Advanced International Journal for Research (AIJFR)
E-ISSN: 3048-7641 ● Website: www.aijfr.com ● Email: editor@aijfr.com

Bridging Theory and Practice: Industry-Academia Collaboration through Internships in Five Year Integrated Master's Programme

Bhawana Sarma[1], Pinki Kumari Singh[2], Dr. Polee Saikia[3]

[1,2] Research Scholar, Department of Education, Gauhati University
[3]Professor, Department of Education, Gauhati University

Abstract

Industry-academia collaboration has become a vital tool for improving the efficacy and relevance of higher education, especially through internship-based learning. It forms a core component of the curriculum structure and framework of the Five Year Integrated Master's Programme (FYIMP), which in comparison to separate undergraduate and post-graduate programmes, seek to build deep subject mastery, research orientation, and employability skills among students in a shorter amount of time. The present study is qualitative and exploratory in nature and aims to examine the nature and scope of industry-academia collaboration through internship programmes as highlighted in NEP 2020. Secondly, it aims to study the existing structure and nature of internship programmes in Five Year Integrated Master's Courses under Gauhati University. For the fulfilment of the objectives, the investigators have employed content analysis technique to study the recommendations of NEP 2020 and other relevant documents on internship-based learning and case study method on some selected departments offering FYIMP, to gather both primary and secondary data. The findings reveal that internship-based collaboration greatly improves practical exposure and experiential learning, although issues like low industry engagement, a lack of common internship frameworks, and coordination gaps still exist. The present study highlights the contemporary demand of industry-academia collaboration via student internship initiatives, pinpointing mutual benefits, and offering guidance for policymakers and academic leaders to craft more effective partnership models, all while contributing to the relevance of curricula and the quality of education.

Keywords: Industry-academia Collaboration, Internship, FYIMP, NEP 2020, Higher Education

1. INTRODUCTION

In today's rapidly developing world, characterized by fierce competition and skilled based job market, acquiring industry related knowledge and skills plays significant role in getting employed. The traditional academic programme equips the students with the theoretical knowledge but most of the times lag behind in providing practical expertise of the workforce. This mismatch between the academic

knowledge and the required industry demands results in a persistent skill deficit which further creates problems for the students.

Industry-academia collaboration emerges as a key instrument in minimizing this gap by integrating practical hands on learning within formal education through internships. Internships provide opportunities to the students for applying their theoretical knowledge in the real field, thus help in improving their professional skills and make them ready for the real job. Akash & Suganya (2024) emphasized that industry-academia collaboration provides a platform whereby academia learns from the emerging requirement and changing dynamics in the job market, while industry enjoys direct interaction with budding talents and the latest research.

The National Education Policy (NEP) 2020 supports industry-academia collaboration through multidisciplinary education, experiential learning, vocational education, research & innovation and enhanced linkage between different stakeholders, also incorporated in the Five Year Integrated Master's Programme (FYIMP), along with Skill Enhancement Course (SEC), Value Added Course (VAC) and Ability Enhancement Course (AEC). Narain & Dwivedi (2023) highlights that internships offer students the opportunity to gain practical experience and develop professional skills, making them more attractive to employers. Industries also benefit from internships by gaining access to a pool of talented and motivated students who can help them solve real-world problems.

2. NEED OF THE STUDY

The present study highlights the contemporary demand of industry-academia collaboration focusing on internship programmes within the context of FYIMP by examining the recommendations of NEP 2020. Furthermore, the study emphasizes the shared benefits derived from industry-academia collaboration, including knowledge sharing, innovation, skill development and institutional capacity enhancement. By exploring the present scenario, the study provide valuable insights for policymakers, academicians and industry stakeholders for implementing effective frameworks and improving the overall quality of education.

3. OBJECTIVES OF THE STUDY

On the basis of the need of the study, the following objectives can be outlined:

a) To examine the nature and scope of industry-academia collaboration through internship programme as highlighted in NEP 2020.

b) To study the existing structure and nature of internship programme in Five Year integrated Master's courses under Gauhati University.

