

Building Workforce Capability through University-Industry Partnerships (UIP) in Bangladesh: A Policy-Based Analysis

Rajib Chandra Das

Lecturer, Public Administration, CCN University of Science & Technology, Kotbari, Cumilla
3503, Bangladesh

Corresponding Author Email: rajibrajcou@gmail.com

Md Shah Alam

DeliaiBinodpur Government Primary School, Noakhali-3708, Bangladesh
Email: asimcoupa@gmail.com

Md. Saydur Rahman

Department of Public Administration, Cumilla University
Email: sayeed1221@gmail.com

DOI Link: <http://dx.doi.org/10.6007/IJARPED/v14-i4/26929>

Published Online: 29 December 2025

Abstract

The labor market in Bangladesh is changing rapidly, but the skills of many students graduating from universities are still not aligned with the needs of the industry. The aim of this study is to analyze in a policy-based manner how to create skilled human resources through University-Industry Partnership (UIP). The study shows that most of the higher education institutions have not yet established effective linkages with the industry. As a result, students are proficient in theoretical knowledge but lag behind in practical application, technical knowledge, and problem-solving abilities. As a result, their competitiveness in the labor market is decreasing. This study proposes a practical and policy-based employability model that will help prepare students for their careers. This model includes joint curriculum development, mandatory internships, university-industry joint investment in research and innovation, and government policy support. The study analysis shows that if effective partnerships are developed between universities and industry, the young generation of Bangladesh will become more competitive in the modern labor market. In addition, this partnership will also contribute significantly to the country's economic growth and sustainable development.

Keywords: Higher Education, Employability of Graduates, Career Development, Policy Options, Bangladesh

Introduction

Bangladesh has made considerable progress in developing its higher education sector. There are presently over 150 universities, and tertiary education's gross enrolment has increased significantly. Nonetheless, the work market has not experienced any qualitative changes as a result of these quantitative gains. Although over a million graduates enter the economy each year, many remain unemployed. With international firms emphasizing soft skills, technological awareness, and extracurricular experience, the gap between academic credentials and job market expectations is widening. According to the Bangladesh Bureau of Statistics (2023), the unemployment rate for persons with a university degree is almost three times greater than the national average. With some universities reporting graduate jobless rates around 25%, this number is particularly severe among graduates in the humanities and social sciences. There are serious policy concerns raised by this gap between education and employment. Without successful policy interventions, the nation faces political, social, and economic challenges from an increasing number of underutilised youth. Universities should prioritise developing future-ready graduates—people with the flexibility, learning agility, and multidisciplinary thinking needed for an unpredictability- and innovation-driven world—in addition to generating graduates who are ready for the workforce (Mainga et al., 2022, p. 100). Higher education systems in developing countries must be restructured to meet the demands of complex, dynamic, and constantly shifting labor markets. For administrators at universities, curriculum designers, companies, and politicians, fostering the growth of adult learners' capacity to flourish in a world that is always changing is a recurring worldwide challenge and strategic priority (Healy et al., 2022; Mainga et al., 2022; Monteiro et al., 2022; Morris, 2019). A university degree used to be the key to a well-respected career. It's only a stepping stone now. Companies now look at more than just GPAs; they want applicants who can solve issues, communicate clearly, and keep up with technology advancements. Regrettably, Bangladesh's conventional educational systems continue to place more emphasis on memorisation than the development of useful skills. Career success increasingly depends on combining particular fields of study with practice-based soft abilities such as critical thinking, teamwork, interpersonal interaction, innovation, and a desire to learn (Aasheim et al., 2009; Collins, 2022; Sahin & Celikkan, 2020; Succi & Canovi, 2020). In order to help students improve their employability, this study attempts to provide a clear and practical overview of employability. This study adds to the expansion of research on industry-university collaboration from innovation and employability results to a scenario of socioeconomic upheaval and contributes to envision knowledge-driven policy tools for sustaining advancement.

Theoretical Framework: Triple Helix Model and Graduate Employability

This study makes use of the pragmatic conceptual structure, bolstered with the concept of graduate employability in order to workforce capability through university-industry partnerships. Graduate employability is a multifaceted term that extends beyond having academic credentials. It entails integrating the attitudes, abilities, and information necessary for graduates to thrive in an increasingly competitive job market. To understand the employability scenario of recent graduates, the Triple Helix Model, developed by Henry Etzkowitz and Loet Leidessdorff in 1990, presents an appropriate theoretical framework. This model incorporates trilateral networks namely; university-industry-government partnerships.

