

Gap Analysis of existing managerial skill set and the skills imparted by the management institutes for the IT Industry

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ARTICLE INFO

Article history:

Received 05 April 2022

Accepted 03 August 2022

Available 10 October 2022

Keywords:

Skillsets, problem-solving, teamwork, management institutes, IT industry

ABSTRACT

Nowadays, it becomes more important to produce rightly skilled individuals with the skills to survive and flourish in the industry. This paper focuses on the skill set that the management institutes are developing and how well that skill set is catering to the current era's IT industry. Such a sample population covers all the IT firms of India, registered as authorized companies and management institutes of the country that follow the overall accepted curriculum for management studies. A sample of 54 respondents was taken. The survey was done, questionnaires were floated to gather data, and further IBM SPSS was used for statistical analysis and to interpret the results. This research reveals a huge gap between the skills required and the skill set provided. It also brings out the key factors to address to fill the gap. Not only the factors but also the best possible methods to overcome such gaps have been brought to light in this paper. It gives an insight into the industry's dynamics and how important it is to cope with them for survival.

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<https://doi.org/10.55980/ebasr.v1i3.45>

1. Introduction

The current market environment has become very dynamic due to various factors like globalization, creativity and innovations, technological advancements, disruptive technologies, and highly increased competition (Das et al., 2022; López-Igual & Rodríguez-Modroño, 2020; Nolan et al., 2019). To cater to such dynamics of the market, organizations are becoming highly proactive, adaptable, and flexible to the new trends, culture, technologies, and working methods prevailing in the current market scenario (Barbe & Hussler, 2019; Kelly et al., 2022; Peixoto & Temmes, 2019; Shaughnessy et al., 2022). To perform in such a market organization requires a highly efficient workforce that can easily adapt and work efficiently in such an environment (Daud & Wan Hanafi, 2020; Frazier et al., 2019). Hence, the industry expectations have even increased compared to the earlier years. In such an environment, even the employees' survival has become tougher as industry expectations change rapidly (Bray et al., 2022). Employees are required to survive and perform in such an environment where competition is increasing rapidly.

As the world is constantly growing at faster pace it becomes highly important for the education system to grow in sync with the corporate world and find newer and creative ways of

learning and training individuals to get better prepared for the life ahead (Barrineau et al., 2022; Oyedotun, 2020). Training and development programs are carried out to improve the current workforce's efficiency, which inculcates huge costs and time and can even lead to not many great results (Jadallah et al., 2021). So here we concentrate on preparing a proactive, adaptable, self-sustaining, self-motivated force that can work and excel in such a dynamic environment without relying on training activities (Blažič, 2021).

In 2016, India's President Pranab Mukherjee said in January if (the situation is) not reversed quickly. We will land ourselves in a scenario of having a large number of people with degrees but not enough manpower with proficiency to meet the emerging requirement of our industrial and other sectors." (India today, 2016). In management studies, management institutes are lagging as they use traditional ways to impart knowledge and develop skills. Dr. Bakul Dholakia, Director General, IMI, Delhi says, "*Management education emphasizes on pedagogies like using case studies etc. instead of imparting the practical expertise attained from years of experience in the domain.*"

As education and training are the main pillars in building skills, they need to be assessed to increase the productive capacity of human resources (Shin et al., 2020). With this dynamically changing environment, management institutes need to produce "marketable products" to the industry (Jordan et al., 2021). There was a huge gap prevailing between industry expectations and the current skills imparted (Aljohani et al., 2022; Blanka et al., 2022; Edeigba, 2022; Erku et al., 2019). A large set of people working currently in the industry need to be skilled, re-skilled and up-skilled to cope up with the needs of the industry. So, in such an environment where survival becomes highly tough, this study seeks to find ways to achieve excellence in careers (Gunarathne et al., 2021; Singh Dubey & Tiwari, 2020). Certain skills as generic, self-management, career-building skills, and discipline-based skills, are required to achieve growth in careers. The impact of different skills needs to be understood so that the performance of employees can be assessed, and this can be prepared since they are in college (Martin & Davies, 2022). This will help the universities to understand which skill to focus on more to produce individuals who can have better careers. Lack of certain employability skills that affect individual's careers can even lead to occupational stresses (Emanuel et al., 2021; Herrmann et al., 2023).

