

## An Article on Bridging the Gap between Industry & Academia

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### ABSTRACT

*Industry – Academia has always been complimentary to each other. The Industry solves the aspirations of budding professionals and the academia supports in strengthening the intellect of the individual to match the standards required by the Industry. Once these avenues of Industry – Academia do not match, the Gap arises. In recent years, concerns have arisen regarding the industry-academia gap, leading to a growing number of individuals making ill-suited career choices. Bridging this gap is essential to minimize career mismatches and ensure a seamless transition for aspiring professionals. Both academia and industry must collaborate to address this issue and equip students with the necessary skills and information to make informed career decisions.*

*This study attempts to understand the essence of coordination between Industry and Academia. It furthers attempts to identify the Gap between Industry & Academia and present potential solution to bridge the gap. This exploratory & descriptive study is conducted by the help of Secondary & Primary data. As primary data, the Interviews with 9 Industry representatives have equipped the Researchers to conclude the study with pertinent recommendations. The Researchers have attempted to offer a pragmatic framework in the form of the 5 R Model, aiming to equip students with the requisite skills, relevance, and resilience to thrive in an increasingly competitive landscape. The scope of the study majorly encompasses the understanding on the Gap between Industry & Academia. The inferences cited in the research are largely based on the Researchers thoughts, theoretical understanding & the opinion gathered from the Interviews of the selected Industry representative. Hence the Inferences are indicative in nature rather exhaustive.*

**Keywords:** industry, academia, employability, 5 r model

## I. INTRODUCTION

In today's rapidly evolving job market, the disconnection between academia and industry stands as a formidable barrier, hindering the seamless transition of graduates into the workforce. This chasm, often referred to as the industry-academia gap, underscores a fundamental misalignment between the skills imparted by educational institutions and the practical demands of employers. Rooted in various factors, including outdated curricula, limited practical exposure, and a lack of coordination between stakeholders, this gap poses significant challenges for aspiring professionals in countries like India, where statistics reveal stark disparities in employability rates among graduates. Recognizing the urgency of this issue, researchers have embarked on a comprehensive exploration aimed at understanding the essence of collaboration between industry and academia, identifying the underlying gaps, and proposing viable solutions to bridge them. Through a combination of exploratory and descriptive methodologies, bolstered by both secondary data analysis and primary interviews with industry representatives, this study seeks to shed light on the multifaceted nature of the industry-academia gap and pave the way for innovative interventions. Amidst mounting concerns and pressing projections of future skills shortages, the imperative for collaborative action between academia and industry has never been more pronounced. Thus, this study endeavors to not only delineate the contours of the problem but also to offer a pragmatic framework in the form of the 5 R Model, aiming to equip graduates with the requisite skills, relevance, and resilience to thrive in an increasingly competitive landscape.

## II. CONCEPTUAL UNDERSTANDING

The industry-academia gap is a multifaceted issue stemming from several reasons. Firstly, traditional academic curricula often fail to keep pace with the rapidly evolving job market. The skills and knowledge taught in classrooms may not align with current industry requirements, leaving graduates ill-prepared for real-world demands. Secondly, there is often a lack of

communication and collaboration between academia and industry. Academic institutions and employers need to work together to identify the skills and competencies required in various fields, effectively bridging the gap. Additionally, students often lack practical exposure and real-world experiences, leading to unrealistic career expectations and uninformed decisions.

In India, there exists a significant disparity between the knowledge individuals possess and the knowledge required in the industry. Regrettably, this gap often diverts many individuals from making the right career decisions, as the skills and knowledge taught in educational institutions do not align with the demands of the real world. The industry-academia gap refers to the disparity between the skills and knowledge acquired through formal education and the practical requirements of the job market. In recent years, concerns have arisen regarding the industry-academia gap, leading to a growing number of individuals making ill-suited career choices. Bridging this gap is essential to minimize career mismatches and ensure a seamless transition for aspiring professionals. Both academia and industry must collaborate to address this issue and equip students with the necessary skills and information to make informed career decisions.