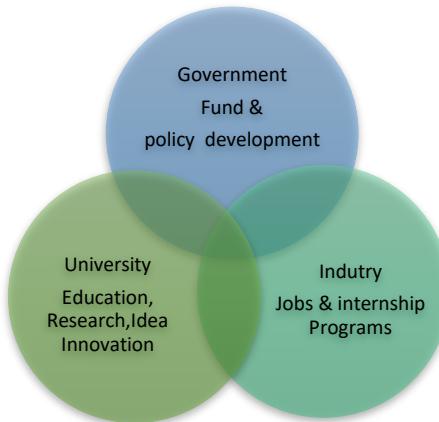


Fig 1. Triple Helix Model

When discussing the relationship between academia and industry, the Triple-Helix model is most frequently cited. Three circles (helices) that overlap to reveal interconnections are used to symbolize the triple helix model. The three elements of the model are universities conducting research and development, training, curriculum development, consulting, education, incubators, and spinoffs; industries producing goods, entrepreneurship, and product and service development; and new intermediary institutions established by the government, including industry parks, science parks, and technology transfer offices. The government has also provided funding, advising services, policy formulation, and support for innovation. Innovation and technology transfer between the domains are encouraged by this institutional setup. Therefore, it was anticipated that universities would be the ones to initiate the triadic partnership.

Literature Review

Employability has been the focus of numerous empirical investigations, according to the literature review. The major empirical research on employability conducted over the past ten years is compiled in the part that follows, with an emphasis on determining the key variables affecting university graduates' employability. Chowdhury (2024) demonstrates how local educational institutions frequently struggle to adapt to the changing demands of the labour market, leaving a workforce deficient in both soft and technical skills.

A recent survey by Haque et al. (2023) found that a considerable majority of Bangladeshi engineering graduates lack proficiency with industry-standard software, revealing structural weaknesses in technical education. Furthermore, the poor collaboration between academia and industry limits students' opportunities to engage with real-world concerns.

For example, compared to 75% in Singapore, only 30% of Bangladeshi institutions have established official agreements with companies for curriculum development (Harry & Chinyamurindi, 2021). The skills gap in Bangladesh is greatly worsened by the misalignment between industry demands and higher education institutions. Many institutions maintain strict, theory-based courses that disregard integrating new technologies and cultivating practical skills (Basir et al., 2022; Chisty et al., 2024).

In Bangladesh, a significantly higher proportion of students at private universities than students at public universities take part in career development programmes (Chowdhury &

Habib, 2024). Private institutions, on the other hand, are better able to offer such programmes since they typically enrol students from wealthy families, which enhance their employment prospects (Sarkar et al., 2021). Proficiency in language, particularly English, continues to be a major obstacle to employment. Because so few local graduates reach the required norms of English fluency, employers frequently favour expats for positions requiring international communication (Tudor et al., 2023). Since the Skills Plus Framework supports academics' emphasis on "good learning" while taking into account complete academic curricula, it is portrayed as an impressive employability endeavour (Knight & Yorke, 2003). The employability study done by Pool & Sewell (2007) might be regarded as a noteworthy accomplishment since it offered a strategy to employability that was clear, simple, and useful, which was determined to be a crucial necessity. The five distinct dimensions of employability—career development learning, experience, topic skills-knowledge-understanding, generic skills, and emotional intelligence—were identified by the Career EDGE model. In an atmosphere where employability is viewed as an obligation of each individual graduate, graduates of colleges and universities are expected to be prepared to meet employers' demands and expectations as well as to be prepared for future employment challenges (Nilsson, 2010). Smith et al. (2014) draws attention to the issues with employability, pointing out that there is no consensus on a universal definition of employability, which results in a lack of theoretical control and clear conceptualisation. Graduates are having trouble finding employment and are losing ground to fierce competition as a result of global labour market competition. Students who want to increase their employability should acquire a set of interpersonal abilities that will make them competent and persuasive in the job market (Azami et al., 2009). When interviewing candidates, employers always look for a specific set of employment traits, such as the ability to solve problems, have a strong work ethic, and make decisions (Kechagias, 2011). Employers, however, find it difficult to identify candidates who possess both technical and soft abilities (Shafie&Nayan, 2010).

