

## STRENGTHENING INDUSTRY–ACADEMIA COLLABORATIONS IN THE WAKE OF NEP 2020

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### Abstract

The National Education Policy (NEP) 2020 has set an ambitious agenda for transforming India's higher education by emphasising multidisciplinary learning, research culture, internships, and stronger links between universities and industry. This paper examines how industry–academia collaborations can be strengthened to realise NEP 2020 goals. Using secondary data from government reports, national studies and recent analyses, the study maps current linkages, highlights structural and incentive gaps, and identifies successful models and policy levers. Key barriers include weak R&D funding streams, misaligned incentives, limited faculty exposure to industry, and variable capacity across institutions and regions. The paper proposes a mixed strategy of policy nudges, institutional reforms, funding mechanisms, and practice-level interventions — such as co-designed curricula, scalable internship ecosystems, joint R&D centres, and performance-linked incentives — to bridge the gap. Strengthened partnerships can improve graduate employability, accelerate innovation, and ensure that teaching and research remain responsive to national development needs. (Education.gov.in)

**Keywords:** Industry–Academia Collaboration; NEP 2020; Employability; Research & Innovation; Internship Ecosystem.

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### Introduction

The National Education Policy (NEP) 2020 reframes higher education in India with an explicit expectation that academia will become more relevant to national economic and technological priorities. NEP 2020 encourages universities to expand multidisciplinary programmes, establish strong research culture, and institutionalise mechanisms such as internships, industry participation in curriculum design, and collaborative R&D. However, translating policy aspirations into sustained, scalable industry–academia partnerships remains a major challenge across many Indian states and institutions. Structural obstacles include limited institutional autonomy, uneven research capacities, low levels of industry-funded R&D relative to global peers, and a fragmented internship and placement ecosystem. Several national instruments — including state and central initiatives to catalyse university–industry linkages — are active, but outcomes vary widely by sector and region. Strengthening these linkages is critical not only for graduate employability but also for building an innovation ecosystem that can support India's transition up the value chain in manufacturing, pharmaceuticals, digital technologies and services. This paper synthesises secondary evidence, identifies practical mechanisms and policy options, and offers targeted suggestions to help academic institutions and industry partners operationalise NEP 2020's collaboration goals. (Education.gov.in)

### **Objectives of the Study**

1. To examine the current status and gaps in industry–academia linkages in India after NEP 2020.
2. To identify policy and institutional mechanisms that enhance collaborations, using evidence from secondary data.
3. To propose actionable recommendations (policy and practice) for strengthening partnerships that improve employability and R&D outcomes.

### **Literature Review**

**1. NEP 2020 and Institutional Mechanisms** — NEP 2020 recommends mandatory internships, industry participation in curriculum design, faculty exchange, and stronger R&D nodes inside universities; these provisions aim to institutionalise recurring contact between industry and academia rather than ad-hoc engagements. ([Education.gov.in](http://Education.gov.in))

**2. State of Industry–Academia Interaction in India** — Analyses of India’s university–industry interactions highlight limited industry-funded R&D relative to gross domestic expenditure on R&D (GERD), uneven capacity among HEIs, and weak mechanisms for technology transfer and commercialization. Policy reports emphasise improved incentives and institutional reforms to raise collaboration rates. ([NITI AAYOG](http://NITI AAYOG))

**3. Employability and Skills Gap Evidence** — National employability studies show that a substantial share of graduates remain only partially job-ready; repeated national skill surveys (e.g., India Skills Reports) indicate employability percentages in the 40–55% range over recent years — illustrating a persistent gap that industry–academia partnerships could narrow through hands-on training and co-designed curricula. ([wheebox.com](http://wheebox.com))

**4. Successful Models and Platforms** — Government and sectoral initiatives (innovation hubs, Manthan platform, mission-driven R&D programs) have demonstrated that public platforms and focused missions can catalyse collaborations, particularly when backed by sustained funding and simplified administrative processes. ([psa.gov.in](http://psa.gov.in))

### **Research Methodology**

**Approach:** This study is a desk-based, descriptive–analytical research exercise that relies solely on secondary data. Sources include central government policy documents (NEP 2020 thematic modules), national reports (NITI Aayog/India Innovation Index), employability studies (India Skills Report, Mercer|Mettl Graduate Skill Index summaries), sectoral white papers, and peer-reviewed and working-paper literature addressing industry–academia linkages. These materials were selected for relevance to NEP 2020 implementation and for presenting usable quantitative indicators (e.g., employability rates, R&D spending patterns, internship uptake initiatives).

