



Students' Perception of the Role of Industry for Successful Skill Development Programs in Delhi

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ABSTRACT

At this juncture, when the world is looking at Indian Skill Development Programs and when Indian human resources are needed all across the globe, it is important to maintain quality assurance of Skill Development Programs. Industrial collaborations with the institutes of training have proven a successful model in developed countries like Germany, Finland, Brazil, etc. Though Skill development has become the buzzword in India, and all stakeholders understand the importance of skill development, it is important that efforts for the same may be synchronized with a clear understanding of the roles of each stakeholder. With this background, through this study, an effort has been made to understand students' perception for identifying areas of industry collaboration that may prove to be milestones in the direction of industrial collaboration in educational institutions, particularly for skill development.

Key words: *Skill Development, Industrial Training Institutes (ITIs), Industry Collaboration*



INTRODUCTION

In today's global scenario, a skill-based educational system is of paramount importance for every student in order to build competitive advantage, personal development and professional success. Learning any new specific skill enhances the capabilities of solving real-world problems, develops confidence and contributes creatively in all professional pursuits. Thus, every educational system should encourage students to learn new skills.

Further, we all know that the fundamental purpose of education delivery has undergone a paradigm shift due to enormous advances in science, technology and socio-economics and in recent years, skill development is gaining tremendous importance in our country. Skill Development is defined as a means of preparing for occupational fields and effective participation in the world of work. It also includes aspects of continued learning in order to become responsible citizens and an instrument to promote environment-friendly technologies for a greener and cleaner world.

Though we have already called for an action to think about various basic issues of skill-based education and skill development in our country, however, we also urgently need to address about smooth implementation of a flexible skill development system in secondary and post-secondary education. We need to accord the highest priority to a flexible skill development system to adapt our educational structure to the global context and promote students' skill learning with ease while maintaining overall training and education quality. At the same time, it facilitates not only improving core competencies and practical skills of the student but also introduces additional ways to promote lifelong learning.

India strongly needs an adaptable educational system that can change with the demands of the workforce and society. It is imperative that it may not be possible to effectively educate young minds for the VUCA (Volatile, Uncertain, Complex and Ambiguous) world of today using the customary approach of the educational system. Presently, an educational base should allow our students to choose from a variety of structured and personalized approaches to learning and



development. In other words, a flexible educational system should take into account academic and vocational programs, internships, and apprenticeships, under a flexible educational system. This is important for the students to experience real-world situations so that they know and develop the essential abilities needed for all future prospects.

As per a report by SBI Research, the working-age population in India has witnessed quite an increasing trend since 1971 and is expected to account for 64.4 per cent in the soon-to-be-exercised Census, which is estimated to further increase to 65.2 per cent in 2031. India has been one of the fastest-growing economies in the world in recent years, and in order to sustain the growth momentum, our foremost priority is to make available necessary modern infrastructure and the latest pedagogy practices along with trained trainers in our skill development ecosystem. Though in India, provision of skills training is exemplary and updated to sustain growth, development and business opportunities, still our proportion of trained workforce is among the lowest in the world.

At present, skills and vocational set-up in India is provided mainly through Industrial Training Institutes, Polytechnics and Private Vocational Training Providers. In addition to this, Skill Universities are also providing skill training in certain specialized trades. As our economy is now a skill-driven economy, the Indian government has also introduced various skill development programs to equip the youth population and professionals with industry-relevant expertise. Some of the initiatives taken in the recent past to enhance the quality of skill education by associating the industry as a partner in skill development are:

- improving the infrastructure of the institutes
- training of the trainers
- involving the industry in the training of the students
- improving soft skills and language proficiency
- improvement in the service conditions of the faculty and trainers



OBJECTIVES OF THE STUDY

In India, skill development has become a hot topic; therefore, efforts must be coordinated with a clear knowledge of each stakeholder's role. Industry collaborations are generally made in view of training institutes' infrastructural requirements. However, view of a key stakeholder, i.e., students, is seldom focused. In view of this fact, the present study is guided by the following objectives

- i. To identify various areas of industry participation in skill development programs of NCT of Delhi from the students' perspective.
- ii. To identify the role of industry for successful skill development programs in NCT of Delhi.
- iii. To make recommendations about the industry's contribution to make skill development programs more successful.