Methodology

This study uses qualitative and policy-based analytical methods. The objective is to analyze how University-Industry Partnership (UIP) can enhance Bangladesh's workforce capability and employability of graduates. It also presents a practical and usable Employability Model that will help students improve their employability. This study adopts a descriptive qualitative design to deeply analyze the current status, challenges and policy constraints of university-industry collaboration. Through this, the alignment of skills and employment needs between higher education and industry has been determined. The study mainly uses secondary data, which has been collected from the following sources: Government and institutional policies and reports (UGC, UNESCO, Ministry of Education, etc.). Published research articles, books and international case studies. Relevant reports published in credible media such as Dhaka Tribune, The Business Standard and UNB. Thematic Content Analysis (TCA) method was applied in the data analysis. It provided an in-depth understanding of the reality, policy constraints, and international best practices of higher education and labor markets in Bangladesh, and analyzed a total of 23 years of context from 2002 to 2025 as the research period. The study uses the Triple Helix Model (Etzkowitz, 2002, 2003), which emphasizes innovation and skill development through collaboration between universities, industry, and government. In addition, the Employability Framework proposed by Pool and Sewell (2007) and Knight and Yorke (2003) is used to identify the necessary skills and soft skills in the

Bangladeshi context. The data obtained from various reliable sources have been cross-checked to ensure the accuracy and consistency of the results. The data has been compared with recent research to ensure consistency with current labor market trends. This study will propose a policy-based Employability Model, which will provide a practical guide for universities, industry, and policymakers. Its goal is to develop the young generation of Bangladesh to be more skilled, innovative, and employable.

Result and Discussion

Current Scenario of Graduate Employment in Bangladesh

In 2019, there were 46 state universities and 105 private universities in Bangladesh due to the country's explosive growth in higher education (UGC, 2019). Bangladesh's higher education system is therefore one of the most congested in the world. The rising gap between graduate quality and industry demands has raised concerns about teaching and learning results in Bangladeshi higher education institutions in recent years. Due to this discrepancy, graduates of Bangladesh's numerous universities are less employable. Degree program courses are usually designed to increase students' academic knowledge of the subject matter with less emphasis on applying that knowledge in real-world scenarios (Chowdhury, (2020)). An increasing number of recent Bangladeshi graduates are struggling to find employment despite possessing university degrees, highlighting a significant problem in the labor market. According to the Bangladesh Bureau of Statistics' (BBS) latest estimate, the unemployment rate among young individuals with education, comprising graduates and postgraduates, has increased to about 11%. Compared to the 4.2% national rate of joblessness, this is far higher. The rise of automation, the absence of effective skill-based training, and widespread economic difficulties has all made the problem worse. Due to a sharp slowdown in both government and private sector employment opportunities, the last six months of 2024 and the first part of 2025 looked particularly depressing for job seekers. Private sector credit increased 9.86% year over year in August but then fell to 7.66% in November, according to statistics from the Bangladesh Bank. September and October saw drops of 9.20% and 8.30%, respectively, as the slide persisted (UNB, 2025). There is an abundance of highly qualified graduates from universities with bachelor's degrees in Bangladesh. However, millions of people are still locked in low-paying positions that don't make use of their knowledge and abilities or are unemployed or underemployed. There is an abundance of highly qualified graduates of universities with bachelor's degrees in Bangladesh. However, millions of people are still locked in low-paying positions that don't make use of their knowledge and abilities or are unemployed or underemployed. The problems lie deeper. Mainga et al. (2022) observe that curriculum designers frequently fall behind the quick changes in data systems and technology. Additionally, creative teaching methods that encourage experience and active learning are inadequate. According to the Bangladesh Bureau of Statistics (BBS), the number of unemployed individuals rose by approximately 2.4 lakh to 25.9 lakh during the first quarter of this year (January–March) as compared to the last quarter (October–December) of the previous year (TBS Report, 2024). The current state of the economy is not conducive to young people looking for work. Consequently, the number of young people without jobs is rising, which suggests that job search activity is decreasing and that frustration is mounting. They are essentially taken out of the labour force by this. About 60% of graduates come from general education programmes, which frequently don't expose students to digital technologies, applied research, or experiential learning, according to the Bangladesh Institute of Development Studies (BIDS, 2024). Graduates with advanced degrees make up the majority

of young adults without jobs. Despite their efforts, they are unable to get employment. Those seeking employment are not finding it, and those seeking qualified workers are not finding them either. This year, the number of males without jobs increased by 2%. It is currently 1.74 million, up from 1.71 million a year ago. This runs counter to the claim that its economy is robust and generating jobs. It indicates that there is still a talent gap and that our recent grads are not very employable (The Business Standards, 2025). The nation's economic and social problems are rapidly taking on a new dimension as the rate of unemployed graduates rises. The influx of degree holders that universities continue to produce each year is overwhelming the labor market, leaving many without steady employment. Not just young individuals, but the entire nation is impacted by the drop in graduate employment. Global organizations like the World Bank (2021) and the World Economic Forum (2025) emphasize that soft skills like digital literacy, communication, teamwork, and flexibility will be more important in the workforce of the future. Nonetheless, many Bangladeshi universities continue to employ lecture-based curricula and lack access to industry engagement platforms, organized internships, or practical training. As a result, companies frequently assert that young graduates lack important abilities like problem-solving, interpersonal interaction, and applied knowledge—particularly in crucial sectors like information technology, manufacturing, and services. Recognizing the predicament, the government has created programmes to promote digital skills development, vocational education, and entrepreneurship. Meanwhile, private businesses offer skill development courses and internship programs to help close the gap between education and employment. Policymakers, corporations, and academic institutions are under growing pressure to create long-term solutions as graduates stay in the labor market.

