
Integrating Vocational Training and Life Skills Education in Secondary Schools in India

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Abstract

India's rapidly evolving job market necessitates an education system that equips adolescents with both vocational and life skills to enhance career readiness. Research indicates that integrating Career and Technical Education (CTE) with comprehensive school reforms can significantly improve student achievement and bridge the existing skill gap. As Industry 4.0 transforms workforce demands, studies suggest that nearly half of India's 310 million school graduates may lack essential job skills, emphasizing the urgency of skill-based education.

Recognizing this challenge, the National Education Policy (NEP) 2020 advocates for vocational training as a core component of secondary education. Initiatives such as the Skill India Mission, Pradhan Mantri Kaushal Vikas Yojana (PMKVY), and Samagra Shiksha Abhiyan aim to promote skill development, yet challenges persist in their effective implementation. Limited infrastructure, societal biases, and accessibility gaps between rural and urban schools hinder progress. The National Institute of Open Schooling (NIOS) has made significant attempts to incorporate vocational training into the curriculum, which would ultimately especially help 300+ Kasturba Gandhi Balika Vidyalaya schools' female students. However, just 6.9% of working-age women receive formal training, indicating that women's participation in vocational education is still disproportionately low.

Successful models such as CBSE's skill-based curriculum, Industrial Training Institutes (ITIs), and NSDC initiatives demonstrate the potential of structured vocational training. Effective implementation of Vocational Education Training (VET) requires innovative teaching methods, updated curricula, industry collaboration, and digital learning tools. Teachers play a

critical role in fostering engaging learning environments to make vocational training a compelling educational choice.

This paper examines existing policies, identifies key challenges, and proposes a few approaches to integrating vocational and life skills education. Strengthening these efforts will empower Indian adolescents with the competencies needed for the future workforce, driving broader socio-economic growth.

Keywords: Skill-Based Learning; Vocational Training; Life Skills Education; Career Readiness; Secondary Education in India; NEP 2020; Skill India Mission

1. Introduction

Vocational education is a type of education that focuses on practical skills and hands-on training to prepare individuals for specific trades, careers, or industries. It equips students with job-specific knowledge, technical expertise, and industry-relevant skills, enabling them to enter the workforce directly or pursue further specialized training.

World Health Organization (WHO) defines life skills as “the abilities for adaptive and positive behavior that enable individuals to deal effectively with the demands and challenges of everyday life.” These skills help individuals make informed decisions, communicate effectively, and manage emotions, ultimately contributing to personal and social well-being. WHO categorizes life skills into three broad areas:

- Thinking Skills – Problem-solving, critical thinking, decision-making, creative thinking, and self-awareness.
- Social Skills – Effective communication, interpersonal relationships, and empathy.
- Emotional Skills – Coping with stress, managing emotions, and resilience.
- WHO emphasizes that life skills education is essential for holistic development, enabling adolescents to handle challenges in education, work, and personal life.

UNICEF also promotes life skills as essential competencies for youth development. According to UNICEF, life skills education helps young people build confidence, self-esteem, and resilience, making them better prepared for personal and professional success. UNICEF aligns life skills with 21st-century skills, including:

- Critical thinking and problem-solving
- Creativity and innovation
- Collaboration and teamwork
- Self-awareness and emotional intelligence
- Decision-making and leadership skills

Both WHO and UNICEF stress that life skills should be integrated into school curricula to prepare adolescents for the challenges of the modern world, including employment, relationships, and personal growth. In the context of vocational education, life skills complement technical training, ensuring students are not only skilled but also adaptable, resilient, and ready for future careers.

Vocational Education and Training (VET) in India faces significant challenges despite its importance for skill development and productivity (Boruah, 2022). The current system lacks demand-driven courses, adequate infrastructure, and quality teachers (Agrawal & Kumar, 2014). Low educational outcomes have resulted in a deficit of employable individuals, with only 14% of new workforce entrants likely to have a college degree (Tognatta, 2014). While VET

holders experience lower unemployment rates compared to general secondary graduates, the overall unemployment rate for VET graduates aged 15-29 remains high at 11% (Agrawal, 2012). However, VET graduates tend to earn higher average daily wages in both regular and casual work (Agrawal, 2012). To address these issues, policymakers have focused on skill development through TVET, aiming to improve youth participation rates (Tognatta, 2014). Despite an increase in Industrial Training Institutes, the coverage across states remains uneven (Agrawal, 2012).

