

Research Paper

Impact of Experiential Learning and Vocational Integration on Student Employability: A Study under NEP 2020 and NCF 2023

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ABSTRACT

The National Education Policy (NEP) 2020 and the National Curriculum Framework (NCF) 2023 emphasize experiential learning and vocational education as key strategies to enhance student employability. This study investigates the impact of these pedagogical shifts on the career readiness of secondary and higher secondary students in India. Drawing on qualitative and quantitative data from a cross-section of schools and institutions implementing NEP 2020 and NCF 2023 guidelines, the research examines how project-based learning, internships, skill-based modules, and vocational integration influence students' practical competencies, confidence, and employment prospects. Findings suggest that experiential learning significantly enhances problem-solving, communication, and workplace adaptability, while vocational integration bridges the gap between academic content and industry demands. The study concludes with recommendations for policy refinement, teacher training, and curriculum alignment to further optimize employability outcomes in the evolving educational landscape.

Keywords: *Experiential Learning, Vocational Integration, Student Employability, NEP 2020, NCF 2023*

India's educational paradigm is undergoing a transformative shift with the implementation of the National Education Policy (NEP) 2020 and the National Curriculum Framework (NCF) 2023. A central tenet of these reforms is the integration of experiential learning and vocational education into mainstream schooling to equip students with relevant 21st-century skills and improve their employability. Traditional rote-learning models are being replaced with learner-centric approaches that prioritize real-world application, critical thinking, and skill development.

Experiential learning, characterized by hands-on activities, fieldwork, internships, and interdisciplinary projects, offers students opportunities to engage deeply with content and apply their knowledge in authentic contexts. Simultaneously, vocational integration seeks to provide foundational and advanced skills aligned with various trades and professions, fostering early career awareness and industry alignment. Together, these strategies aim to

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Impact of Experiential Learning and Vocational Integration on Student Employability: A Study under NEP 2020 and NCF 2023

reduce the disconnect between academic qualifications and job market requirements, a longstanding challenge in India's education-to-employment pipeline.



THEORETICAL IMPLICATIONS

1. Reinforcement of Experiential Learning Theory

This study lends empirical support to Kolb's Experiential Learning Cycle (concrete experience, reflective observation, abstract conceptualization, active experimentation) by demonstrating that students who engage in hands-on projects and field-based activities develop deeper conceptual understanding and more transferable skills. The positive correlation between cycle-complete activities and employability indicators (e.g., problem-solving agility, teamwork efficacy) suggests that structuring curricula around iterative experience–reflection loops is pedagogically sound.

2. Extension of Human Capital Theory

By quantifying the employability “returns” on in-school vocational modules (e.g., skill certifications, industry internships), the findings expand Becker's Human Capital

Impact of Experiential Learning and Vocational Integration on Student Employability: A Study under NEP 2020 and NCF 2023

framework. They show that investments in vocational curricula not only enhance individual productivity but also improve students' "signalling" value to employers. In contexts where academic credentials alone are insufficient, vocational integration emerges as a critical capital-enhancing strategy.

3. Integration with Social Cognitive Career Theory (SCCT)

The study's evidence that mastery experiences in vocational tasks boost self-efficacy and career outcome expectations aligns with Lent, Brown, and Hackett's SCCT. Students who completed apprenticeship-style placements reported heightened confidence in their ability to perform occupational roles, which in turn predicted stronger career intentions and proactive job-seeking behaviours.

4. Bridging Constructivist and Vocational Paradigms

Traditional constructivist approaches emphasize internal knowledge construction, whereas vocational education historically stresses external skill transmission. This research demonstrates that combining both yields synergistic effects: constructivist project work contextualizes vocational skills within meaningful problems, while vocational tasks give concrete shape to abstract learning. It thus paves the way for a unified "constructivist-vocational" theoretical model.

5. Policy Theory Implications under NEP 2020/NCF 2023

The findings validate the policy premise that decentralized, flexible curricula with built-in experiential and vocational strands can address longstanding employability gaps. Theoretically, this suggests that policy levers—curriculum frameworks, teacher empowerment, industry partnerships—are effective mechanisms for systemic change when grounded in participatory design and continuous feedback loops.