4. DELIMITATION OF THE STUDY

The study is delimited to the Five Year Integrated Master's programme under Gauhati University, Assam.

5. METHODOLOGY OF THE STUDY

The present study is qualitative and exploratory in nature and for the fulfilment of the Objectives (a) and (b), the investigators have employed content analysis technique to study the recommendations of:-

- Official document of National Education Policy, 2020,
- Guidelines for Internship/Research Internship for Under Graduate Students, UGC, (2023),
- Gauhati University Internship Guidelines (2025)

Case study method is employed on some selected departments offering internships as a part of their FYIMP syllabus, to gather both primary and secondary data.

6. DATA ANALYSIS AND DISCUSSION

6.1 Analysis of Objective (a): To examine the nature and scope of industry-academia collaboration through internship programme as highlighted in NEP 2020.

This National Education Policy 2020 is the first education policy of the 21st century that aims to revise and revamp all aspects of the educational structure. The policy also breaks down rigid disciplinary silos by promoting multidisciplinary learning across arts, sciences, and vocational streams, recognizing that Industry 4.0 problems often require integrated solutions that draw from multiple knowledge domains (Yaduvanshi, et al., 2025). Below are its recommendations on internship-based learning, academia-industry collaboration and research & innovation:

a) Internship & internship-based learning

- In NEP Part II (Chapter 11, Section 11.8), it is recommended that students studying at various higher education institutions will be provided with opportunities for internship with local businesses, industries, artists, craftsperson, etc., as well as research internships with faculty members either at their own institution or other HEIs/ research institutions. This will benefit the students by engaging them with the practical side of their learning and, as a by-product, further improve their employability.
- Policy envisions a comprehensive approach to transforming the quality and quantity of research in India. This includes definitive shifts in school education to a more play and discovery based style of learning with emphasis on the scientific method and critical thinking. This includes career counselling in schools towards identifying student interests and talents, promoting research in universities, the multidisciplinary nature of all HEIs and the emphasis on holistic education, the inclusion of research and internships in the undergraduate curriculum, faculty career management systems that give due weightage to research, and the governance and regulatory changes that encourage an environment of research and innovation. All of these aspects are extremely critical for developing a research mindset in the country. (NEP 2020 Part II, Chapter 17, Section 17.8, P. 46)

b) Academia–industry collaboration

- NEP 2020 envisions that by the year 2025, at least 50% of learners through the school and higher education system shall have exposure to vocational education, again for which a clear action plan with targets and timelines will be developed by the concerned authority. Higher education institutions will offer vocational education either on their own or in partnership with industry and NGOs. (NEP 2020 Part II, Chapter 16, Section 16.5, P. 44).
- HEIs can experiment with different models of vocational education, and apprenticeships and further it is recommended for these institutions to set up incubation centres in partnership with industries (NEP 2020 Part II, Chapter 16, Section 16.7, P. 44).
- The policy envisions the establishment of a National Research Foundation (NRF) to become a catalyst for bridging the long-standing gaps between teaching and research and improve India's research output and quality. (NEP 2020 Part II, Chapter 17, Section 17.9, P. 46). It will act as a liaison between researchers and relevant branches of government as well as industry. (NEP 2020 Part II, Chapter 17, Section 17.11, P. 46).

c) Research & innovation

In NEP Part II, (Chapter 11, section 11.12), it is mentioned that higher education institutions will set up start-up incubation centres and technology development centres to promote research and innovation with an interdisciplinary approach, so as to amalgamate humanities and social sciences research. Also, the National Research Foundation (NRF) will function to support a vibrant research and innovation culture across HEIs, research labs and other research organizations. Kaicker et al., (2023) in their study states, that the need of the hour is for greater interaction, cooperation and collaboration between Universities and the Industry to facilitate better education for students and greater employability.