A Graduate-Churning Mill

A defective educational system produces graduates with inadequate training. The present state of the employment market does not align with their expectations. The absence of high-quality academic and vocational education is the main cause of this. According to several pieces of research, colleges and other educational establishments do not sufficiently prepare graduates with the requisite skills. They must fill the vacancy on their own since they are unable to participate in skill development programmes. But they face several obstacles in their endeavours. The primary obstacles to high-quality higher education at Bangladesh's public universities include a lack of teaching aids, library resources, books and periodicals, and research and laboratory facilities (Sarkar, Rana & Zitu, 2013). Bangladesh's socioeconomic problems, such as a shortage of government assistance, a digital gap, unequal educational quality, and insufficient social justice, are among these challenges. Additionally, it highlights a serious weakness in our educational system. It no longer produces skilled workers and has turned into a "certificate mill". Because the majority of Bangladesh's universities have been producing graduates without providing them with education, companies say there is a lack of applicants with the necessary hard, soft, and technology skills. The demand for workers who possess a variety of talents in addition to their schooling has increased. Along with hard skills, soft skills are becoming more and more valued by employers. But when it comes to being prepared for the workforce, Bangladesh's young people might not be equipped with the skills that the nation's current educational system can offer. One major obstacle to high-quality education is the commercialisation of education (Rahman, 2010). The upcoming fourth industrial revolution (4IR) will alter the labour market as we know it in the near future. Our educational system isn't prepared for that, though. It will make our traditional training and

economy insufficient. How can a graduate get work if they can't even communicate with a foreign customer or send an email? A significant indicator of a high-quality educational system is employability. It indicates that the educational system isn't adequately educating graduates for the workforce if they have trouble finding employment because of a skills gap (The Business Standards, 2025).

Challenges of University-Industry Linkage in Bangladesh

Several scholars have identified elements that can help or hinder the transfer of knowledge and technology from academia to industry (Panagopoulos & Carayannis, 2013; Sideri & Panagopoulos, 2018). Some of the major issues that impede the establishment and performance of university-industry links. Universities and enterprises frequently have different forms of knowledge, such as tacit vs explicit, fundamental vs applied, and generic vs specific. These discrepancies might make it challenging to communicate, comprehend, and integrate knowledge from the two areas. Additionally, Universities and corporations have different goals and motivations, such as academic freedom versus commercialization, curiosity vs problem-solving, and long term vs short term. These disparities can lead to conflicts of interest, misaligned expectations, and difficulty evaluating the collaboration's outcomes. Moreover, Universities and companies have distinct organizational cultures, norms, beliefs, and practices, such as openness vs secrecy, collaboration vs competition, and peer-review versus market input. These discrepancies might have an impact on the partners' trust, commitment, and pleasure with the collaboration. There is a lack of trust and communication among the partner. Cognitive and cultural limitations impede the effective transfer and absorption of knowledge.

Pathways for Building Workforce Capability: Bridging The Gap

Although universities are increasingly recognised as important forces behind the development of the local workforce, many still have difficulty forming partnerships with businesses that are truly responsive. Our experience demonstrates that partnerships may boost local economies and provide students with fulfilling career paths when they are planned with mutual benefit in mind. Examples of these partnerships include co-developed teaching and cooperative research. Here are some significant considerations to think about:

- 1. Align Teaching and Training with Regional Industry Needs:** One method to find out how a university may support local development is to collaborate with the economic development organisations in your area, who are tasked with promoting growth and identifying new sectors. It could entail working together on research projects or creating course materials that complement priority industries and guarantee graduates are prepared for the workforce. Universities can collaborate with industry to co-design programmes to promote economic agendas and address local skills shortages. For instance, engineering minor has been co-developed with local industries as a result of a regional economic development strategy centred on aircraft. Additionally, proprietary research has been conducted in conjunction with partners in the aerospace industry. Students are consequently exposed to cutting-edge technologies, guaranteeing that the academic material reflects both established and new trends while fostering the expansion of regional companies in the aerospace industry.
- 2.

