

Issues and Challenges in Implementing Vocational Education in Assam: An Introspective Analysis

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Abstract— Education plays a crucial role in preparing individuals for a productive and meaningful life. However, the traditional system of general education in India often fails to equip students with the practical skills required for gainful employment. Many students who complete secondary education continue to higher studies without developing employable skills, which frequently leads to unemployment or underemployment. Even university graduates often require additional training to secure skilled jobs, making the transition from education to employment both time-consuming and costly. Moreover, the conventional system of secondary education has largely overlooked the dignity of labour and maintained a wide gap between theoretical knowledge and practical application. In this context, vocational education has emerged as an important approach to bridge the gap between education and employment by incorporating skill-based and work-oriented learning within the curriculum. The present study examines the challenges in implementing vocational education in rural areas of Assam. The study is based on both primary and secondary data collected through field interactions with teachers, students, and administrators, along with relevant policy documents and literature. The findings reveal several challenges, including inadequate infrastructure, shortage of trained vocational teachers, limited awareness among students and parents, and weak linkages between educational institutions and local industries. The study suggests strengthening institutional support, improving training facilities, and enhancing community awareness to ensure effective implementation of vocational education and promote skill development and employment opportunities.

Keywords: Vocational Education, Development, Assam

Introduction

Education is widely regarded as the backbone of social and economic development in any nation. It plays a significant role in shaping society by enhancing human capabilities, promoting social mobility, and preparing individuals for productive participation in the workforce. In rural areas, educational institutions, particularly colleges and schools, often serve as the primary centres of higher learning and skill development. However, the Indian education system has long faced challenges related to access, quality, relevance, and equity, especially in rural and remote regions. In this context, the introduction of the National Education Policy 2020 by the Government of India marks a significant reform aimed at transforming the education system from early childhood to higher education.

One of the key features of the National Education Policy 2020 is its emphasis on multidisciplinary and holistic education, flexible curricula, integration of technology, promotion of research, and skill development. The policy introduces several structural reforms in higher education, including the four-year undergraduate programme, the Academic Bank of Credits, and greater academic flexibility through multiple entry and exit options. These reforms aim to make higher education more inclusive, learner-centred, and relevant to the evolving demands of the modern economy.

Within this broader reform framework, vocational education has been given renewed importance. Historically, vocational education in India has often been perceived as a secondary and

less prestigious alternative to mainstream academic education. This perception has contributed to a persistent gap between theoretical knowledge and practical skills, resulting in a workforce that is frequently underprepared for employment opportunities. Recognizing this challenge, the policy seeks to integrate vocational education into mainstream education and promote a culture that values the dignity of labour and skill-based learning. According to the policy vision, vocational education involves the development of practical skills and occupation-related competencies through hands-on training and work-based learning, thereby enhancing students' employability and readiness for the labour market.

To ensure effective coordination and regulation of vocational training in the country, the National Council for Vocational Education and Training has been established to oversee quality assurance and standardization of skill-based programmes. A major objective of the policy is to provide exposure to vocational education to at least 50 percent of learners in schools and higher education institutions by the year 2025. The policy also recommends introducing vocational exposure from the middle school level so that students become familiar with various trades and occupations at an early stage. In addition, the policy encourages the integration of academic, vocational, and artistic disciplines to remove rigid boundaries between different streams of education. It also promotes the inclusion of indigenous knowledge systems such as Lok Vidya and supports the expansion of the National Skills Qualifications Framework to cover diverse vocational pathways and facilitate mobility between academic and skill-based education.

Despite these policy initiatives, the implementation of vocational education remains a challenge in many parts of India. The issue becomes particularly significant in states like Assam, where a large proportion of the population resides in rural areas and depends primarily on agriculture and allied

activities for their livelihood. Rural colleges in Assam often serve students from low-income households and remote villages who face multiple barriers to accessing quality education and skill development opportunities. Although the policy aims to bridge urban-rural educational disparities, infrastructural limitations, socioeconomic constraints, and resource shortages continue to affect its effective implementation in rural institutions.