Most of the skills taught in higher education do not focus on the ability of students to solve technical problems faced by the organization. Thus it hinders individuals' career development and makes it difficult for them to adapt to a dynamic environment. There is a huge gap between the developments of these skills that are required for the longevity of careers compared to skills that are being developed in management institutes (Spada et al., 2022). For the fact that employees can achieve better performance results if these skills are catered to well by academic institutions. Thus, this study aims to identify which skills are required to sustain careers in the IT industry. For specification, this study aims to (a) Discover which skills are the most important for the sustainability and growth of an employee's career. (b) To find out gap between the skills set required in industry and developed by the institutes. (c) To find out factors that affect the development of these skills in the institutes. This research contributes to helping educational institutions bridge the gap between the skills taught by institutions and the skills needed by the industry. The research also contributes to providing insights to management institutions to focus more on developing skills that will help students pass their job interviews and career growth.

2. Methods

This research was conducted in IT industry, and it was motivated that IT industry is a powerful economic force in the global marketplace. The sampling area covers all the IT firms of India registered as authorized companies and management institutes of the country that follow the overall accepted curriculum for management studies. In addition, the IT industry is at the forefront of India's economic growth. Fact that the IT industry is a purely knowledge-driven sector, IT industry includes all knowledge-based activities. So it requires a workforce with a dynamic skill set according to industry needs. There are four variables used in this study; problem-solving skills, communication skills, leadership skills, and teamwork skills. In addition, this study examines five factors that affect each managerial skill: extra-curricular activities, summer internships, live

projects, training & development, and Personal development and grooming sessions. The Data was gathered using quantitative techniques and as well as qualitative techniques. A sample of 54 respondents was taken. A survey was done, questionnaires were floated to gather data, and further IBM SPSS was used for statistical analysis and to interpret the results.

3. Results

The analysis was done using IBM-SPSS. A T-test was applied to the collected sample data set, which showed that almost all the skills were not developed up to the mark according to the respondents and that a gap in skills must be bridged.

Table 1. One Sample Test

Test Value = 5						
	t	df	Sig. (2 tailed)	Mean Difference	95% Confidence Interval Of The Difference	
					Lower	Upper
e_problem solving	-6.839	53	.000	-1.130	-1.46	-.80
e_communication skills	-5.000	53	.000	-.833	-1.17	-.50
e_leadership	-5.078	53	.000	-.870	-1.21	-.53
e_team	-4.794	53	.000	-.778	-1.10	-.45
SI_problem solving	-9.584	53	.000	-1.593	-1.93	-1.26
SI_communication skills	-8.851	53	.000	-1.611	-1.98	-1.25
SI_leadership skills	-9.775	53	.000	-1.722	-2.08	-1.37
SI_team skills	-9.718	53	.000	-1.648	-1.99	-1.31
LP_problem solving skills	-8.673	53	.000	-1.463	-1.80	-1.12
LP_communication skills	-8.235	53	.000	-1.593	-1.98	-1.20
LP_leadership skills	-8.891	53	.000	-1.519	-1.86	-1.18
LP_teamwork skills	-7.192	53	.000	-1.315	-1.68	-.95
TS_problem solving skills	-10.543	53	.000	-1.611	-1.92	-1.30
TS_communication skills	-9.626	53	.000	-1.500	-1.81	-1.19
TS_leadership skills	-10.166	53	.000	-1.537	-1.84	-1.23
TS_teamwork skills	-9.560	53	.000	-1.444	-1.75	-1.14
Trainer_problem solving	-11.262	53	.000	-1.926	-2.27	-1.58
Trainer_communication skills	-11.262	53	.000	-1.926	-2.27	-1.58
Trainer_leadership skills	-10.495	53	.000	-1.907	-2.27	-1.54
Trainer_team skills	-10.253	53	.000	-1.833	-2.19	-1.47
PDP_problem solving	-12.176	53	.000	-2.093	-2.44	-1.75
PDP_communication skills	-9.180	53	.000	-1.778	-2.17	-1.39
PDP_leadership skills	-10.764	53	.000	-1.981	-2.35	-1.61
PDP_team skills	-11.579	53	.000	-2.019	-2.37	-1.67

Table 1, shows the analysis was done using IBM-SPSS. T-test was applied on the collected sample data set, which showed that almost all the skills were not developed up to the mark according to the respondents and that a gap exists on skills required to be bridged.

