ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue III, March 2026

Why Industry Academia Collaboration is a Matter: A Review Presentation as Literature Guidance

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DOI: https://doi.org/10.51583/IJLTEMAS.2026.150300122

Received: 27 March 2026; 02 April 2026; Published: 24 April 2026

ABSTRACT

The industry collaboration with institution is a long back talk, but it goes every year as emerging talk in the field of academic and the education world. Because its parallel travel not yet completed. So, the present article tries to address why industry and academia collaboration is a matter and how various researcher have addressed the matter and what was their findings. This will help the present and future researcher in the field to frame conceptual model, attributes and available gap. It is purely an analytical study. The present article discusses about why it's a matter, importance and benefits and various national and international researcher findings. The researcher of this article is taking research in addressing the connecting local industries for local employment.

Keywords: Industry and Academia collaboration, why it's a matter, need, benefits and literature collections

INTRODUCTION

Industry-Institute collaboration and interaction have always been and will always be relevant. Without these collaborations and dialogue between industry and Institutes, both these entities will be at a disadvantage. Because the industry will not be able to get what they expect and institutes will also not be able to offer courses that are relevant and what the industry is looking for. These collaborations will continue to create and influence employability skills, placements, entrepreneurship, research and innovation, and transformation.

Importance of Industry Institute Collaboration

There are several reasons why Industry Institute collaboration is important especially in today's changing world. It fosters innovation and enhances quality of education. Some of the reasons highlighting the importance of this Collaboration is *1. Labour market Exposure:* By collaborating with Industries academic institutions can get practical exposure to what the industry requirements are, and what happens in the real world of the business. This will help in identification of what are the current trends in the market and the demand for manpower etc. 2. *Skill Specific:* The industries can provide training on specific skills required and that is in high demand, which will help the students to become more employable. These collaborations can help in also fine-tuning the curriculum based on the market requirements. 3. *Support for Internships and Placements:* The Industries can provide an opportunity for students to gain practical exposure through Internships. These practical experiences will help the students to find better placements and 4. *Resource sharing:* Through the Industry Institute collaboration, both the Industry and Institute can use each other's resources for mutual benefit facilities, research capabilities, diverse talent pool, and intellectual capability.

Why it's a Matter and how benefits

Industry–academia collaboration is essential as it bridges the gap between theoretical knowledge and practical application. It ensures that academic research aligns with real-world industry needs, making education more relevant and effective. Such collaboration helps institutions stay updated with the latest technologies and trends, while also enabling industries to benefit from academic expertise and innovation. It creates a strong foundation for knowledge exchange and long-term partnerships.

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This collaboration greatly benefits students by providing exposure to real industry environments through internships, training, and live projects. It enhances their skills, improves employability, and prepares them to meet job market demands. Academic institutions gain access to funding, modern infrastructure, and industry insights, which help in improving the quality of education and research. Faculty members also benefit by staying current with industry developments.

Industries gain access to fresh talent, innovative ideas, and cutting-edge research, which can lead to improved products and services. Collaboration helps companies solve complex problems efficiently and supports the development of new technologies. On a larger scale, it promotes entrepreneurship, reduces the skill gap, and contributes to economic growth. Overall, it creates a win-win situation that benefits students, institutions, industries, and society as a whole.

The benefits are 1. Access to talent employees: Collaboration allows industries to access a pool of talented students and researchers who are trained in the latest technologies and methodologies. Internships, joint projects, and training programs help industries identify potential employees early, reducing recruitment challenges. For academic institutions, this interaction helps align their curriculum with industry requirements, ensuring students are better prepared for real-world jobs. It creates a continuous pipeline of skilled professionals for the industry while improving the employability of graduates.

2. It helps in research and innovative business: Industries benefit from the fresh perspectives and innovative ideas generated by academic researchers. Collaborative research projects lead to the development of new products, technologies, and solutions to complex problems. Academic institutions gain funding, advanced equipment, and practical insights that enhance the quality and impact of their research. This synergy accelerates technological development and fosters a culture of creativity and problem-solving on both sides.

3. Support of Board for curriculum and knowledge transfer: Through collaboration, industries can provide input into curriculum design to ensure that courses are relevant to current market needs. This helps institutions produce graduates with skills directly applicable to the workforce. Knowledge sharing between industry professionals and faculty enhances teaching quality and keeps institutions updated with modern practices. Simultaneously, industries benefit from research-based solutions and trained graduates who require less on-the-job training.