2. Use 'Pull' Research Partnerships to Respond to Industry Needs: Only when university research is closely linked to industry demands can it be a potent tool for graduate employment and regional development. A "pull" collaboration strategy, in which industry guides research direction, produces more pertinent results and improves student learning experiences compared to a "push" model, in which research is produced and made available to industry. Cooperation between the state's universities and power firms has made it possible to conduct applied research that is in line with difficulties. Co-development of postgraduate research with sector member organisations should be guaranteed. Many top-notch graduates have been drawn to the industry and university programmes as a result of this partnership, which has also allowed the industry to develop quickly within the sector. In addition to ensuring the long-term sustainability of academic programmes, the formal structure—which includes full funding—has made it possible for research to match business objectives and has produced a workforce that is suited to those expectations. Rajalo and Vadi (2017) acknowledge trust as a critical factor and stress its critical role in fostering fruitful cooperation.

3. Bridge the Transition from Study to Work: Collaboration can help graduates make a successful transition to the profession, benefiting both business and universities. Course-based internship programs benefit businesses and the community by addressing issues that would not be tackled in ordinary business operations, while also supporting students in building employability skills in a useful and stimulating manner. Government-backed programmes lower expenses for firms and provide subsidies for student internships. These experience awards are very focused on innovation, enhancing organisations' capacity for research and development while providing students with excellent experiences. Lauvås and Steinmo (2021) examine how mutual commitment, trust, and regular contact are synergistic and how they all work together to promote understanding between academic and business partners.

4. Support the Development of the Existing Workforce: The current workforce has to be reskilled and upskilled, and universities may help with that. When professional education is conducted in collaboration with industry, it can improve organisational capacity and provide individuals with new opportunities. Co-design is essential for creating microcredentials or short courses. Employers may fill important skill shortages while employees continue to be productive on the job by co-designing courses in subjects like artificial intelligence or project management. Working professionals can now obtain upskilling through online delivery in a variety of formats. Co-creation guarantees that course material is current and pertinent to industry demands for academic institutions. This encourages graduates to keep pursuing their educations into full university programmes and allows the university to create new content and offer more short courses.

5. Build Relationships before Formal Agreements: Informal interaction frequently results in strong partnerships. Top graduates should be drawn to the government through internships, guest teaching, and ongoing participation in student clubs. Because of their unofficial prominence, they were seen as a top employer for recent graduates, which inevitably resulted in official arrangements that included financing joint research and talent acquisition initiatives. According to the review carried out by Sanahuja-Vélez and Ribes-Giner (2015), while companies think internships should help interns grow their job skills, relationships, and

interpersonal abilities, students want internships to expand their work experience, offer technology training, and improve job placement. Employers think students should be eager and committed participants and place a high importance on professionalism, communication skills, and positive and responsible attitudes.

6. Necessity of Tech Skills: Digital literacy has become an essential need in the fourth industrial revolution. The ability to use technology, from simple office software to sophisticated data analytics, is crucial in today's employment environment. However, many Bangladeshi graduates are unable to exhibit even the most basic digital competencies when they go into interviews. While global labour markets are becoming more automated, a sizable percentage of Bangladeshi graduates are still lacking basic tech skills, according to a survey by the International Labour Organisation (ILO). Eight essential abilities were also highlighted by the ACCI/BCA project: self-management, learning and technology, initiative and enterprise, problem-solving, communication, teamwork, planning, and organising (ACCI & BCA, 2002).

7. Extracurricular: It's important to consider both your extracurricular activities and the knowledge you acquire in the classroom. Employers place a high priority on graduates who participate in extracurricular activities, such as volunteering, student organisations, or athletics, as these activities show leadership, teamwork, and time management. However, a large number of Bangladeshi students disregard extracurricular activities in favour of their studies, losing out on important chances to develop their skills. According to a Bangladeshi study on graduate employability, students who participated actively in extracurricular activities had a 30% higher chance of landing jobs in international corporations than their peers who prioritised academics. This implies that employers find a well-rounded graduate much more appealing than one with only an impressive academic record. For students to gain skills outside of the classroom, clubs, competitions, and leadership initiatives should be promoted—or even mandated (Dhaka Tribune, 2025).

8. Curriculum Reform: Technology courses and training in soft skills must be incorporated into university curricula. Fullan (2007) shows how well-executed curriculum modifications can result in improved knowledge retention and deeper comprehension. UNESCO (2015) highlights the value of curricula that support global citizenship and sustainable development, in line with Bangladesh's educational objectives. According to Sohimi et al. (2019), in the context of the current Fourth Industrial Revolution, business participation in curriculum development should be developed, and resource sharing should be prioritised. Malaysian vocational colleges foster collaboration through expert sharing, human capital growth and development, quality inspection, and job-based education programmes (Sappar et al., 2024).

9. Industry-Academia Collaboration: In order to provide training programmes that are relevant to the industry and guarantee that students gain skills that meet the demands of the labour market, multinational corporations should actively collaborate with academic institutions. Businesses are more inclined to work with academic institutions in order to gain access to new information and secure scientific backing for the creation of new products. An industrial visit is essential for university graduates to acquire real-world experience (Lee, 2000).