**Table No. 1:** Leading definitions related to the theme of the study

<b>Definition Source</b>	<b>Definitions</b>
<b>Section (2)(j) “Industry” of Industrial Dispute Act, 1947</b>	“ <b>Industry</b> means any business, trade, undertaking, manufacture or calling of employers and includes any calling, service, employment, handicraft, or industrial occupation or avocation of workmen”
<b>Employability (Hillage and Pollard, 1998)</b>	‘ <b>Employability</b> is the capability to move self-sufficiently within the labour market to realise potential through sustainable employment. For the individual, employability depends on the knowledge, skills and attitudes they possess, the way they use these assets and present them to employers and the context (personal circumstances and labour market environment) within which they seek work.’
<b>Skills (European Commission)</b>	<b>Skills</b> may be defined as the ability to apply knowledge and use know-how to complete tasks and solve useful problems, typically in the workplace.

### III. OBJECTIVES OF THE STUDY

The Researchers have considered the following objectives for the study:

- ▶ To understand the essence of coordination between Industry and Academia.
- ▶ To identify the Gap between Industry & Academia and present potential solution to bridge the gap.
- ▶ To contribute a model depicting solution to the identified gap between Industry and Academia.

### IV. RESEARCH METHODOLOGY

An article on bridging the Gap between Industry & Academia is an Exploratory & Descriptive study conducted with the help of massively secondary data and Primary Data in the form of Interview Method. The Authors have Interviewed 9 Industry representatives to collect the view points on the theme of the study. The Researchers aim to understand the essence of coordination between Industry and Academia. It further aims to identify the Gap between Industry & Academia and present potential solution to bridge the gap. The Researchers have also contributed a model depicting solution to the identified gap between Industry and Academia. The study demonstrates the academia at large rather any specific wing of Academia, also the industry at large has been considered rather any specific sector. Hence this may be a limitation of the study as the inferences are indicative in nature rather exhaustive.