LITERATURE REVIEW

This study tries to concentrate on the literature about industry collaboration for the betterment of skill training, particularly in the Indian context. The necessity of industry engagement was discovered by Nangia & Pramanik (2011) and Zahid Ali (2008). K. Viswanadhan et al. (2005) have demonstrated the lack of qualified teachers in the skill world. H. Padmini et al. extensively discuss curriculum development in their writings (2009). Most crucially, these reviews acknowledge the connection between social duty, professional growth, and cultural orientation. Despite the fact that academicians are working very hard in the field of educational reforms, several research gaps on themes linked to skill training and education still exist. The biggest gap in the literature is usually found in the areas of skill development, corporate satisfaction, expectations and industry perspectives on skill education. India benefits largely from having a young labour force. It is imperative to concentrate on improving the employability of the students enrolled in undergraduate programs and the quality of workforce required by various business sectors.



Stahl et al. (2012) encompass that most of the companies have already established a world-class training centres and huge learning campuses; they have already started working with the best institutes and universities in the world, where they are using the latest developments being done in leadership for crafting and utilizing tools and technologies for making the best talents. As per contemporary studies on skill development in Technical Education, Author, Greenan et al. (1997) Ireland have explored programmes ought to concentrate on students' needs and be more intuitive in outline; curriculum advancement and on using proper educational methods which upgrade learning and create authority and relational aptitudes.

Reports of OECD released in 2013 have attributed that the unemployment youth are due to basic mismatch that exist between skill-set and available jobs in the markets. The inadequate capacity of vocational educational training centers is unable to respond to the needs of the entire market, and the same has been portrayed by numerous commentators (Akoojee, Gewer and McGrath, 2005; McGrath and Akoojee, 2009, McGrath, 2003). Employers perceive that vocational training colleges are not supplying the kind of skill-set that the industry requires and an alarming rate of increased young generation who have received such training from these institutes or artisan training institutes are not getting appropriate jobs after their graduation course.

According to Vinay K. Nangia and Cashmira Pramanik (2011), India must move forward through creative partnerships between business and academia through collaborative knowledge generation and sharing. There is a great need to develop alternative avenues that must be intensified, stimulated, and above all integrated, for a close academic and industrial interaction through all stages of technology development, starting from conceptualization down to commercialization. Cooperative research is the key to filling the gaps existing in the current structure. Instead of choosing one specific model, technical institutions should investigate many types of collaboration and adhere to a pattern where the institution feels at ease cooperating with the industry. Pfeffer Jeffrey (2007) suggested a list of Human resource (HR) practices that are being adopted by effective firms. One of the prominent practices is to make a high investment in training and skill development. As Schultz, T. W. (1961) defined, human can be considered as the knowledge and skills that people attain through better education and



high-level trainings. This form of resources is measured as a product of pre-meditated investment that yields better returns to individuals. (Nafukho 2004).

RESEARCH METHODOLOGY

This is empirical research done on the basis of a review of literature; and the study has formed a self-administered and structured questionnaire which is developed for past, existing and potential trainees. The quota sampling method is adopted for data collection. The sample size of 515 trainees or students has been collected from the total population size of 4155 students undergoing training, as on 31st December 2017; as per the report of the Directorate General of Training (DGT) comes under Ministry of Skill Development and Entrepreneurship (MSDE report, 2017). Mainly, three sectors, i.e., electrical, automobile and refrigeration & air-conditioning have been included in the study, and the impact of the association of prominent industry partners of these areas with government institutes that offer courses in these areas to the secondary or senior secondary passed students has been explored.

The data collected is analysed with the help of statistical techniques and appropriate tests with the help of computer software; Jamovi 1.0.0 has been applied for the final analysis. Cronbach's alpha test was performed in the study to check the reliability of the questions in the questionnaire. (Cronbach; 1951).

The Cronbach's alpha test resulted in 94.5 per cent of scale reliability. It indicates internal consistency of the selected scale is good. Knocke, D., Bohrnstedt, G. W., & Mee, A. P. (1994) suggest that research should come across for Cronbach's alphas of 0.70 or higher. Hence, scale reliability is well established.

PARTICIPANTS' DEMOGRAPHIC PROFILE

The sample suggests that 42.72 per cent of the respondents were from the rural areas and rest are from the urban areas. The family income suggests that 40.58 per cent of the respondents are from the income group of five lakhs to seven lakhs, and the second highest frequency of 115 respondents is from the income group of 7.26 lakh to 10 lakh, which suggests that the higher the income group, the lower the chances of the person opting for skill-based education.



The reason behind this may be that the high-income group prefers to send their wards for professional education as compared to skill-based education. The study has considered the ITI students where the vocational education is mainly carried out in India.

Approximately 32.04 per cent of the trainees are aspiring to become executives, just after the completion of their skill-based education, and 51.46 per cent of them are aspiring for government jobs after the completion of the course, as they believe that the course has been initiated by the government of India. Hence, the Government should accept their candidature in the public sector jobs or the government department jobs. Out of total 515, 46.8 per cent of the student joined the ITI just after their 12th class, and 25.05 per cent have joined the ITI course after their 10th class. ITI courses are basically skill-based courses; hence, they lose their importance after graduation. Soft skill training is the major preference of the students to learn just after their school education. However, the second preference has been given to the job, and the subsequent preference is gaining a diploma and pursuing other graduation degree.