Recognizing this, the Government of India introduced the National Education Policy (NEP) 2020, which emphasizes vocational training as an integral part of secondary education. Policies like Skill India Mission and Pradhan Mantri Kaushal Vikas Yojana (PMKVY) aim to equip students with industry-relevant skills. However, the lack of structured integration between vocational education and life skills training remains a key challenge (UNESCO, 2022).

Research suggests that combining vocational training with life skills education is essential for holistic development. Life skills such as critical thinking, problem-solving, adaptability, and communication complement technical expertise, making students more employable and prepared for the challenges of Industry 4.0. Additionally, integrating vocational training within secondary education can address gender disparities by increasing women's participation in skill-based careers.

This paper explores the current state, challenges, and opportunities in vocational education in India. It evaluates successful models such as the CBSE skill-based curriculum, ITIs, and NGO-led programs to propose a structured approach for making vocational education and life skills a cornerstone of secondary schooling. By analyzing policy frameworks and global best practices, the study aims to highlight strategies to make Indian adolescents future-ready in an increasingly competitive job market.

All references mentioned in the text should be cited in parenthetical format—e.g., (Smith, 2020), (Brown & Jones, 2021), (Martinez et al., 2022). See the end of the document for further details on references.

2. Literature Review

The integration of vocational training and life skills education in secondary schools is essential for preparing India's youth for future success. Research underscores that combining Career and Technical Education (CTE) with comprehensive school reforms can enhance student achievement and bridge the growing skill gap in India (Castellano et al., 2003). With Industry 4.0 reshaping workforce requirements, it is estimated that nearly half of India's 310 million school graduates may lack job-ready skills (Singh & Sharma, 2020). This highlights the pressing need for an education system that incorporates skill-based learning alongside traditional academic curricula to ensure employability and socio-economic growth (Mahapatra & Satapathy, 2016).

2.1 The Role of Vocational Education in India

Vocational education in India remains underdeveloped compared to general academic education, despite its potential to improve employability and workforce productivity. According to research, integrating vocational training at all levels of schooling—primary, secondary, and higher secondary—can create a more productive human resource base (Mahapatra & Satapathy, 2016). However, the current implementation of vocational education faces challenges such as curriculum rigidity, lack of infrastructure, and limited industry collaboration (Oasis, 2020).

A study by Vigyan Ashram and Lend-A-Hand India (LAHI) highlights the success of the Multi-Skill Foundation Course (MSFC), which integrates experiential learning-based pedagogy into

vocational education. The MSFC, implemented in 600+ secondary schools under the National Skills Qualification Framework (NSQF), has improved student retention, employability, and appreciation for vocational skills (Springer, 2022). This model underscores the effectiveness of hands-on skill training in building 21st-century competencies (Springer, 2022).

2.2 Vocational Training for Women and Marginalized Groups

Women's participation in vocational education remains significantly low, with only 6.9% of working-age women receiving vocational training as of 2018-19 (Chauhan, 2022). To address this gap, the National Institute of Open Schooling (NIOS) has introduced vocational training in 300+ Kasturba Gandhi Balika Vidyalaya (KGBV) schools, in alignment with the National Education Policy (NEP) 2020. This initiative aims to promote gender inclusivity and empower young women through skill development (Oasis, 2020). However, challenges such as social stigma, limited access to resources, and traditional gender norms continue to hinder widespread adoption (Oasis, 2020).

2.3 Challenges in Implementing Vocational Training in Secondary Schools

Despite growing policy focus, the integration of vocational training with mainstream education in India faces several barriers:

- **Curriculum Misalignment:** Vocational subjects are often treated as supplementary rather than core subjects (Mahapatra & Satapathy, 2016).
- **Infrastructure Gaps:** Schools lack adequate labs, trained teachers, and industry partnerships (Oasis, 2020).
- **Urban-Rural Divide:** Rural schools face limited access to vocational courses and digital resources (Springer, 2022).
- **Social Perception:** Vocational education is often viewed as an alternative for academically weak students, reducing its attractiveness (Chauhan, 2022).