## V. RESEARCH PROCESS

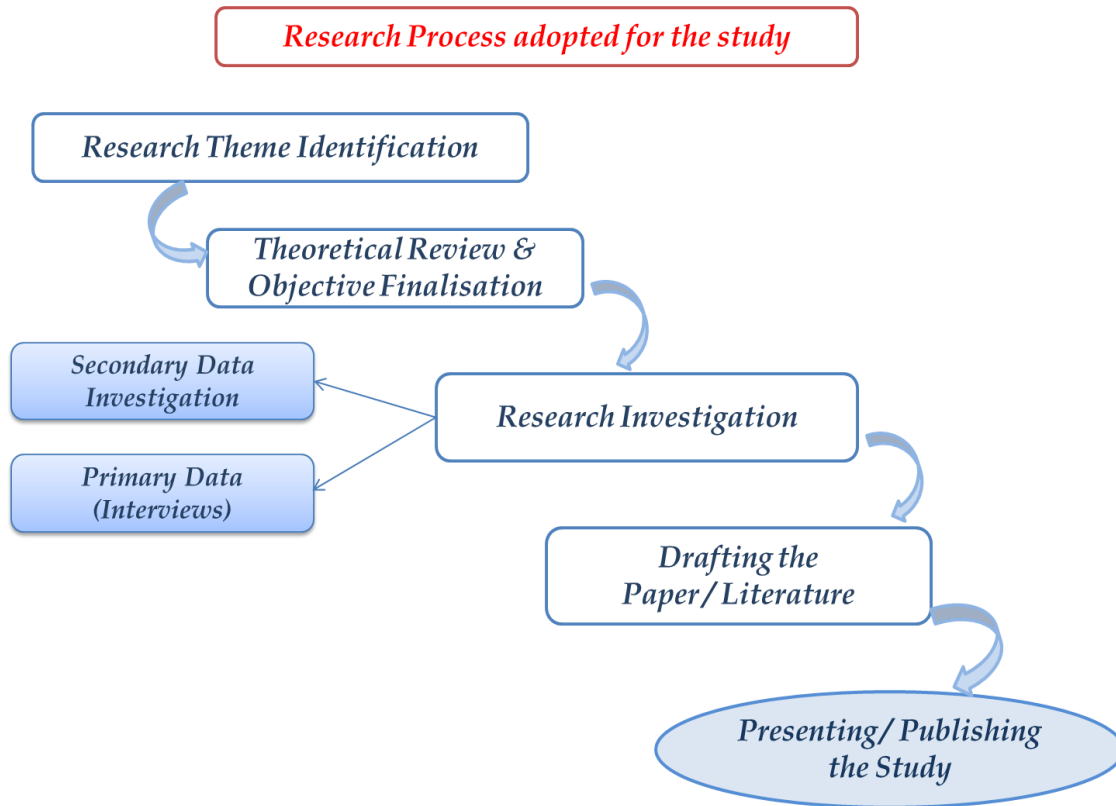


Figure 1: Research Process adopted

## VI. STATISTICS RELATED TO INDUSTRY ACADEMIA GAP

- According to a report by the National Employability Report 2021, only **45.9%** of Indian engineering graduates were employable in 2020, highlighting the gap between industry requirements and the skills of graduates.
- The report also states that **61.5%** of employers prefer candidates with industry-specific skills and practical experience.
- A survey by Aspiring Minds, a job skills assessment company, found that **95%** of Indian engineering graduates are not fit for software development jobs in the IT sector, emphasizing the need for practical skills and experience.
- A report by the World Economic Forum (WEF) states that India is projected to have a skills gap of **29 million** workers by 2030, highlighting the urgency of bridging the gap between industry and academia to meet the demands of the job market.
- The report also states that India's education system needs to focus on providing students with practical skills and experience to prepare them for the changing demands of the job market.

## VII. EXHIBITS FROM INTERACTION WITH INDUSTRY REPRESENTATIVES

### 1. Mr. Limesh Parekh, CEO, Enjoy IT Solution Ltd., Bhilad

Enjoy IT Solutions is a leading IT company headquartered at Bhilad, Gujarat. A small-town giant has larger aspirations. They have started with a forum named "SkillXperience" which aims at developing the youth of the region on employability front. They engage youth in Internship activities where by the youth learns the required skill set and gets occupied at the company after internship. Enjoy believes that the gap between the Industry & Academia shall get over with active participation of Industries in bridging it.

### 2. Mr. Anirudha Panchal, HR Head, Huber Group, Vapi

A leading HR professional from the region finds that Intellectual building and Exposure of students is very essential for the development of the product at academia. He believes that the students must be encouraged to participate in the external activities and learn from the same. Attend conferences and Meets that enhances the intellectual level & develops networking.

### 3. Mr. Subodha Sarangi, HR Manager, Gulf Oil, Silvassa

The HR manager at Gulf Oil, believes that Summer Internship projects and academic exposure like Paper writing shall equip the students to a level that will be acceptable to the industry. The Academia may develop a module where by summer internship scope is included. The Internship equips the students to practically understand the industrial scenario and exhibits the learning during their professional career.

### 4. Ms. Urvi Radadiya, HR Assistant Manager, Owen's Corning, Silvassa

Ms. Urvi, the newly joined HR person at Owens brought into light a best practice at the company. As part of the Apprenticeship programme at Owen's, the company first trains & educates the prospective employees and then recruit them on merit. Such practices can be extended with tie ups between 12<sup>th</sup> Standard & Graduation Institution. This idea has a potential to bridge the gap between academia and industries. Urvi being into her mid decade of experience, a recent MBA pass out believes that exposure of students at Companies in the form of visits and internship is very essential.

### 5. Mr. Vashishth Dave, HR Manager, Huhtamaki, Silvassa

Mr. Vashishth believes that Practical training to the student on being industry ready is essential for Institutions to understand. Like creating a module beyond just syllabus on the theme of "What Industry needs from the freshers, across domain." Such initiatives will help the Institutions to churn out industry ready individuals. Also the Industry shall have less time spend behind the training of freshers.

