenario for 2008 which changed dramatically at present. The millennial generation rules the job market at present. Hence the strategies of talent management are tailor made to best suit the needs and wants of multiple generational workforce in the IT industry.

2. Review of literature

This section is split into two sections. The first section deals with the existing difference across generations in the work place and the second section encapsulate talent management literature.

2.1 Section 1 (Generational Differences)

Much difference appears in the millennial generation regarding values, attitudes, behavior and expectations than their predecessors. (E. Anderson, Buchko, & Buchko, 2016) opined that millennial generations favor negative feedback. The millennial prefer feedback in the form of performance appraisal, monetary incentives, mentoring and informal verbal acknowledgements. The millennial prefer negative feedback for self-regulation. The millennial considers negative feedback as developmental criticism. While providing negative feedback the manager must remember that the millennial are generation with high level of self-fulfillment. While providing the negative feedback the management must be assertive that it considers the sentiments of the employees and a high profile employee doesn't leave the organization on account of negative feedback. (H. J. Anderson et al., 2017) highlighted the limitations of present leadership theories for the millennial generation. The five key practices that must be reengineered for the millennial are transformational leadership, authentic leadership, ethical leadership, leader member exchange and leadership processing. Millennial exhibits inclusive attitude towards diversity even though they are named as the 'selfie generation'. Millennial look forward for more leisure and work life balance and close supervision. They are highly self-evolved and show narcissist tendencies in work. (Arsenault, 2004) considered generational diversity as legitimate and essential in today's working environment. Generational differences should be nourished in the organizations as they cultivate field of attitudes, emotions, preferences and dispositions. Generational interactions have both positive and negative outcomes. If nourished properly generational differences embrace creativity and innovation, in contrary generational mushiness can lead to viral organizational conflicts. (Lazazzara, A. and Bombelli, 2012) emphasized on improving HRM practices to prevent skill shortages. Old worker are underrepresented in many service sector organizations. Old workers are discriminated because they focus too much in retirement, resistant to change, static attitudes, physical and cognitive limitations. Training is considered as an effective mechanism in age diversity.

2.2 Section II (Talent Management)

For managing generational diversity the IT industry must focus on talent management strategies. (Tafti, Mahmoudsalehi, & Amiri, 2017) identified four major challenges for the effective implementation of talent management strategies. They are structural challenges and barriers, environmental challenges and barriers, behavioral challenges and barriers and managerial challenges and barriers. Talent management includes the efforts of recruitment, selection and maintenance of potential employees in key positions of the organization. The structural challenges included the physical conditions of the organizations, environmental challenges includes the external forces , unofficial relationships in the organization contribute to the behavioral barriers while managerial barrier is a subset of behavioral barriers. (Vaiman, Scullion, & Collings, 2012) examined the factors influencing talent management decision making. Decision making in

talent management is based on the people management in the organization. Talent shortages, demographical and societal trends, corporate social responsibility, diversity, increasing mobility, permanent shift to knowledge economy and growing importance of emerging markets are the key factors that influence talent management decision making. (Zijderveld & Brinks, 2014) studied the effect of talent management practices, differentiation strategies and incongruent talent perceptions on psychological contract fulfillment of employees. Incongruence is a situation where a supervisor or manager considers a person as talent but the employee is unaware of this. When the talent strategy is conceived as exclusive, where some employees are considered talented talent communication eliminates the level of incongruence which effect the psychological fulfillment of the employees. Psychological contract of an individual is shaped by the interaction of employee with the working environment facilitated through correct organizational practices. (Thomas, 2008) found that quality of employees network have significant impact on the employee capacity to solve challenges and facilitate transition learning process while learning something new. The study proved that talent management require effective utilization of the available network and those employees identified as rising stars get tapped in this process. Organizational network should be enriched with increased pay, promotions, increased mobility and performance evaluation methods.

3. Research questions

Based on the above reviews on existing skill gap among employees and talent management practices, the researcher poses two major questions to be answered through this research paper.

Q1. How does skill differ across generations among IT sector employees?

Q2. What are the important talent management strategies adopted in IT sector for managing generational differences?

4. Objectives of the study

1. To identify the skill gap across generations of employees in select IT sector organization.
2. To list the talent management strategies adopted in select IT companies for managing generational differences.

5. Research methodology

5.1 Research design

The proposed work is descriptive in nature since it is concerned with specific predictions and is related to the characteristics of the employees working in an organization. This study identifies the existing skill gap among the IT sector employees and list out the frequently used talent management strategies in the industry.

5.2 Data collection

The study is purely based on primary data collected from the employees and managers (immediate supervisors) of select IT sector organization. Two different questionnaires were constructed to collect data from employees and their immediate supervisors. The different type of skills that is used to construct the employee questionnaire is adopted from Kavanagh and Drennan's survey instrument which was validated in their Australian studies (Abayadeera & Watty, 2014). The employees were requested to rate the skill on a five point Likert Scale. The managers questionnaires which require them to rank the talent management strategies were mailed to the employees and requesting them to pass the same to their manager (immediate supervisor).