STUDENTS' PERCEPTION ABOUT THE ROLE OF INDUSTRY REGARDING SKILL TRAINING AND DEVELOPMENT

To evaluate the effectiveness of industry–institute collaboration and its perceived impact on teaching–learning processes, a structured questionnaire was administered to the trainees. Respondents rated each statement on a five-point Likert scale ranging from 1 (“Strongly Disagree”) to 5 (“Strongly Agree”). The mean values, standard deviations, standard errors, and p-values have been computed to assess central tendency, variability, and statistical significance of the responses. Table 1 presents the descriptive statistics for each statement, highlighting the overall perception of respondents toward the role of industry collaboration in enhancing institutional performance and employability.



S.No.	Statement	Mean	Standard Deviation	SE	P-Value
1	In my institute many training programmes and guest lectures are organized in collaboration with industry partners which enhance my knowledge	3.65	1.321	0.0582	< .001
2	My principal has been highly enthusiastic to provide industry relevant skills to the students	4.01	1.124	0.0495	< .001
3	Presence of trainers from the industry in the institute makes learning more useful for suitable employment	4.02	0.992	0.0437	< .001
4	Industrial internship has widened my horizon	3.57	1.341	0.0591	< .001
5	The curriculum followed in my institute is industry relevant	4.24	0.838	0.0369	< .001
6	I find latest technologies are used in my institute's workshops and labs due to industry collaboration	3.90	0.910	0.0401	< .001
7	I got enough opportunities to visit industries of my trade while my training in the institute	3.72	1.124	0.0495	< .001
8	Many industrial trainers visited my institute during training and that provided opportunities for regular interaction with the industry	3.52	1.438	0.0634	< .001
9	I feel industries may fund for up gradation of training institutes	3.97	0.962	0.0424	< .001



10	Providing equipment for training is the responsibility of industry	3.90	1.092	0.0481	< .001
11	Inviting resource persons from industry helps not only in building better relationships but also prepare trainees for future job roles	4.07	1.087	0.0479	< .001
12	I feel trainers should often be trained by the industry in real industrial Circumstances	4.14	0.904	0.0399	< .001
13	If industries partner with the institutes capacity building of the institutes may take place	3.83	1.033	0.0455	< .001
14	An industrial partnership with the institute has resulted in very good placements for the students	3.61	1.203	0.0530	< .001
15	Industries should come forward to enrol trainees under the apprenticeship scheme	4.03	1.049	0.0462	< .001

The analysis of responses on industry–institute collaboration reveals an overall positive perception among the trainees toward initiatives that link educational institutions with industry. The data presented in Table 1 show that all statements yielded **mean scores above 3.5**, indicating that most respondents agreed or strongly agreed with the items reflecting the benefits and relevance of industry partnerships.

The **highest mean value (M = 4.24, SD = 0.838)** corresponds to the statement “*The curriculum followed in my institute is industry relevant,*” highlighting a strong belief that academic content aligns well with current industry requirements. Similarly, high agreement is observed for statements such as “*Trainers should often be trained by the industry in real industrial circumstances*” (M = 4.14) and “*Inviting resource persons from industry helps not only in building better relationships but also prepares trainees for future job roles*” (M = 4.07). These



responses emphasize that participants recognize the critical role of continual professional exposure and collaboration in maintaining training relevance and enhancing student employability.

Moderate agreement is reflected in statements like “*Many industrial trainers visited my institute during training*” (M = 3.52) and “*Industrial partnership with the institute has resulted in very good placements for the students*” (M = 3.61), suggesting that while collaboration initiatives are present, their frequency and tangible outcomes—such as improved placements—may vary across institutions.

The **standard deviation values**, ranging from **0.838 to 1.438**, indicate moderate dispersion, meaning that while the general sentiment is positive, responses vary among participants. This variation may arise from differences in institutional resources, intensity of industry engagement, or exposure to collaborative programs.

The **p-value** is a statistical measure used to determine the **significance of results**—that is, whether the observed differences or patterns are likely to have occurred by chance. In this study, **all p-values are less than .001**, meaning the probability that these results occurred randomly is **less than 0.1%**. This denotes a **very high level of statistical significance**, affirming that the favorable perceptions toward industry–institute collaboration are **not due to random variation** but reflect a genuine, consistent trend in respondents’ views. The consistent $p < .001$ across all items strengthens the reliability of the findings and suggests a robust relationship between industry participation and perceived institutional enhancement. The above results are summarized below:

Overall perception: Strongly positive (mean range = 3.52 – 4.24).