10. Investing in Research and Development: Businesses can gain a competitive edge, foster innovation, and get assistance with their specific issues by collaborating with universities and funding research and development (R&D). These programmes encourage businesses to participate in organised UIC activities like collaboratively developed PhD studies, governmental funding schemes, or long-term academic collaborations (Sazzad Hossain, 2023).

Policy Implications

First, Higher education policy needs to be integrated with industry and economic policy. Arrange part-time internships for university students to gain practical experience and identify future skills needs. This benefits the industry by reducing training and apprenticeship time, allowing companies to hire employees based on their needs, and saving time on hiring. New employees can demonstrate work skills from the first day, increasing production and reducing costs. Arrange jobs for skilled students by organizing courses for students to develop their skills for free.

Second, In this case, universities can design separate online and offline courses by changing their existing structure very much. These courses can be designed with the help of industry experts and skilled academicians.

Third, government and private institutions should be created whose job will be to find jobs for educated students in the country and abroad and provide all the help and support until they get hired. Through government and private sector collaboration, research can be conducted to address a variety of real-world issues.

Finally, by involving students in these research projects, their problem-solving abilities will improve. Increase the research of universities and funding can be arranged through PPP for these works. And the companies that fund these activities can be given tax concessions or exemptions or research royalty shares can be arranged.

Discussion

The findings of this study articulates that the graduates qualities of HEIs in Bangladesh are having struggle to meet the industry demands, causing the lack of collaboration between academia and industry as well as government in terms of Triple Helix Model. According to Sarkar, Rana&Zitu, (2013), lack of teaching aids, library resources, books and journals, and research and laboratory facilities are the main barriers to high-quality educational institutions at Bangladesh's public colleges and universities. This study presents that partnerships and collaborations, including co-developed teaching and cooperative research, hands-on internship, available funds, updated curriculum and course, among universities, industries and government bodies may augment local economies and ensure jobs opportunities for graduates when they are planned and organized with mutual advantages. Lee (2000) articulates In order to obtain new information and obtain scientific support for the development of new products, businesses are more likely to collaborate with academic organisations. For recent graduates to gain practical experience, an industrial visit is crucial. This discussion emphasizes that although Bangladesh has acknowledged the need of university-industry cooperation, systemic changes are necessary to move from dispersed projects to an organized, long-lasting, and entrepreneurial UIC model. To achieve

Bangladesh's goals of creating a knowledge-based and technologically advanced economy, it will be essential to strengthen policy implementation, match curriculum with market demands, close trust gaps, encourage research collaboration, and provide fair access to partnerships.

Limitations

The data used in the study are mainly taken from secondary sources, such as journals, government reports, and online publications. As a result, it was not possible to fully reflect the field-level experiences and real needs. The data of the study do not represent all sectors equally. In particular, data from private universities and small-scale industries were relatively less included. The analysis mainly relied on urban-centered data. As a result, the education-industry relationship in rural and marginal areas was not properly reflected. The study was limited to policy analysis. Administrative or financial barriers at the implementation stage of the policy could not be analyzed. Due to limited time and resources, larger sample analysis or long-term observation was not possible. As a result, although the results are theoretically strong, practical verification is needed. The Triple Helix Model and Employability Framework were used. However, the application of these models varies in different contexts, so they may not be fully consistent with the reality of Bangladesh. Overall, these limitations did not hinder the main objective of the study, but rather created opportunities for more evidence-based and comparative analysis in future studies.

Conclusion

Along with government policy assistance, collaboration and partnership between academia and industry is essential to increasing graduates' employability. Consequently, they may develop curricula that equip graduates with the skills needed in the workforce. At present, work is more about skills, adaptability, and a desire to learn than it is about degrees alone. The employability of Bangladeshi graduates is at a critical juncture. If swift action is not taken, the nation faces the risk of squandering the demographic dividend it got and postponing its transition to middle-income status. Collaborations among educators, businesses, and lawmakers are vital for developing syllabi that not only teach specific disciplines but also encourage professional skills such as communication, empathy, and problem-solving. Furthermore, adopting learner-centered teaching paradigms and including active, problem-based learning will raise students' perceived job prospects by increasing their confidence and competence for difficult work conditions. A workforce that is innovative, productive, and prepared for the future will be made possible by close collaboration between government organisations, businesses, and academic institutions. The development of curricula and teaching materials, the restructuring of education and assessment policies, the modernisation of infrastructure facilities, the linkage program between education and society, the co-optation program for industry, the institutions of training for faculty members at the tertiary level, etc., are further measures that should be taken by Bangladesh's tertiary education establishments in order to lower the country's graduate-level unemployment rate. Furthermore, since improved communication raises the possibility of desired employability, recommendations are provided regarding the necessity for students to build excellent presentation skills. In addition to their research activities, graduates should demonstrate their employability by having strong analytical and problem-solving skills. Lastly, it is advised that students be given the chance to gain corporate orientation through internships and part-time employment. In order to address the lack of sufficient internship

and part-time employment opportunities, educational institutions should establish career councils and placement centres and host workshops, conferences, and seminars, as well as arrange industrial visits and educational trips. The notion that academic performance and practical knowledge/skill are more important in terms of graduate employability should be promoted by educational institutions.