In accordance with the NEP 2020, the University Grants Commission framed a new student-centric 'Curriculum and Credit Framework for Undergraduate Programme' (CCFUP) incorporating a flexible choice-based credit system, multiple entry and exit options, and a multidisciplinary approach. Internships includes working with government or private organizations, higher education institutions, universities, research and development labs/research organization/non-government organization, enterprises, centres involved in research, innovativeness and entrepreneurship, business organizations, local industry, artists, craftspeople, and similar other entities for providing opportunities to students for active engagement in on-site experiential learning. (Guidelines for Internship/Research Internship for Under Graduate Students, UGC, 2023)

The intended objectives of internship-based learning are given below (Guidelines for Internship/Research Internship for Under Graduate Students, UGC, 2023):

a) To promote physical and hybrid learning by combining physical and digital modes under expert mentorship.
b) To integrate classroom, workshop, laboratory, and research learning with real-world workplace experiences.

c) To enhance students' understanding of the nature, culture, challenges, and expectations of the world of work.
d) To develop research aptitude through exposure to research methodologies, tools, ethics, data analysis, and scholarly writing.
e) To provide exposure to emerging technologies and automation across modern and traditional sectors.
f) To strengthen entrepreneurial mindset and capabilities, encouraging students to become job creators.
g) To enhance professional competence through the development of ethics, values, integrity, and workplace professionalism.
h) To foster problem-solving, decision-making, teamwork, and collaborative skills for academic and professional growth.
i) To cultivate social awareness, civic responsibility, and ethical citizenship among students.
j) To stimulate industry–academia–HEI collaboration for internships, apprenticeships, and research opportunities.

6.2 Analysis of Objective (b): To study the existing structure and nature of internship programme in Five Year integrated master's courses under Gauhati University

Following the guidelines of NEP 2020, Gauhati University started its Undergraduate Programme for their academic session 2023-2024, in its academic departments and affiliated colleges. The Gauhati University Examination Regulations, 2023 (sec.5.2e) adapted the definition of internship as "a course requiring students to participate in a professional activity or work experience, or cooperative education activity with an entity external to the education institution, normally under the supervision of a teacher/an expert of the given external entity. A key aspect of the internship is induction into actual work situations."

Based on the UGC guidelines, an internship /research internship model was adapted by the University with a weightage of 4 credits (with equivalent marks of 100), that marks it as a mandatory requirement for granting a three/four-year degree under Gauhati University. Under this, two categories of internship have been identified, viz.,

Category I: Enhancing employability-- for example, trade and agriculture, economy and banking/ financial services, Handicraft, art, design and music, Education, Communication, Tourism and hospitality, Healthcare & Life Science, Sports and wellness, Information Technology, Sustainable Development and so on.

Category II: Developing research aptitude-- predefined themes/projects, pairing students with potential mentors from Labs/ Research & Development Institutions and/or universities. A certain number of internships under identified guides may also be funded by the university.

While the former aims to minimize the bridge between traditional bookish learning and practical skills, enabling graduates to join a workforce, the latter aims to provide exposure to real research environment, develop knowledge about research methodology and research ethics.

All undergraduate students in the beginning of their fifth semester of their FYIMP or FYUGP will enroll themselves in some Summer internship under an Internship Supervisor, which according to the G.U Examination Regulation (2023, Sec. 45.3) defines the internship duration as eight weeks, i.e., 2 months.

Therefore, all students are required to complete their internship within the "Summer Term" of University academic calendar, during 3rd to 5th semester, but, in exceptional circumstances, it can be carried during or at the end of 6th semester. But, in that case, the result of the student will remain undeclared till the internship is satisfactorily completed. Also, as per the mutual agreement of Domain Expert/Internship Providing Organization (IPO) and the parent institution, the internship duration can be split into parts, for instance, extended to the "Winter Term" of the academic calender. Accordingly, a student can be accredited four (4) credits upon completion of the internship programme, or it can be split into two segments with 2 credits each or 1+3 credits earned under same/ different IPOs. A four-credit internship will thereby require a minimum of 120 hours of engagement, properly reflected in the activity logbook. In this respect, the following provisions have been cited in Internship Guidelines for Undergraduate Students, 2025, published by Gauhati University:

a) It is mentioned that the internship needs to carried out either entirely in physical mode or adopting hybrid mode, in case of which the theoretical components of learning may be completed online, while the practical, hands-on component will be completed physical mode.