2.4 The Way Forward: Best Practices and Policy Recommendations

Several successful models and policies demonstrate how India can strengthen its vocational education framework:

- **CBSE Skill-Based Curriculum:** Introduced vocational courses in areas such as AI, tourism, and agriculture (Springer, 2022).
- **Skill India Mission & PMKVY:** Focuses on short-term skill certification programs with industry tie-ups (Oasis, 2020).
- **Industrial Training Institutes (ITIs):** Need modernization to integrate digital skills and life skills training (Mahapatra & Satapathy, 2016).
- **Public-Private Partnerships:** Collaborations like Tata STRIVE and NSDC initiatives have enhanced vocational training accessibility and relevance (Springer, 2022).

3. Materials and Methods

To innovatively integrate vocational training with life skills education in secondary school, consider practices like: project-based learning that incorporates real-world scenarios, industry partnerships for mentorship and internships, embedding life skills development within vocational courses, utilizing technology for simulations and online learning, and fostering a culture of entrepreneurship through student-led projects; all while aligning curriculum with local job market needs and providing regular career counseling to students.

3.1 Framework for Integrating Vocational Education & Life Skills in Indian Secondary Schools

3.1.1 Interdisciplinary Approach

- Cross-curricular Integration: Embed life skills (communication, critical thinking, problem-solving) into vocational training modules to demonstrate workplace relevance.
- Real-World Projects: Design hands-on projects requiring students to apply both vocational and life skills (e.g., developing a business plan for a product built in a workshop).

3.1.2 Industry Partnerships & Career Readiness

- Guest Lectures & Mentorship: Connect students with professionals to highlight workplace soft skills.
- Internships & Apprenticeships: Provide on-the-job experience to apply technical and interpersonal skills.
- Career Counseling & Guidance: Help students identify skill-based career paths through structured programs.

3.1.3 Technology-Driven Learning

- Virtual Simulations & AI-Based Training: Use VR and digital platforms to provide realistic workplace scenarios for decision-making practice.
- Digital Portfolios: Encourage students to document their vocational and life skills progress.

3.1.4 Life Skills-Focused Curriculum

- Dedicated Life Skills Modules: Include teamwork, conflict resolution, time management, financial literacy, and emotional intelligence.
- Peer-to-Peer Learning: Facilitate student-led workshops to strengthen collaborative learning.

3.1.5 Entrepreneurship & Innovation Development

- Student-Led Ventures: Encourage learners to develop and manage small businesses, enhancing leadership and problem-solving.
- Innovation Challenges: Organize competitions where students pitch real-world solutions, fostering creativity and critical thinking.

3.2 Implementation Considerations

- Teacher Training: Educators need training to seamlessly integrate life skills with vocational education.
- Assessment & Evaluation: Develop holistic assessment methods to measure both technical and life skills competencies.

- Community Engagement: Collaborate with local industries and NGOs to provide relevant training and skill-building initiatives.

3.3 Proposed School-Based Model

- Experiential Learning – Hands-on projects for skill application.
- Industry Collaboration – Apprenticeships and work-based learning.
- Career Guidance – Structured counseling programs.
- Technology Integration – AI-driven digital learning modules.

3.4 Policy Recommendations

- Mandate Life Skills Training: Make it a compulsory part of the secondary school curriculum.
- Strengthen Teacher Training: Equip educators with modern pedagogical tools.
- Enhance Digital Infrastructure: Expand access to e-learning, smart classrooms, and virtual skill labs.
- Encourage Public-Private Partnerships: Collaborate with industries for skill-based curriculum design and training.

By implementing this structured framework, Indian secondary schools can bridge the skill gap and equip students with the necessary tools to succeed in both employment and personal life.

4. Conclusions

The integration of vocational training with life skills education in Indian secondary schools is crucial for creating a future-ready workforce. While policies like NEP 2020 and Skill India provide a foundation, effective implementation remains a challenge. This paper highlights the urgent need for curriculum reforms, teacher training, industry collaborations, and digital skill development. By addressing these gaps, India can equip its youth with the competencies required to thrive in an evolving job market and contribute to the nation's economic growth.

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