**Data extraction and synthesis:** Key quantitative indicators extracted include graduate employability percentages (from national skill reports), measures of R&D spending composition (public vs private from NITI analyses), and counts/trends in internship and collaboration programmes where available in public reports. Qualitative synthesis identified recurring themes on barriers and enablers: incentive alignment, funding architecture, administrative friction, intellectual property (IP) issues, and geographic/sectoral heterogeneity.

### **Representative Statistics Used (Secondary Sources)**

- **Employability:** India Skills Report series reported employability in recent years typically in the mid-40s to low-50s percent range, indicating underutilised graduate capability and a need for practical skill inputs. ([wheebox.com](http://wheebox.com))

- **R&D composition:** Government analyses show that private-sector and industry-funded contributions to GERD are rising but remain lower than in many advanced economies, and university R&D outputs are uneven across states and institutions. ([NITI AAYOG](#))
- **Limitations:** Being secondary-data based, the study is constrained by the availability and granularity of published statistics and by the fact that many recent state-level initiatives or institutional MoUs may not be publicly reported in consistent formats. Nevertheless, triangulation across multiple reputable reports provides defensible insights and practical recommendations.

### **Observations and Findings**

- 1. Policy momentum exists, but implementation is uneven.** NEP 2020 provides clear instructions for institutionalising industry links (internships, multidisciplinary programmes), yet uptake across universities/colleges varies widely due to capacity and incentive constraints. ([Education.gov.in](#))
- 2. Employability shortfall signals opportunity for partnership.** National employability studies repeatedly show that a large fraction of graduates are only partially job-ready — creating strong demand for industry-driven experiential learning, co-curriculum design and workplace-based assessments. ([wheebox.com](#))
- 3. Funding and incentives are decisive.** Where industry funds targeted chairs, sponsored labs, or co-funded projects, university research activity and student exposure show measurable improvement. Absence of predictable funding and clear IP/benefit sharing discourages long-term industry engagement. ([NITI AAYOG](#))
- 4. Scaling requires low-friction platforms.** Central or state platforms (digital marketplaces, managed internship portals, and mission platforms) have proven useful in matching institutional supply with industry demand, especially for MSMEs and startups that lack HR bandwidth to run formal internship drives. ([psa.gov.in](#))

### **Conclusions and Suggestions**

- 1. Create predictable, performance-linked funding windows for I-A R&D:** Allocate matching grants where industry contributes cash or in-kind resources to faculty-led projects; use simplified contracting and pre-approved IP frameworks to reduce transaction costs. This will encourage industry to invest in mid- and long-term research partnerships. ([NITI AAYOG](#))
- 2. Institutionalise co-design of curriculum and assessments:** Establish formal industry advisory boards per department with clear mandates for periodic curriculum reviews, joint capstone projects, and contribution to competency frameworks — ensuring graduates meet sectoral skill requirements. ([Education.gov.in](#))
- 3. Scale internships and micro-apprenticeships through managed platforms:** Use government or university consortium platforms to list verified internship opportunities, match students (including from tier-2/3 institutions), and record competency attainment; incentivise SMEs via tax/skill credits for offering internships. ([psa.gov.in](#))
- 4. Reward and expose faculty to industry practice:** Create sabbatical and consultancy windows, and include industry collaboration metrics in faculty evaluation and promotion criteria to align incentives for engagement. Facilitate joint appointments and industry fellowships to transfer tacit knowledge. ([Education.gov.in](#))
- 5. Strengthen regional innovation ecosystems:** Encourage regional innovation clusters where universities, MSMEs, incubators, and government missions co-locate — leveraging state incentives to pilot sector-specific models (e.g., pharma, advanced manufacturing, AI). ([psa.gov.in](#))

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