4. Long term participation and economic growth: Joint efforts between industry and academia promote entrepreneurship, startup creation, and commercialization of research. Industries gain innovative solutions that can enhance competitiveness and market growth, while institutions strengthen their reputation and attract more funding and partnerships. Long-term collaborations create networks for continuous learning, research, and development, ultimately contributing to economic growth, societal progress, and a sustainable innovation ecosystem.

LITERATURE REVIEW FOR INDUSTRY-ACADEMIA COLLABORATION

The researcher presents the various literature collected from national and international authors from 2026 to 2017 below. It is presented in chronological order.

Loggers et al. (2026) discuss enablers and barriers in academic-industry collaboration, especially in biomedical innovation, and their impact on commercialization success. Independent variables include facilitators like funding, trust, and infrastructure, while barriers such as regulatory challenges and IP issues are also considered; dependent variables include partnership success, innovation adoption, and commercialization outcomes, moderated by research discipline, regulatory environment, and organizational culture.

Abu Sa'a & Gunnarsson (2025) focus on how collaborations help smaller or less experienced firms by facilitating technology transfer, innovation, and competitiveness. Independent variables include the extent of academic involvement and collaborative projects, dependent variables are innovation performance and technology adoption, and moderating variables include firm size, prior collaboration experience, and industry type

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Singh et al (2024) emphasize that industry–academia collaboration improves student engagement, practical skills, and employability by integrating real-world projects and mentorship into academic curricula. For research, variables include the level of industry mentorship and project involvement as independent variables, with student skill development, engagement, and employability as dependent variables, and moderating factors such as field of study and prior industry exposure

Tucker, Robinson & Liyanage (2025) underline that objective alignment, governance, and structured knowledge-sharing are critical for sustainable, mutually beneficial partnerships. Research variables involve alignment of objectives and frequency of joint activities as independent variables, partnership sustainability and innovation outcomes as dependent variables, and institutional support and type of collaboration as moderators.

Bertha Leticia et.al, (2023) has revealed that the industry 4.0 is creating the challenges among the organization workers such as lack digital competencies, and research on new roles are limited. The above may be addressed through the Industry Institute Collaboration by incorporating the skills in the curriculum for the entry level employees. Additionally, existing models for its adoption focus on technology incorporation, process improvement, and organizational transformation and are limited. Therefore, they have identified that there was an opportunity that exists for designing a new model that emphasizes developing employee readiness and their competencies through the Industry Institute collaboration.

Nina evans et.al (2023), states that the University Industry Collaboration depends on the engagement and relationship between individual academicians and industry practitioners for digital transformation**.** Future research should investigate the collaboration between STEM academics in other higher education institutions and their industry partners. The different roles within a university can be investigated to determine how university-industry collaboration can be optimised with the correct support in place. The direct contribution of university-industry collaboration to digital transformation activities should be investigated and quantified.

Aktar Kamal et.al (2023), their study finds that knowledge transfer mechanism, governmental factors, organizational design factors, technology transfer and the collaborative network has a significant impact on strengthening UIC, which ultimately facilitates creativity, knowledge creation, skills development and supply of graduate according to the requirement of the industry, good research work.

Times of India (Nov 2023), mentioned that it is well that t collaborations between industry and academia can be mutually beneficial. However, most Indian higher education institutions (HEIs) have not focused on such collaborations or on intellectual property (IP) and technology transfers. While universities conduct and encourage basic research, many of them do not capitalise on the same research by commercializing their IP; they miss out on likely gains from patents, licensing, or start-up companies.

Gabriela Fernandes et.al (2022) in her research stated that University Industry Collaborations are becoming more critical for discovering innovations that can lead to development of new products, services, and processes and, more broadly, social impact in terms of employment, economic development, and public health. The University Industry Collaborations and their partners present many different cultures, practices competencies and mind-sets. Further research is required to understand how this can be program managed and reduce the gap of cultural differences and empower multicultural differences, so that the industries can strengthen their partnership with the universities.

Times of India (2022, March 13) published that there is a need for effective industry-institute collaboration for the sharing of emerging skills and knowledge for the stakeholders of institutions and the industry. In an era of rapidly advancing technology and evolving workforce requirements, there exists a noticeable gap between academic institutions and industries. This gap has significant repercussions for students, faculty, businesses, and society at large. The same can be addressed effectively by the collaboration of industry and institute.