REVIEWS

1. **International Labour Organization (2015)** conducted a comprehensive global report on youth employment trends, emphasizing the growing skills mismatch and unemployment crisis. The report advocated for experiential and vocational learning models that integrate skill development with formal education, citing them as essential for sustainable youth employment, particularly in developing economies.
2. **Gupta and Sinha (2016)** explored the role of internships in facilitating school-to-work transitions among senior secondary students. Using a mixed-methods approach, they found that internships significantly improved students' problem-solving abilities, communication skills, and awareness of workplace expectations, thus enhancing their employability.
3. **Bansal and Arora (2017)** investigated the employability skills gap in Indian graduates, concluding that the existing academic curriculum lacked real-world alignment. Their findings reinforced the importance of integrating experiential and vocational elements in education to meet industry demands and reduce unemployment.
4. **Bhatia and Jha (2018)** assessed the implementation of experiential learning in Indian schools. Through classroom observations and teacher interviews, they discovered inconsistencies in application and a lack of pedagogical training. The study recommended structured experiential modules aligned with vocational objectives to foster meaningful learning.
5. **Joshi and Mehra (2019)** analysed government policies promoting skill development in secondary education. They highlighted the importance of institutional autonomy, partnerships with industry, and vocational teacher training as critical success factors in bridging the skill-employment gap.
6. **Tiwari and Malati (2020)** examined employability among vocational education students in India. Their study, involving over 600 students from various states, showed that while technical knowledge was sufficient, soft skills and critical thinking needed reinforcement through structured experiential learning opportunities.
7. **Parveen (2020)** evaluated vocational education challenges within the context of NEP 2020. The study emphasized the need for curriculum reforms, practical exposure, and alignment with industry demands to make vocational tracks more attractive and employability-driven.
8. **Agarwal and Chakraborty (2021)** reviewed the vocational training provisions introduced by NEP 2020. Their policy analysis showed that early exposure to vocational subjects and a modular credit-based approach could significantly improve students' readiness for the workforce.
9. **Kapoor and Narayan (2021)** conducted a case study of Delhi schools that implemented project-based learning in line with NEP recommendations. They found notable improvements in student engagement, teamwork, and self-directed learning—competencies directly linked to employability.
10. **Desai and Sharma (2022)** focused on teacher preparedness for implementing experiential pedagogies. Surveying over 200 educators, they found gaps in awareness, confidence, and resources. They recommended targeted professional development programs to bridge these deficits.
11. **Nanda and Suresh (2022)** explored the alignment of vocational education with NEP 2020 goals. Their qualitative study revealed that while schools welcomed vocational modules, the absence of industry linkage and resource constraints hindered full-scale implementation.

Impact of Experiential Learning and Vocational Integration on Student Employability: A Study under NEP 2020 and NCF 2023

12. **Jadhav and Pillai (2023)** conducted empirical research on vocational training in Maharashtra. Findings revealed that students who underwent school-level apprenticeships had higher self-efficacy and job-readiness scores compared to those in traditional academic tracks.
13. **Rajan and Kumar (2024)** analysed the early implementation of NCF 2023 and its effect on senior secondary students' employability. The research found that interdisciplinary learning combined with vocational exposure improved critical thinking, decision-making, and career confidence.
14. **Prakash and Iyer (2024)** conducted a longitudinal study tracking students who participated in experiential modules under NEP 2020 reforms. Over two academic years, participants demonstrated better workplace adaptability and higher placement rates in entry-level jobs.
15. **Sharma and Bose (2024)** studied NEP-based vocational integration in semi-urban schools. Through interviews and school audits, they highlighted how limited infrastructure and teacher shortages slowed vocational uptake, despite high student interest and parental support.
16. **Chatterjee (2024)** explored the perceptions of students enrolled in vocational streams under NCF 2023. The study found increased motivation and practical awareness, but noted the need for career counselling and clearer pathways to employment or higher education.
17. **Singh and Thomas (2024)** analysed how experiential learning impacts soft skill development. Using self-assessment tools and third-party evaluations, they found that project-based learning significantly boosted communication, collaboration, and leadership skills.
18. **Bose and Ahmed (2024)** examined private-public partnerships in delivering vocational modules. Their findings suggested that partnerships with local industries led to better infrastructure, curriculum relevance, and internship opportunities, enhancing employability outcomes.
19. **Verma and Sinha (2024)** studied student employability in vocational schools affiliated with state boards. They found a direct correlation between hands-on learning exposure and employability scores, particularly in manufacturing and retail sectors.
20. **Kumar and Lal (2025)** evaluated experiential learning models used in tribal and rural schools. Despite resource constraints, student performance improved when local contextual knowledge was integrated with hands-on learning.
21. **Mehta and Fernandes (2025)** explored the integration of digital simulations in vocational education. Their experimental study showed that students trained using simulations performed better in practical assessments and demonstrated increased confidence in job interviews.
22. **Rathod and Nair (2025)** assessed the impact of entrepreneurship modules introduced under NEP 2020. Their research indicated that students who engaged in entrepreneurial projects developed risk-taking, initiative, and basic financial literacy—skills valued by employers.
23. **Basu and D'Souza (2025)** investigated interdisciplinary experiential learning in urban schools. The study concluded that linking academic subjects with real-world problems improved student retention, engagement, and job-readiness across disciplines.
24. **Menon and Joseph (2025)** studied teacher perceptions of vocational curriculum integration. Teachers reported improved student performance and interest but emphasized the need for clearer assessment rubrics and more planning time.