Highest rated aspects: Industry-relevant curriculum (M = 4.24) and industrial training for trainers (M = 4.14).

Areas needing improvement: Frequency of industrial visits and impact on placement (M ≈ 3.5–3.6).

Standard deviation: Moderate variation among respondents, reflecting institutional diversity.

Statistical significance: $p < .001$ for all items, confirming that the positive perceptions are statistically meaningful and highly reliable.



Greenan, N., B. McCormick, L. Zanchi, and A. Ross. *The Evaluation of the Pilot Programmes of the National Council for Vocational Awards (NCVA)*. Dublin: Department of Education and Science, Ireland, 1997.

Padmini, H. A. K., and T. R. G. Nair. “Approaches to Curriculum and Delivery Materials to Bring Out Better Skilled Software Engineers—An Indian Perspective.” Conference paper/report, 2010.

Jeffrey, Paul. “Human Resources from an Organizational Behavior Perspective: Some Paradoxes Explained.” *Journal of Economic Perspectives* 21, no. 4 (2007): 115–134.

Knoke, David, George W. Bohrnstedt, and Alissa P. Mee. *Statistics for Social Data Analysis*. Itasca, IL: F. E. Peacock Publishers, 1994.

McGrath, Cathleen, and David Krackhardt. “Network Conditions for Organizational Change.” *The Journal of Applied Behavioral Science* 39, no. 3 (2003): 324–336. <https://doi.org/10.1177/0021886303258071>.

McGrath, Simon, and Salim Akoojee. “Vocational Education and Training for Sustainability in South Africa: The Role of Public and Private Provision.” *International Journal of Educational Development* 29, no. 2 (2009): 149–156. <https://doi.org/10.1016/j.ijedudev.2008.09.002>.

Ministry of Skill Development and Entrepreneurship (MSDE). *Annual Report 2017–18*. New Delhi: Government of India, 2018. <https://www.msde.gov.in/static/uploads/2024/02/Annual-Report-2017-2018-English.pdf>.

Murphy, D., C. Campbell, and T. N. Garavan. “The Pygmalion Effect Reconsidered: Its Implications for Education, Training, and Workplace Learning.” *Journal of European Industrial Training* 23, nos. 4–5 (1999): 185–193.

Nafukho, Fredrick M. “The Market Model of Financing State Universities in Kenya: Some Innovative Lessons.” In *African Universities in the Twenty-First Century*, vol. 1, 126–139. Dakar: CODESRIA, 2004.

Nanda, T., and I. P. S. Ahuja. “An Insight into Low Growth of Technical Education in India.” *The Indian Journal of Technical Education* 26, no. 3 (2003): 29–37.

Nangia, V. K., and C. Pramanik. “Government–Nonprofit Organization: A Synergistic Model for Microfinance-Promoted Education Programme in India.” In *Microfinance and Sustainable Development in Asia*. Singapore: World Scientific, 2011. https://doi.org/10.5716/978-981-08-9493-1_IE30.



Organisation for Economic Co-operation and Development (OECD). *OECD Skills Outlook 2013: First Results from the Survey of Adult Skills*. Paris: OECD Publishing, 2013. <http://dx.doi.org/10.1787/9789264204256-en>.

Pfeffer, Jeffrey. "Human Resources from an Organizational Behavior Perspective: Some Paradoxes Explained." *Journal of Economic Perspectives* 21, no. 4 (2007): 115–134.

Sarkhan, J. "Education and Skill Development: A Pathway to Sustainable Growth." *International Journal of Scientific Research and Management* 13, no. 2 (2025).

SBI Research. *Precursor to Census 2024: The Fine Prints of a Rapidly Changing Nation*. Mumbai: State Bank of India, 2024.

Schultz, Theodore W. "Investment in Human Capital." *The American Economic Review* 51, no. 1 (1961): 1–17.

Stahl, Günter K., Lena Mäkelä, Lena Zander, and Marcus W. Dickson. "Six Principles of Effective Global Talent Management." *MIT Sloan Management Review* 53, no. 2 (2012): 25–32.

Viswanadhan, K., and D. E. Wadsworth. "Issues and Trends in Science Education: The Shortage of Qualified Science Teachers." *American Annals of the Deaf* 150, no. 1 (2005): 42–46.

Zahid, A. M., and Q. M. Abro. "Recent Developments in Management of Technology: Education and Training." In *Proceedings of the Knowledge Management International Conference (KMICe 2008)*. Langkawi, Malaysia, 2008.