Table 2, shows a matrix to build a factor-skill relationship, as it shows the effect of different factors of the curriculum of management institutes and their effect on skills. The scaling of the relationship between factors and the skill has been done from high to low, in which the High rating signifies the level of contribution of the factor on the skill set. Similarly, the level of contribution is defined for moderate and low ratings.

Table 2. Effect of factors on skillsets

Skill \ Factor	Problem Solving Skills	Communication Skills	Leadership Skills	Teamwork Skills
Extra-curricular activities	Low	High	High	High
Summer Internships	Low	High	Moderate	High
Live Projects	High	Moderate	Moderate	High
Training & Development	Moderate	Moderate	High	High
Personal Development and Grooming Sessions	Moderate	High	Moderate	High

4. Discussion

Researchers have always been focusing on doing research that fulfills the gap between the theory and the organizational implementation. The current study focuses on the same attribute. It attempts to bridge that gap and provide a powerful solution comprising of skillset that needs to be provided to the current set of students to be better prepared for the organizations. Hence, decreasing the cost involved for the organizations in training such students. Organizations invest huge amounts of money in training employees as per their requirements. The idea is to reduce such excess costs. If the educational institutes understand the basic skillset that the IT organizations require, they can better help prepare the students. A workforce with skills that can adapt to technological developments is an important asset in facing the industrial revolution (Akyazi et al., 2020).

The first set of results shows how the skillset required by the organizations is in shortage in the educational institutes. In this research context, the educational institutes in the current scenario lack the skillset that the IT organizations require. Skills like problem-solving, communication, and teamwork are essential in business innovation, especially in a dynamic economic environment (Rampersad, 2020). In a continuously changing business environment, managers deepen problem-solving skills through the ability to build networks (McGrath et al., 2019). Although the development of information and communication technology in the workforce is increasing, non-AI-related skillsets (e.i cognitive, communication, availability, technical, and self-organization skills) are still very much needed (Arendt et al., 2023).

The second results show how the institute's current activities help develop these skill sets. There is a requirement to enhance such factors of skillset. For example, Extra-circular activities are not enough to strengthen problem-solving skills, but they are effective in increasing inspiration for changing business environments (Carpenter & Wilson, 2022). Educational institutes should take more ways to enhance the such important skill. Educational institutions need to develop an integrated educational curriculum. This curriculum uses a holistic approach to bridge the gap between the skills needed by the industry and formal education in institutions.

These skills are required to attain better organizational results and sustainable industry careers. The “employability assets” should be understood and their deployment, then worked out with students to get better results. Indian youth are not only facing unemployment but also unemployability. There is a need to connect the campus with the corporate world. As most of the individuals' performance levels are not up to the mark in the industry, training is required, but training incurs cost and time. So, institutes need to understand factors of the environment and career needs for individuals and train them in institutes. There lies a need to bridge this skill gap and bring both worlds closer.

5. Conclusion

The study was done to identify the gaps and magnitude of them in the IT industry's current skills of the workforce. The findings show a huge gap existed between the industry expected levels and the current capabilities of the employees. The skills required to achieve excellence are not well catered by the management institutes and need to be worked upon to produce a high-performing task force and enhanced careers. It is a way for a sustainable career and employment relationship. The study identified that there is a major gap in the skills required for the longevity of an employee's career and so to bridge this gap, here are certain propositions (1) Specialized Personal Training in colleges for students with the amalgamation of motivational case studies; (2) More Industry exposure to understand the dynamics better; (3) Increase in quantum of training sessions and live projects; (4) Constant harmonization of the course structure with the industry.

There are certain limitations of the study. Firstly, the sample size could be increased. Secondly, other modes of data collection measures could be taken other than online mediums. Thirdly, future studies can focus on longitudinal data. The research has been done to determine if there are any gaps between the skill set developed in individuals in management institutes and the skill set required in the IT industry. Such factors have been taken up that reflect the shortcomings in the institutions and how further they can be worked upon for improvements. Some of the major institutes have been taken up to conduct the research and the alum students of such institutes working in the IT industry have been sought to conduct the analysis. The factors that affect the development of these skills are identified so that management institutes can work on them and produce better results. This will help bridge the gap and can bring the corporate world closer to the college world or the education system. Feedback was taken from the individuals working in the IT sector to first identify the skills they felt were most required for the sustainability of their careers then whether their college or universities properly catered the development of these skills.

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