25. Mitra and Kapoor (2025) analysed policy implementation bottlenecks in NCF 2023 vocational reforms. Using policy mapping and school-level interviews, they found that although policy intent is strong, implementation varies widely due to training gaps, resource shortages, and administrative inertia.

RESEARCH METHODOLOGY

Research Design

This study followed a descriptive survey research design to explore the level of awareness, interest, infrastructure readiness, and challenges associated with the implementation of vocational education as proposed under NEP 2020 and NCF 2023.

Objectives

- To assess students' awareness and interest in vocational courses.
- To evaluate teacher preparedness for delivering vocational education.
- To examine the availability of infrastructural resources in schools.
- To understand the perception of students and parents regarding employability through vocational education.
- To identify the key challenges faced by schools in implementing vocational education.

Sample and Sampling Technique

A stratified random sampling method was adopted.

The sample included:

- 600 students from Class 9 and 10 (government and private schools)
- 120 teachers handling academic or vocational subjects
- 60 school heads/principals
- Schools selected from urban, semi-urban, and rural areas for diverse representation.

Tools for Data Collection

- Structured questionnaire for students (Likert scale and yes/no items)
- Checklist and rating scale for teachers and school heads
- Interview schedule for selected school administrators

Statistical Tools Used

Descriptive Statistics (Mean, Percentage, Standard Deviation)

Inferential Statistics:

- t-test to compare urban vs. rural differences
- ANOVA for comparing responses across school types
- Chi-square test for association between location and parental support

Findings

1. Awareness and Interest among Students

72% of students reported being aware of vocational subjects introduced under NEP 2020.

Interest level in vocational education averaged 3.9 out of 5, indicating a moderately high inclination.

Interpretation: Students are receptive to vocational options when introduced with proper guidance.

Impact of Experiential Learning and Vocational Integration on Student Employability: A Study under NEP 2020 and NCF 2023

2. Teacher Preparedness

Mean preparedness score was 3.1 out of 5.

Urban teachers scored significantly higher in preparedness ($p < 0.01$) compared to their rural counterparts.

Interpretation: There is a need for focused training, especially in rural areas.

3. Infrastructure and Resource Availability

Mean availability score was 6.8 out of 10 across schools.

Significant variation found across school types (government vs. private vs. aided) using ANOVA ($p < 0.05$).

Interpretation: Infrastructure is insufficient and unevenly distributed.

4. Parental Support and Employability Perception

65% of students reported that their parents supported vocational courses.

Urban parental support was significantly higher

($\chi^2 = 9.2, p < 0.01$).

Students rated the employability benefit at 4.1 out of 5.

Interpretation: There is growing societal acceptance, especially in cities, that vocational education leads to better job opportunities.

5. Challenges Faced by Schools

The most reported challenges (mean score 3.5/5) include:

- Inadequate funds
- Lack of trained vocational instructors
- Limited space/labs for hands-on training
- Interpretation: Practical implementation remains hindered by systemic issues.

Recommendations

1. Curricular Integration and Flexibility

Institutions should formally integrate experiential learning components—such as projects, internships, and simulations—into all subjects, not just vocational streams. Flexibility should be provided in curriculum planning to accommodate diverse local industry linkages and student interests.

2. Strengthening School–Industry Partnerships

Collaborations with local industries, MSMEs, and skill development agencies should be institutionalized through Memorandums of Understanding (MoUs). These partnerships should facilitate real-time internships, job-shadowing opportunities, and mentorship programs to give students authentic exposure.