### 6. Mrs. Indu Nair, Lead L&D, Bayer Group, Silvassa

L&D head at leading Company Mrs. Indu Nair firmly believe that Curriculum based extracurricular and Industry visits will be handy for students to get groomed & be Industry ready. She acknowledges the role of Industries too in imparting such avenues to institutions where by the Students can get connected with the Companies. Practical exposure at Industries through visits and Internships helps the students to make a proper glimpse of expectations from the Industry. As a Learning & Development head, she advocates that the Companies need to have proper annual plan on extending such exposure.

### 7. Shri. Sujendra Roy, HR Manager, APAR Industries, Silvassa

Shri. Sujendra states that working in teams and Team building approach can make the students Industry ready. APAR Industries have tie up with Dale Carnegie for developmental programme. That gives a hint to Shri. Roy that Institutions must have such initiatives of career-based programme that connects straightaway to the industries.

### 8. Mr. Durgesh Ojha, HR Manager, AYM Syntex, Silvassa

AYM is a renowned company with employee centric activities. The HR Manager Mr. Durgesh believes that Students with more of human factor can excel in industries. The Institutions to bridge the gap between Industries and Institutes must conduct such activities which has more of human centricity. That eventually will help students in Organisations.

### 9. Mr. Pradipta Acharya, HR Manager, Audex, Silvassa

Mr. Pradipta states that academically sound and extrovert students can do wonders in the organisations. The students eventually need to employ their skills at Organisations. The exact process related training will be imparted at Organisations but the domain skills of grasping & extending has to be learnt at Institutions.

## VIII. INDUSTRY – ACADEMIA RELATIONS: ESSENCE & SIGNIFICANCE

The industry-academia collaborations have become the reason for the rise of blockbuster discoveries over the years, and supported a large number of students to go from educational institutions to the corporate world. It has a myriad of benefits for the participants. Here is how this partnership is beyond placements,

- **Develop skills and knowledge** – While considering academics, the industry-academia partnership provides a platform for the students to address challenging research questions with real-world applications and helps them to be aware of the tangible impacts of their research while developing new skills, data, or equipment. With industry-academia collaboration, companies improved their business performances by developing new technologies and techniques, while extending the capabilities and expertise available at the firm.
- **Discovery of new synergies** – The industry-academia partnership promote the discovery of new synergies and models for companies and this collaboration provides access to expertise and research that leads to innovation, extends the resources and sharpens the competitive advantage of the companies. It offers revenue streams to institutions and increased competitiveness in funding options.
- **Promote advanced research** – The industry-academia partnership promotes advancing research and creating a skilled workforce. This leads to the gaining of work-ready talent with specialist knowledge and practical training, while universities get the benefit of having opportunities to work on the latest technologies and challenging problems.

The collaboration of industry and academics is advantageous not only for the corporations, but also for the students, who avail themselves into the top management colleges and the colleges itself, that have partnerships with top industries of different fields.

- **Access to more resources** – Partnership with industries can help universities to get access to more study resources for funding their research and diversifying research areas, and receive feedback and guidance from the industries, while helping them further.
- **Exposure to industry jobs** – The industry-academia partnership provides a platform for the colleges to offer real-time industry jobs to the students, along with encouraging them to involve in incubator projects, that are offered within the firm post-graduation to the students.
- **Full-time employment to students** – The collaboration also helps the students to turn their internships into full-time employment, which makes it a powerful tool for colleges. This results in high placement numbers, that can be used to entice prospective students and corporate partners.

## IX. IDENTIFIED GAP BETWEEN INDUSTRY & ACADEMIA:

It's well known that those working in academia and those working in industries have different cultures and environments. This disconnect is the root of various problems, so it's important to understand the various gaps between the two sectors in order to begin filling them. The following are some of the different gaps between academia and industry:

### 1. Curriculum of Universities are Not as Per the Industry Standards

Curriculum of Universities is more theory based rather than application based. Some courses offered by the university are often out-dated.