References

Azami, Z., Yuzainee, M. Y., Zaidi, O., Azah, M., Norhamidi, M. & Ramli, M. (2009). Employers' Perception towards Engineering Employability Skills in Asia. *Wseas Transactions on Advances in Engineering Education*, 306-310.

Australian Chamber of Commerce and Industry (ACCI) and Business Council of Australia (BCA). (2002). Employability skills for the future. Commonwealth Department of Education Science and Training. Retrieved April 2019 from 621D02265C3A/2212/final_report.pdf

Basir, N., Zubairi, Y., Jani, R., & Wahab, D. (2022). Soft skills and graduate employability: evidence from a Malaysian tracer study. *Pertanika Journal of Social Sciences and Humanities*, 30(4), 1975-1986. <https://doi.org/10.47836/pjssh.30.4.26>

Chowdhury, R. (2024). Bridging the skills gap through the education supply chain to meet industry requirements. *International Journal of Supply Chain Management*, 13(5), 27-36. <https://doi.org/10.59160/ijscm.v13i5.6270>

Chisty, N., Guttin, T., Irin, N., Sattar, A., Hoque, M., & Baillie, S. (2024). Utilising stakeholder consultations to identify context-specific professional skills for veterinary graduates in Bangladesh. *Journal of Veterinary Medical Education*, 51(6), 807-818. <https://doi.org/10.3138/jvme-2023-0101>

Chowdhury, R., & Habib, M. (2024). Bridging the skills gap through education supply chain to meet industry requirements. *International Journal of Supply Chain Management*, 13(5), 27-36. <https://doi.org/10.59160/ijscm.v13i5.6270>

Chowdhury, F. (2020). Work Integrated Learning at Tertiary Level to Enhance Graduate Employability in Bangladesh. *International Journal of Higher Education*, 9(4), 61-68.

Dhaka Tribune (2025). Educated-but-unemployed-joblessness-soars-among-graduates-in-bangladesh. Retrieved from <https://www.dhakatribune.com/bangladesh/378000/educated-but-unemployed-joblessness-soars-among>

Dhaka Tribune (2025). Educated-but-unemployed-joblessness-soars-among-graduates-in-bangladesh. Retrieved from <https://www.dhakatribune.com/bangladesh/378000/educated-but-unemployed-joblessness-soars-among>

Etzkowitz, H. (2003). Innovation in innovation: The triple helix of university–industry–government relations. *Social Science Information Sur Les Sciences Sociales*, 42, 293–337. <https://doi.org/10.1177/05390184030423002>

Etzkowitz, H. (2002). Networks of innovation: Science, technology and development in the triple helix era. *International Journal of Technology Management & Sustainable Development*, 1(1), 7–20.

Fullan, M. (2007). The New Meaning of Educational Change (4th ed.), New York: Teachers College Press.

Haque, N., Uddin, M., Ahmad, A., Mamun, A., Uddin, M., Chowdhury, R., ... & Alam, A. (2023). The desired employability skills and work readiness of graduates: evidence from the perspective of established and well-known employers of an emerging economy.

Industry and Higher Education, 37(5), 716–730. <https://doi.org/10.1177/0950422221149850>

Harry, T., and Chinyamurindi, W. (2021). "Still have not found what I am looking for": rural black students' perceived work readiness and assessment of labor market access. *Education + Training*, 64(2), 276–289. <https://doi.org/10.1108/et-10-2021-0387>

Kechagias, K. (2011). Teaching and assessing soft skills, MASS Project report. School of Thessaloniki, Neapoli.

Knight, P. T., & Yorke, M. (2003). Employability and Good Learning in Higher Education. *Teaching in Higher Education*, 8(1), 3-16, <http://dx.doi.org/10.1080/1356251032000052294>

Lauvås, T., & Steinmo, M. (2021). The role of proximity dimensions and mutual commitment in shaping the performance of university-industry research centres. *Innovation*, 23(2), 182–208.