b) It is the responsibility of the Higher Education Institution to, "explore, reach out to, and sign a Memorandum of Understanding (MoU) with local businesses, research organisation, HEIs, etc. as this will aid in training, research, employment, and start-ups."

c) Every student will be awarded with a certificate of completion by the IPO and his/her internship will be approved by the Research and Development Cell (RDC) of the college/university upon the submission of internship certificate, activity logbook and evaluation report of Internship Supervisor of the concerned institution.

d) The following criteria of evaluation will be examined-- i) Format of presentation and the quality of intern's report, ii) Acquisition of skill sets by the intern, iii) Originality and any innovative contribution, and iv) Significance of research outcomes.

e) The interns will be evaluated through seminar presentation or viva-voce at the HEI, (marks will be given by a group of experts from HEI including the supervisor). [Guidelines for Internship/Research Internship for Under Graduate Students, UGC, 2023]

Working model of Internship programme

As per the Internship Guidelines for Undergraduate Students, 2025, published by Gauhati University, the working model of the internship programme can be understood as:

Every HEI will form a Research and Development Cell (RDC) for successful implementation of the programme, led by the Coordinator, RDC or the Nodal Officer, Internship Programme. It is their responsibility to identify the need and demands of the students in diverse disciplines along with establishing communication with identified organizations for internship allocation and subsequent completion. A list of sectors and details of organizations/domain experts will also be uploaded in the university website. It is the responsibility of the Academic Registrar of the University to maintain an updated inventory of the RDCs, Coordinators and/or Nodal Officers in its affiliated colleges. Also, the students may choose internship supervisors on their own from domain experts/ organization/NGOs/Govt and non-government agencies. Each student will be supervised under a Mentor (faculty member) from

G.U/affiliated colleges for the specific duration of the internship projects. Stating the role of the mentor, UGC states that he/she will be providing professional/research guidance to the student during the internship. The mentors will also facilitate networking with other subject matter experts/professionals, which will enhance the internship experience and learning of the intern. They shall be making the timely evaluation of a student and provide him completion certification/report for submission in HEI. (Guidelines for Internship/Research Internship for Under Graduate Students, UGC, 2023)

6.3 Case Study: Internship-based Learning, Department of Hindi, G.U

The Department of Hindi offers FYIMP in accordance with the objectives of NEP 2020 from 2023. This case study draws upon internships undertaken by the students in banking and media institutions, reflecting diverse industry engagement. The present batch of FYIMP 5th Semester consists of three students, anonymized as Student A, B and C, the participant profile for which is given below:

Table 1: Participant profile, Dept. of Hindi, G.U.

Student code	**Internship Organization**	**Sector**
Student A	Rajbhasha Division, State Bank of India, Head Office, Dispur	Banking
Student B	Rajbhasha Division, State Bank of India, Head Office, Dispur	Banking
Student C	Dainik Purvodaya, Purvodaya Bhawan, Guwahati	Print Media/ Journalism

The internship at Raj Bhasha Division of the State Bank of India, Head Office, Guwahati by Student A and B included translation of official documents such as circulars, letters, memos, notices, reports between English and Hindi. In adherence to official banking terminology, the student interns were assisted in tasks like formatting, editing, and proofreading translated materials. Participation in a semi-annual official language review meeting further provided insights into inter-bank evaluation mechanisms and administrative communication practices. Student A states, “I learnt additional skills that were professional in nature such as time management, work discipline and teamwork during my days of internship.” Student B expresses, “I developed a strong understanding of work etiquette, sense of responsibility during my internship days, meanwhile developing my communication skills alongside. I am looking forward to applying these skills in my life.”

The internship at Dainik Purvodaya, a reputed Hindi daily newspaper by Student C involved daily tasks such as reporting of local events, fact compilation on assigned cases, translation work from English and Assamese to Hindi such as translating press conference statements related to government schemes and public welfare activities, proofreading and occasional article writing. The internship also included field exposure at the Guwahati Press Club, where the student learned journalistic norms, ethical reporting practices, and professional questioning techniques.