5.3 Sampling Technique

For administering the employee questionnaire, multi stage random sampling technique was used. The manager questionnaires were mailed to the employees who mailed it to their managers (immediate supervisors).

5.3.1 Sample Design

The data was collected from employees working in BSE & NSE listed IT sector companies in Info Park, Kochi, Kerala. There are three major IT hubs in Kerala- Techno Park (Thiruvananthapuram), Info Park (Cochin), and Cyber Park (Kozhikode). The proposed research is based on the IT companies located in Info Park, Kochi. There are 165 companies functioning in Info Park, Kochi. (See http://www.infopark.in/companies.php). Among them employees working in Indian IT companies listed with BSE and NSE are chosen for the study. Hence the data is collected from the employees working in Tata Consultancy Services (TCS), Wipro Technologies and Hindustan Computers Limited (HCL). Project teams which consist of project managers or team leader and subordinates who are required to complete the assigned project within a span of time are considered for the study. 322 sample respondents are considered for the study.

5.4 Tools used in the study

- Factor analysis
- ANOVA
- Garrett ranking

6. Analysis and interpretation

H_0: There is no skill difference across generations of employees in select IT companies.

Employee questionnaire consists of 19 statements defining various types of skill. Initially the researcher employed factor analysis for reducing the statements into fixed number of factors. As the researcher is interested in studying how age discriminates different types of skills among the employees, the results of factor analysis is briefly explained below.

The KMO value measures the sampling adequacy of the collected data. The general rule of thumb says that KMO value of 0.5 is satisfactory. Since the KMO value is 0.873 the researcher decided to proceed with the factor analysis. The Barlett's Test of Sphericity measures if there is any relationship between the variables. Since the probability value is less than 0.05, the researcher concluded that there is a relationship between the variables and proceeded with the factor analysis. The results of varimax rotation are presented below which represent the rotated factor loadings of each factor. Based on the Eigen values the statements are classified into four factors which explain 55.585% of total variance.

Table 2- Rotated component matrix

Skills	1	2	3
Negotiation	.542		
Workplace experience	.532		
Resource management	.751		
Risk analysis	.678		
Computer technology	.782		
Consumer orientation	.762		
Research minded	.761		
English speaking competencies	.767		
Strong work ethics and values		.646	
Intellectual capacity		.735	
Decision making capacity		.754	
Dedication, motivation and meeting deadline		.733	
Target achievement		.576	
Inter personal development		.517	
Commitment to professional development		.659	
Leadership			.574
Problem solving			.650

Ability to deal with complexity			.640
Listening to others			.663

Source: computed from primary data

Based on the factor loadings in the rotated component matrix, the factors are named as work skills (blue), developmental skill (red) and leadership skills (green).

The researcher used analysis of variance to find the difference in skill on the basis of age factor.

Table 3- Analysis of Variance

Factors	F value	Probability
Work skills	11.60491	0.001
Development skills	14.50448	0.001
Leadership skills	2.812485	0.001

Source: computed from primary data

The results depicts that there is significant difference in skills across generations of chosen employees ($p<0.05$). The researcher is interested in testing how the skills differ across generation for which Duncan post hoc test was applied.

Table 4- Analysis of work skills

Age group	Subset for alpha=0.05		
	1	2	3
Baby boomers	3.72		
Generation X	3.76	3.76	
millennial		4.08	4.08

Source: computed from primary data

Table 5 – Analysis of development skills

Age group	Subset for alpha=0.05		
	1	2	3
Baby boomers	3.64		3.64
Generation X		4.12	
millennial		3.83	3.83

Source: computed from primary data

Table 6- Analysis of leadership skills

Age group	Subset for alpha=0.05		
	1	2	3
Baby boomers	4.08		4.08
Generation X		4.32	4.32
millennial		3.69	

Source: computed from primary data

The results show a difference in skills between all the three age groups, but the difference is significant or more between the generations X and millennial, that is between the age groups 18-36 and 36-54. The results shows that the changes in work skills is dramatic between the millennial and generation X. Even though millennial prefer more leisure time and work life balance, they are good at work (mean value= 4.08) (H. J. Anderson et al., 2017). Millennial value relationship more than their predecessors; hence they are ease in negotiations. Baby boomers prefer to quit the job if their needs are not met. The millennial generate consisting fresh graduates are skilled computer operators also (Lu and Gursoy, 2013). Millennial are characterized by experienced digital media and network access. They prefer multi-tasking and poses the skill to work in any kind of environment. They enjoy risky job and often expect negative feedback as motivation. But baby boomers prefer self-supervision and lack negotiation and does not prefer to learn from work experience (Arellano & Arellano, 2015). The millennial are the best suited for technological changes who prefer latest technologies to achieve work life balance (Loughlin and Barling, 2001; Lyons, 2004).