Small and Medium Enterprises (SMEs) are especially struggling while working and collaborating with universities **(Laursen & Salter, 2004).** Some barriers and challenges faced in the process are a lack of resources for innovation, a lack of human resources, a lack of innovation strategy, and a lack of common goals with the rest of the participants of the collaborative projects **(Bertello et al., 2021).**

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Boarh etal(2020) talks about teaching-focused university-industry collaborations. Their results found that teaching-focused university collaborations can acquire better employability and domain-specific competencies. Teaching-focused UICs refer to initiatives facilitating the industry's participation in universities' teaching activities. They include the development and delivery of curriculum (Davey et al., 2018; Plewa et al., 2015), industrial value-added courses (Cavallone et al., 2019), student projects and internships (Rossano et al., 2016), setting up labs with industrial tools at the university campus for students.

Shruti Sandeep (2020) mentioned in her article that there is high demand from students and low availability of good quality institutions leads to brain drain from India. It is need of the hour to not only increase number of institutions but also to improve quality and relevance of education offered by them to prevent brain drain from India. It is now a necessity for the Universities and Industry not to walk in the same direction of growth and development on different path separately, but to collaborate with each other and work together for the benefit of the nation.

Leidesdorff, (2019) - identified that the IIC plays three major roles of universities within an innovation system. First, they undertake a general process of scientific research and thereby affect the technological frontier of industry over the long run. Secondly, they partly produce knowledge that is directly applicable to industrial production. Thirdly, universities provide major inputs for industrial innovation processes in terms of human capital, either through the education of graduates, who become industry researchers or through personnel mobility from universities

Abhilasha Singh (2019), states that the lack of human and intellectual resources and capital has affected the survival of different industries and organizations in this globally competitive world. Universities have failed to provide necessary human resources to these organizations. The coordination between industries and universities is not optimal. Such challenges are being faced in the United Arab Emirates (UAE). Moreover, the study depicted missing links in the association between universities and organizations and proposes effective measures to overcome the challenges affecting their collaboration. Innovation performance, trust and knowledge transfer have been the most influential factors between the university and industry collaboration

Asad Abbas et.al.2018 in their article on "University Government Collaboration for the Generation and commercialization of new knowledge for Use in the Industry" describes the collaboration between universities and the government in China. the profile of university-based collaboration has increased in China due to government financial support policies for research and industrial venture capital. Government funding is essential for university-based collaboration. The government in China funds projects in universities and thus creates a research environment that meets the requirements and flexible policies of the industry.

Kenneth R Lutchen (2018) in a Harvard business review mentioned both industry and academia stand to benefit from long-term cooperation. Companies will gain greater access to cutting-edge research and scientific talent at a time when corporate R&D budgets are increasingly under pressure. Universities will gain access to financial support and partners in research at a time when government funding is shrinking. Most importantly, society will benefit from a stream of previously unimaginable advances in life sciences, biomedical engineering, communications, environmental sciences, artificial intelligence, and more that will vastly improve everyone's life

Ludwig Bstieler etal (2017), according to the authors they examine how trust develops between industry and institutes over time. The results further indicate that mutual trust formation is also influenced by the other partners' perceptions of relationship factors. Trust cannot be mandated and is an outcome of consistent efforts on both ends. Sometimes people with little prior interaction tend to develop initial trust and this is required for the relationship to continue and succeed. This study has limitations as it is a sample survey of collaborations from three industries in one country.

Priya Saini and Dubey S. (2017), in their study tried to examine various issues related to academic institutions and industry collaborations on the basis of nature of resources and abilities of stakeholders in the knowledge management. They also suggested certain policies and strategies to introduce such collaborations to boost the

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economic growth. They also identified potential areas where industry's partnership with academia would be more fruitful.

CONCLUSION

Industry Institute collaboration is progressively significant in today's rapidly changing world as it links the gap between theoretical knowledge and practical industry requirements. Such collaborations enhance the quality of education, foster innovation, and make students more employable by providing experience to current market trends, skill-specific training, internships, and placements. They also enable resource sharing, allowing both institutions and industries to benefit from research competences, infrastructure, and intellectual talent. Industry academia partnerships reinforce research and innovation by endorsing knowledge transfer, joint projects, and the growth of new technologies. Over time, these collaborations contribute to long-term economic growth, entrepreneurship, and a sustainable innovation ecosystem. Finally, Industry Institute collaboration creates a win-win situation, benefiting students, academic institutions, industries, and society as a whole.

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