The internship experiences demonstrate a clear linkage between academic learning and professional application. Students applied theoretical knowledge of Hindi language, grammar, translation studies, and literary expression to real-world tasks such as official translation, media reporting, drafting, and documentation. It was completed in the summer term and internship reports along activity logbook have been submitted. However, the students initially faced challenges in adapting to the transition from academic writing to official and media communication, usage of professional or formal Hindi language with terminological accuracy.

6.4 Case Study: Internship-based Learning, Department of Psychology, G.U

The Department of Psychology offers FYIMP in accordance with the objectives of NEP 2020 from 2023. The present batch of FYIMP 5th Semester consists of five students, anonymized as Student A, B, C, D and E, the participant profile for which is given below:

Table 2: Participant profile, Dept. of Psychology, G.U.

Student Code	Internship Organization	Sector
Student A	Ashadeep Day Rehabilitation Centre, Bilpar Road, Rehabari, Guwahati	Child Guidance and Rehabilitation
Student B		
Student C		
Student D		
Student E		

The internship at Ashadeep Rehabilitation Centre, Guwahati undertaken by five students for their FYIMP 5th Semester purely focused on child guidance, observation of the daily routine of children with special needs at the centre, making observation reports, assignments on the health issues faced by them, with extensive experiential learning in the field of disability, child psychology, and rehabilitation practices. It was completed in the summer term and internship reports along activity logbook have been submitted.

Students A, B, C mentioned the importance of structured daily routines in special education settings. Activities such as morning prayer, physical exercises, meditation, and scheduled learning sessions were observed to play a significant role in emotional regulation, attention building, and behavioral stability among children. On the other hand, Students D and E specifically mentioned about the exposure to group activities such as dance and movement therapy that highlighted the importance of social interaction, peer learning, and creative expression in rehabilitation settings. The student interns observed the placement, planning and execution of various sensory activities in the children's daily routine such as coloring, finger painting, hand tracing, movement therapy and so on, for fine motor development and emotional expression. The internship also sensitized students to behavioral challenges and emotional self-regulation in children with special needs. Interns learnt to identify triggers for behavioral outbursts and respond with calmness rather than reprimand. Through counselling and group therapy sessions, interns developed conceptual clarity regarding distinction between guidance, counselling and psychotherapy, along with the essential skills of an effective counsellor.

However, the intern students reported that although the experience was quite enriching, it was also overwhelming most of the times, specially when they were not being able to meet the workplace expectations or had difficulty handling the special children. They also reported that the commute was long and tiring, and heavy on their pockets as a whole.

6.5 Discussion

The concept of internship is not that novel, but its inclusion in the Five Year Master's Programme with high weightage in terms of credits and marks that reflects in the students' overall academic path is new and unexplored. In this respect, the benefits, challenges and strategies to enhance internship opportunities in India are briefly discussed here:

For students, such internship opportunities do not just offer practical experiences to work in ground reality, but also provides a platform to use their theoretical knowledge to solve real-world challenges. Working with experts of the field, networking with potential employers, mentors providing career guidance, first-hand experience of work settings-- are some of the many perks of internship programmes. Industries and organization also benefits from such collaboration as they identify future employees, who bring fresh perspectives and innovative ideas, assist professionals and handle routine tasks. Also, organizations benefit by building cordial relationships with academic institutions and vice-versa. Inputs provided by the industry partners help institutions to periodically assess the effectiveness and relevance of their curricula so that it aligns with the labor market demands.

6.5.1 Challenges encountered by organizations in connecting academia and industry

Just as benefits, all the three parties involved also face tremendous challenges that are discussed here. For students, it is a whole new experience and if not guided properly, the academic benefits of the internship programme might not be fruitful. They also might not fully dedicate themselves to the cause if they feel misalignment between their discipline and nature of work assigned. Balancing internships with semester schedules and examination can be stressful for them as well. Also, lack of stipends, travel allowance and accommodation can also discourage participation.