### 2. Interns Not Getting Proper Working Environment in Some Company

The primary purpose of short-term training programs, which are a part of many higher education systems' curriculums, is to give students good practical knowledge. Many students prefer to choose big branded companies over startups because they believe they will gain more experience. However, the reality is that startups provide much more opportunity for creativity and live projects, leading to greater practical knowledge than what students would gain from working in a big branded company. In some cases, big branded companies don't offer live projects to their employees, resulting in poor practical knowledge or no knowledge at all.

### 3. Faculties Lacking Industrial Exposure

Faculties across the board are failing to provide students with the skills they will need in order to succeed in real-world scenarios. Many professors are research-oriented and lack the ability to take their findings and turn them into a commercial product - something that is essential in today's market. Professors need to be able to show their students how to make money out of their research so that they are prepared for the real world.

### 4. Process of Evaluations

The process of evaluating the student in academic is based on grades obtained in examination but in corporate, the evaluation is based on performance of the students as per type of projects he has handled and challenges he has faced and overcome.

### 5. Skill Gap or Performance Gap or Employability Gap

Students lack technical skills or soft skills or both. Skill gap can be measured as the difference between what is expected from students and what they perform. It is also sometimes called the Performance Gap or Employability gap.

### 6. Absence of Industry – University Interaction Cells

Most of the Universities don't frequently interact with the industries. So, universities are deprived of advanced and up-to-date knowledge in different fields.

### 7. Unrealistic Expectation of Students from Industry

Students have high expectations from Industry in terms of salary, position and timing. Moreover, students have a mindset that getting a degree is sufficient to get them a job.

### 8. Industry People are Not Seriously Involved in Updating the Curriculum of Academics

Industry people are very busy in meeting their own deadlines of various projects in the company and so they don't get enough time to invest on updating the curriculum of Academics.

There are areas where academia falls short, and companies have taken note. It is the responsibility of universities to surmount the deficiencies in education and provide new methods to fill the gaps. A collaborative body comprising representatives of both industry and academia can be formed to continually monitor for gaps and make ongoing efforts to close them.

It falls on both Academia and Industry to form strong relationships with one another and serve the needs of society at large. Such collaborations may also help to reduce unemployment rates in India.