Regarding the leadership skill generation X win the game. They are people of self-expression who listen to others for reducing the complexity in decision making. They are truly passionate and consider other people feeling also. They pose leadership competencies that can turn the organizational hierarchy upside down (Arsenault, 2004).

Generation X'ers are more dominant in development skills. They engage in continuous learning process to upgrade their skills. They prefer factors such as flexible schedules and comfortable working environment for better employee development. They are categorized as lifelong learners who embrace challenging work to stretch their mind. This generation poses the critical competencies required for their self and organizational development. (Bova & Kroth, 2001). They look forward for challenging jobs which ensure growth potential, increased responsibility, career development and finally facilitate decision making process (Walsh and Taylor, 2007).

The previous analysis is an evidence for the existing/developing skill gap in IT sector employees. Talent management strategies can be used to manager the inter-generational differences and skill gaps in the organization. Talent management practices must be tailor made for the needs of various generations to

accompany the generational diversity (Cheese, 2008)(Cascio & Boudreau, 2016).

Table 7- Results of Garrett Ranking Technique

Particulars	Garret score	Rank
Succession planning	22773	2
Training and development	20640	3
Learning agility promotion	20197	4
Organizational support	24132	1
Extrinsic reward practices	18974	5

Source: computed from primary data

Garret ranking was used to rank the talent management strategies preferred by the managers of select IT sector organizations. Managers are asked to rank six talent management strategies namely succession planning, training and development, promotion learning agility, organizational support and extrinsic reward practices taken from talent on demand framework proposed by Cappelli, 2008 (Bolander et al., 2017). The gap between desired level of capabilities and existing level of capabilities can be narrowed through talent management strategies (Karatop, Kubat, & Uygun, 2015). Talent management is different from traditional management practices as it is more egalitarian in its approach and not simply old wine in the new bottle (M. Dhanabhakyam & K. Kokilambal, 2014) . Organizational support is the most sort strategy by the managers for reducing the skill gap between age groups. Organizational support consists of role clarity, alignment to the work and proper infrastructure support. Managers believe that if the organization can lend its hand for multi-generational diversity, it can lead to organizational development (Bhatnagar, 2007). Succession planning is the best sorted talent management strategies by the managers. It is considered as a high potential program (HiPo). Succession planning incudes fast tract development plans which includes stretch assignments, action learning, and internal mentoring which prepares the millennial for the future responsibilities. Through succession plans the management can ensure uninterrupted leadership and can build talent internally (Malik & Singh, 2014).Training and development is another important strategy of talent management. Training proactively addresses the multi-generational diversity in the organizations. The millennial who are branded as technology savvy's should give hands on experience on work related issues (Srinivasan, 2012). Managers promote agility and collaborative learning for enhancing talent management. Studies reveal that collaboration leads to co- development where people join together to learn something new. Agility and collaboration is considered as an intrinsic part for organizational success. Virtual learning environment needs to be enhanced and networking should be increased for better results (Butter, Valenzuela, Graciela, & Quintana, 2015). By providing extrinsic rewards, the management can boost employer brand loyalty and organizational attractiveness which in turn retains top talents of the organization. Millennial who prefer work life balance more should be supplemented with monetary rewards.

Organization which offer better rewards are attractive to the talented millennial. But sometimes the effects of extrinsic rewards are moderated by the individual differences. This is the reason managers prefer monetary benefits the least for managing talent across generation (Jiang & Iles, 2011).

Conclusion

Cementing a diversity policy in an organization requires proper talent development of the employees (Ballafkih, 2010). In the light of generational differences in the IT sector organizations, the practice of talent management should be nurtured. Succession planning is one of the effective methods to bridge the skill and capacity gap across generations. If inclusive talent approach is adopted in the organization back filling employees saves money and cost compared to hiring and recruiting new employees. When employee talent is recognized and nourished properly it will also make them loyal to the organizations. In addition to the strategies discussed in this paper the managers should make use of effective communication across all generation regarding talent identification and talent development. The management should also focus on employee engagement and retention strategies to retain the top talents of the organization. With an increase in the millennial headcount in the IT industry and increasing retirement of their predecessor generation, the management should invest in employee's talent to enhance their competitive edge. If the talents of employees are monetized effectively, the Indian IT organization can witness paradigm shift in its employee performance (Baragde & Baporikar, 2017). Further while managing multigenerational diversity the management should focus on three bricks of talent development- knowledge base, strong service ethics and employee adaptability (Edgley, Sharma, & Anderson-gough, 2016).

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