Nilsson, S. (2010). Enhancing individual employability: the perspective of engineering graduates. *Education & Training*, 52(6/7), 540-551, <http://dx.doi.org/10.1108/00400911011068487>

Okonofua, F., Odubanjo, D., & Balogun, J. (2021). Assessing the triple helix model for research and development in sub-Saharan Africa. *Proceedings of the Nigerian Academy of Science*. <https://doi.org/10.57046/VQBZ7705>

Pool, L. D. & Sewell, P. (2007). The key to employability: developing a practical model of. *Education + Training*, 49, 277 - 289.

Professor DrMdSazzad Hossain (2023) Industry-academia liaison to foster innovation Published Tuesday 1.

Panagopoulos, A., & Carayannis, E. (2013). A policy for enhancing the disclosure of university faculty invention. *The Journal of Technology Transfer*, 38, 341–347. <https://doi.org/10.1007/s10961-011-9244-5>

Rajalo, S., & Vadi, M. (2017). University-industry innovation collaboration: Reconceptualisation. *Technovation*, 62, 42–54.

Rahman, M. A. (2010). Commercialisation of education in Bangladesh: Problems and solutions. *NAEM Journal*, 5(10), 1-11.

SanahujaVélez, G., & RibesGiner, G. (2015). Effects of business internships on students, employers, and higher education institutions: A systematic review. *Journal of Employment Counselling*, 52(3), 121-130.

Sideri, K., & Panagopoulos, A. (2018). Setting up a technology commercialization office at a non-entrepreneurial university: An insider's look at practices and culture. *The Journal of Technology Transfer*, 43, 953–965. <https://doi.org/10.1007/s10961-016-9526-z>

Sulung, U., & Muspawi, M. (2024). MEMAHAMI SUMBER DATA PENELITIAN : PRIMER,SEKUNDER, DAN TERSIER. *EDU RESEARCH*, 5(3), 110–116.

Shafie, L., & Nayan, S. (2010). Employability awareness among Malaysian undergraduates. *International Journal of Business & Management*, 5(8), 119-123.

Smith, C., Ferns, S., & Russell, L. (2014). Conceptualising and measuring 'employability' – lessons from a National OLT Project. *Gold Coast, Australian Collaborative Education*

Sarkar, S. H., Rana, S., and Zitu, R. A. (2013). Challenges of quality higher education in Bangladesh: A study on public universities. *Journal of Education and Practice*, 4(8), 151-160.

Sohimi, N. E., Affandi, H. M., Rasul, M. S., Yasin, R. M., Nordin, N., & Adam, S. (2019). Malaysian Industrial Collaborations for Skills Development in the 4th Industrial

Revolution. Journal of Technical Education and Training, 11(3). <https://publisher.uthm.edu.my/ojs/index.php/JTET/article/view/3192>

Sappar, R., Hussain, M. A. M., & Zulkifli, R. M. (2024). The Implementation of Collaborative Industry Practices in Information Management and Business Review (ISSN 2220-3796) Vol. 16, No. 3(S), pp. 1050-1062, Sep 20241062 Malaysian Vocational Colleges. International Journal of Academic Research in Progressive Education and Development, 13(2). <https://ijarped.com/index.php/journal/article/view/504>

Sarker, M., Hossain, M., Islam, M., Chowdhury, N., & Haque, A. (2021). Tracing the route to organisational performance through expatriate leadership effectiveness: the role of emotional, cultural and spiritual intelligence. International Journal of Business Excellence, 1(1), 1. <https://doi.org/10.1504/ijbex.2021.10041128>

TBS Report. (2024, May 6). *Unemployment rises to 3.51% in Q1; overseas jobs rise 14% from March.* The Business Standard. Retrieved [insert retrieval date], from <https://www.tbsnews.net/bangladesh/unemployment-rate-rises-359-years-first-quarter-bbs-844436>

The Business standards. (2025). Why are Bangladeshi graduates unemployable? Retrieved from <https://www.tbsnews.net/features/panorama/why-are-bangladeshi-graduates-unemployable-852576>

Tudor, S., Cilan, T., Nastase, L., Ecobici, M., Opran, E., & Cojocaru, A. (2023). Evolution of interdependencies between education and the labor market in the view of sustainable development and investment in the educational system. Sustainability, 15(5), 3908. <https://doi.org/10.3390/su15053908>

UGC (University Grant Commission): 2019, Retrieved from: <http://www.ugc.gov.bd/en/home> (Accessed May 12, 2019). Network Limited, pp. 1-10.

UNB. (2025). Educated-but-unemployed-joblessness-soars-among-graduates-in-bangladesh. Retrieved from <https://unb.com.bd/category/Special/educated-but-unemployed-joblessness-soars-among-graduates-in-bangladesh/156975>

UNESCO. (2015). Education 2030: Incheon Declaration and Framework for Action. Paris.