**X. RECOMENDATION: 5 R MODEL**

**Impact of 5 R Model**

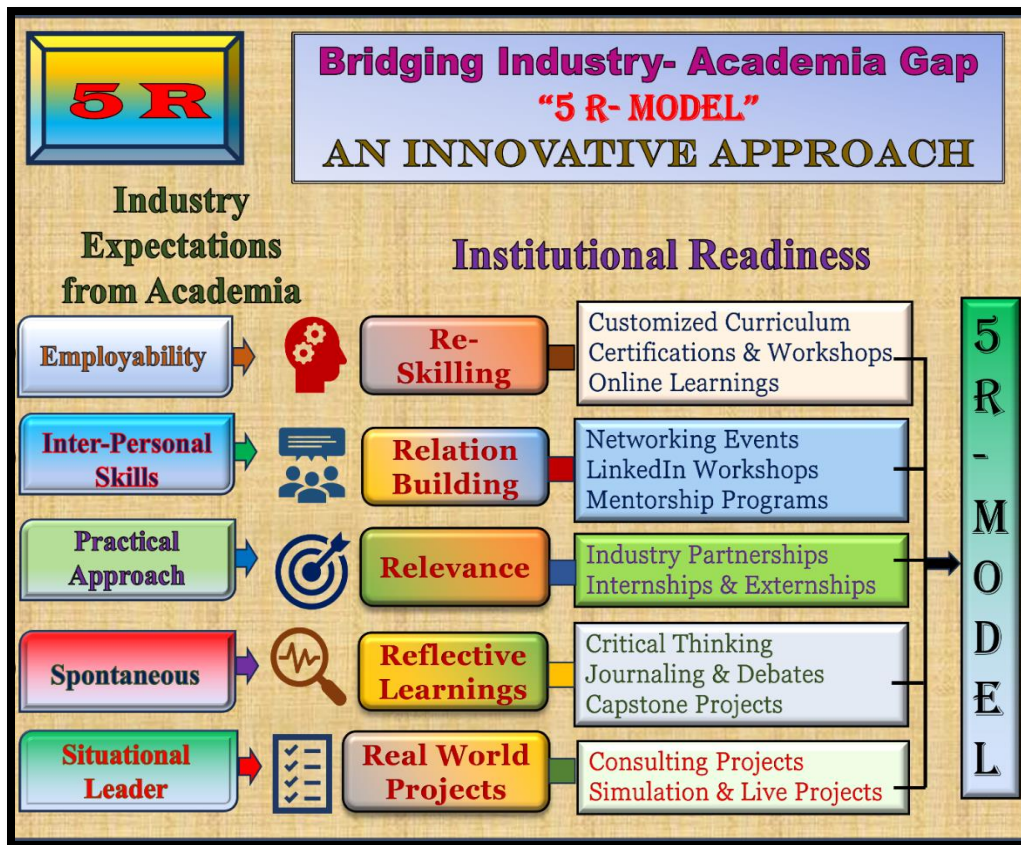


Figure 2: 5 R Model

Table 1: Impact of 5 R Model

Industry Expectations		Institutional Readiness
Employability	➔	Re-Skilling
Inter-Personal Skills	➔	Relation Building
Practical Approach	➔	Relevance
Spontaneous	➔	Reflective Learnings
Situational Leader	➔	Real World Projects

**Explanation of the Model**

To bridge the significant gap between the ever-evolving industry expectations and the education system, a holistic approach known as the 5 R Model has been designed.

**Re-skilling**, the first element, involves crafting a customized curriculum that adapts to the dynamic needs of the job market. This incorporates certifications and workshops that equip students with practical skills and knowledge essential for their careers. Online learning platforms further enhance accessibility and flexibility.

**Relation building**, the second pillar, focuses on nurturing relationships that transcend the classroom. Networking events bring students in contact with professionals, while LinkedIn workshops help them harness the power of social media for career growth. Mentorship programs provide guidance, allowing students to learn from experienced industry leaders.

**Relevance**, the third aspect, is established through robust industry partnerships, enabling students to gain real-world insights. Internships and externships offer hands-on experience, bridging the theory-practice gap and enhancing employability.

**Reflective learnings**, the fourth component, encourage critical thinking, journaling, and debates. These activities foster analytical skills and a deeper understanding of subject matter, which is vital for adapting to changing industry demands. Capstone projects offer an opportunity to apply this knowledge in practical contexts.

**Real-world projects**, the final segment, encompass consulting projects, simulations, and live projects. These initiatives simulate actual industry scenarios, enabling students to develop problem-solving abilities and work on projects that have a real impact.

Together, the 5 R Model aims to create a seamless transition between education and industry, ensuring that graduates are not only well-prepared but also highly relevant and adaptable in the rapidly changing job landscape.

## XI. CONCLUSION

In conclusion, addressing the industry-academia gap is imperative for fostering a workforce equipped with the skills and knowledge necessary to thrive in today's job market. The statistics presented underscore the magnitude of this gap, with reports indicating a significant disparity between graduates' skills and industry requirements. Recognizing the multifaceted nature of the issue, the study emphasizes the need for collaborative efforts between academia and industry to bridge this gap effectively. The 5 R Model proposed offers a comprehensive framework for addressing the various dimensions of the gap, from re-skilling and relationship-building to fostering relevance and reflective learning. By customizing curricula, fostering industry partnerships, and providing hands-on experiences, this model aims to ensure that graduates are not only employable but also adaptable to the evolving demands of the workforce. Moreover, the significance of nurturing relationships, promoting real-world projects, and instilling critical thinking skills cannot be understated in preparing students for successful careers. Ultimately, it falls upon both academia and industry to actively engage in this collaborative endeavor, thereby mitigating career mismatches and contributing to the socioeconomic growth of the nation. Through concerted efforts and the adoption of innovative models like the 5 R Model, we can strive towards a future where the industry-academia gap is minimized, and graduates are empowered to make meaningful contributions to society.

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**Disclaimer:** The view point expressed by the Industry representatives during interaction is solely the responsibility of the Industry representatives. The Researchers have presented the interpretation for Readers benefit.