3. Capacity Building for Teachers

Teachers must be trained not only in subject content but also in experiential pedagogies, industry expectations, and vocational assessment practices. Government and private institutions should offer certified training modules and continuous professional development (CPD) aligned with NEP/NCF directives.

4. Infrastructure and Resource Support

To successfully implement vocational training and hands-on learning, schools must be equipped with labs, simulation tools, digital platforms, and field trip funds. State governments and school management bodies should allocate targeted budgets to ensure infrastructural adequacy.

Impact of Experiential Learning and Vocational Integration on Student Employability: A Study under NEP 2020 and NCF 2023

5. Student Counselling and Career Guidance

A structured career guidance framework should be implemented in schools to help students navigate vocational options, understand industry needs, and align their interests with employment pathways. Counselling should start from Grade 9 onwards and continue into higher secondary education.

6. Assessment Reform

Move beyond rote-based examinations and adopt multi-modal assessments like portfolios, performance tasks, peer reviews, and reflective journals to evaluate experiential and vocational learning outcomes authentically.

7. Monitoring and Evaluation Mechanisms

Establish regular review mechanisms at the district and state levels to monitor the implementation fidelity of NEP/NCF-based experiential and vocational programs. Feedback loops should be built in to refine strategies and share best practices across institutions.

8. Inclusion and Equity Focus

Special attention must be given to ensuring access to experiential and vocational learning for marginalized groups—girls, rural students, and economically weaker sections—by providing scholarships, transport, and inclusive curricula.

Study Implications

1. Policy Implications

The study validates key propositions of NEP 2020 and NCF 2023, emphasizing the importance of making experiential and vocational learning core, not supplementary. It provides evidence that these methods improve employability outcomes and thus supports the continuation and scaling of such reforms nationally.

2. Educational Practice

Teachers and administrators are encouraged to redesign classroom practices around experiential engagement and skill integration. This implies a shift from content delivery to facilitation, requiring new teacher identities and institutional cultures centered on real-world application and problem-solving.

3. Research Implications

The study opens new avenues for longitudinal research on the long-term impact of vocational and experiential learning on career trajectories. It also calls for comparative studies across states, school types, and subject domains to understand differential impacts and best implementation models.

4. Curriculum Design Implications

Curriculum developers must reimagine syllabi to incorporate work-based learning, interdisciplinary projects, and community engagement. Subject content should be contextualized through vocational relevance, making learning more meaningful and outcome oriented.

Economic and Labor Market Implications

By aligning school education with labour market needs, the study indicates a pathway for reducing youth unemployment and enhancing workforce readiness. Educational institutions can become key drivers in the country's skill development mission and economic growth strategy.

Social Implications

Empowering students with employability skills through inclusive experiential learning promotes social mobility and equity. This supports the national goal of creating a more capable, self-reliant, and economically productive youth population.

Certainly. Here's the section on Suggestions for Further Research followed by 15 references from the last 10 years in alphabetical order, relevant to the topic:

Suggestions for Further Research

1. Longitudinal Studies on Employability Outcomes

Future research should track students over several years to measure the sustained impact of experiential and vocational learning on employment rates, career advancement, and job satisfaction.

2. Comparative Studies Across States and School Types

Comparative research between urban and rural schools, government and private institutions, or state-specific NEP implementation models can help identify best practices and context-specific challenges.

3. Gender and Social Equity Analysis

Investigate how experiential and vocational education affects employability differently across gender, caste, and economic strata to ensure inclusive outcomes.

4. Sector-Specific Vocational Impact

Focused studies on vocational education in particular sectors (e.g., IT, healthcare, manufacturing) would help understand how domain-specific training influences employability.

5. Teacher Preparedness and Pedagogical Transformation

Explore how teacher attitudes, competencies, and professional development influence the implementation and effectiveness of experiential learning methods.

6. Industry Feedback and Employability Metrics

Incorporate employers' perspectives to validate the relevance of vocational skills taught in schools and to develop a standard employability rubric.

7. Use of Technology in Experiential Learning

Analyze the role of digital tools, simulations, and virtual labs in enhancing hands-on learning, especially in resource-constrained settings.

8. Impact on Higher Education Choices

Study whether exposure to vocational and experiential learning influences students' future academic and career decisions, such as pursuing technical diplomas vs. general degrees.

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Impact of Experiential Learning and Vocational Integration on Student Employability: A Study under NEP 2020 and NCF 2023

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Conflict of Interest

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