As for IPOs, there are challenges of time and resources because training of interns demand more financial investment and time requirement by professionals, which worsens if the batch of student interns lack practical skills, technical competence or workplace etiquette. A mismatch between organizational needs and academic goals, in terms of lack of clarity regarding curricula, learning objectives and outcomes, evaluation criteria, can also create confusion.

Some of the challenges faced by academic institutions include limited networking, formal collaborations or MoUs with industries and organizations, integration of internship in curricula, lack of standardized assessment methods and so on. The problem is, with time the numbers of regular students in a batch are going to increase and managing internships for large students would require dedicated manpower and infrastructure, creating problems for faculty members who would require necessary industry knowledge to guide the students. Importantly, institutions in rural and backward regions might struggle to attract internship partners. Another aspect is that evaluating a student's performance in an industry setting is also difficult. Unlike a standard exam, internship performance depends heavily on the quality of the industry mentor and the specific projects available at that company, leading to inconsistent grading across a cohort.

6.5.2 Strategies to enhance internship opportunities in India

The first step has to come from the academic institutions-- by recognizing potential local, regional and national organizations and industries, plan collaborative research, facilitate smooth internship activities once, or twice a year through formal Memorandum of Understanding (MoU). Students and faculty should be briefed in advance regarding the importance of such internship programme and the standard guidelines by the higher authority should be complied. Institutions should establish a dedicated Industry-Institute Partnership Cells that can function as coordination centres, establishing proper communication channel between academia and industry. Such internship cells can host career fairs and employer meetups, engage Small and Medium Enterprises (SMEs) to engage in such programmes and so on. Institutions can make sure that the students do not feel overburdened with classwork and internship, and provide flexibility in scheduling their internship hours between summer and winter terms. Government can also encourage this motive by providing certain incentives in terms of certification and visibility to organizations collaborating with academic institutions.

7. CONCLUSION

As understood from the discussion above, industry-academia collaboration can prove to be a strong and effective instrument in minimizing the gap between theoretical and practical knowledge. This paper explores one of the provisions of Five Year Integrated Master’s Programme that allows students to confront real-world challenges, cultivate their professional identities, and gain versatile skills necessary for modern careers. For this purpose, a well-organized internship program, uniform standards of execution and evaluation by both the internship providing organization and academic institution and continuous feedback cycle on the effectiveness of the programme is a must.

REFERENCES

1. Akash R., Suganya V. (2024), Bridging the gap between industry needs and student skills for quality education through SDGs: An industry–academia collaboration in curriculum development, Journal of Lifestyle & SDG's Review, 4 (e03616), 1–37. https://doi.org/10.47172/2965-730X.SDGsReview.v4.n04.pe03616
2. Gauhati University. Official website of Gauhati University. https://gauhati.ac.in Gauhati University. (2025), Internship Guidelines for Undergraduate Students, Gauhati University. https://share.google/peopltukxEUABvzGN
3. Gauhati University. (2023), Gauhati University Regulations For Examinations, Gauhati University. https://nep.gauhati.ac.in/
4. Kaicker A., et al. (2023), Industry–academia interaction in India: The current scenario and the future, Journal of Ecophysiology and Occupational Health, 23 (1), 14–22. https://doi.org/10.18311/jeoh/2023/31937
5. Ministry of Education. (2020), National education policy 2020, Government of India. https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf
6. Narain D., Dwivedi R. (2023), Importance of internship in bridging the gap between industry and academia, International Journal of Advanced Research in Commerce, Management & Social Science, 6, 3 (I), 92–96.
7. University Grants Commission. Official Website of University Grants Commission. https://www.ugc.gov.in
8. University Grants Commission. (2023), Guidelines for Internship/Research Internship for Under Graduate Students, University Grants Commission. https://www.ugc.gov.in/pdfnews/0063650_Draft-Guidelines-for-Internship-and-Research-Internship-for-Under-Graduate-Students.pdf
9. Yaduvanshi T., Yadav S., Yaduvanshi S., Yaduvanshi R. (2025), Bridging academia and industry: NEP 2020's role in aligning higher education with Industry 4.0 demands, International Journal of Applied Research, 11 (4), 16–21. https://doi.org/10.22271/allresearch.2025.v11.i4a.12448