The importance of vocational education is further underscored by the rising levels of unemployment in the country. According to the Centre for Monitoring Indian Economy, India had approximately 53 million unemployed individuals as of December 2021, a significant proportion of whom are women. Although the country has a large network of vocational training institutions, including thousands of Industrial Training Institutes, concerns regarding quality, regulation, and industry relevance remain. To address these issues, grading systems and industry collaborations have been introduced, while efforts are being made to align industry-recognized courses with the National Skills Qualifications Framework. Major companies such as Oracle, Microsoft, Tata Group, and Cisco Systems are also contributing to skill development initiatives aimed at reskilling and upskilling youth for emerging industrial requirements.

Against this backdrop, examining the implementation of vocational education policies in rural contexts becomes essential. Understanding the opportunities and challenges associated with vocational education in rural areas of Assam can provide valuable insights into the effectiveness of policy initiatives and their role in promoting inclusive educational and socio-economic development.

Objectives:

- I. To study the issues and challenges in the implementation of vocational education in

II. Assam and to examine the factors affecting its effective development in educational institutions.

Methodology:

The present study adopted a descriptive research design to examine the implementation and challenges of vocational education programmes in senior secondary schools in Assam in the context of the National Education Policy 2020. A mixed-method approach was employed, combining both quantitative and qualitative data to obtain a comprehensive understanding of the subject. Primary data were collected through structured questionnaires designed separately for students, parents, and teachers. The questionnaires were administered through Google Forms to facilitate easy distribution and data collection. The researcher approached several senior secondary schools in Sivasagar and circulated the digital questionnaires among the selected respondents. The study involved three key stakeholder groups associated with vocational education programmes. These included 30 senior secondary students enrolled in vocational education courses, 30 parents of students participating in such programmes, and 30 educators comprising vocational education instructors and subject teachers involved in programme implementation. Altogether, a total of 90 respondents participated in the study. Secondary data were collected from relevant policy documents, reports, and scholarly literature to support the analysis and provide a broader contextual understanding of vocational education implementation in the region.

Analysis and Findings

The findings of the study provide significant insights into the implementation, effectiveness, and challenges of vocational education in schools and training institutions in Assam in the context of the National Education Policy 2020. The data collected from students indicate that vocational education has begun to gain institutional presence in senior secondary schools. A large majority of respondents (92%) reported that

vocational education programmes are being implemented in their schools. This suggests that educational institutions have started integrating vocational subjects into the curriculum in alignment with policy directives. However, the fact that 8% of students reported the absence of vocational subjects in their specific class sections indicates uneven implementation and highlights the need for more consistent institutional arrangements.

The study also reveals that teachers play a central role in creating awareness about vocational education. Approximately 87% of students reported that they learned about vocational programmes through teachers, while only 1% indicated parents as the source of information. The remaining 12% cited other channels such as peers or institutional communication platforms. This pattern suggests that awareness about vocational education in the community remains relatively limited and largely dependent on school-based dissemination. Greater parental and community engagement may therefore be necessary to strengthen awareness and acceptance of vocational pathways.

The analysis of subject enrolment trends indicates that students tend to prefer vocational subjects that are perceived to have higher employment potential and technological relevance. Courses such as IT/Computer Science, Typography and Computer Applications, Healthcare and Health Care services, Physical Education, and Arts and Crafts recorded comparatively higher enrolment. On the other hand, courses such as Textile Design, Cooking, and Robotics witnessed lower participation. These patterns suggest that students' choices are influenced by perceived career prospects, exposure to technology, and availability of facilities within schools. The limited enrolment in certain trades may also reflect inadequate infrastructure, lack of trained instructors, or limited awareness regarding career opportunities in these areas.

With regard to perceived usefulness, the study shows that vocational education is generally viewed positively by students. Around 88% of respondents believed that vocational education would be useful for their future careers and employment opportunities. However, only 29% of students expressed high confidence in the practical skills they had acquired through these programmes. This discrepancy between perceived usefulness and skill confidence indicates that although students recognize the value of vocational education, the level of hands-on training and practical exposure may not yet be sufficient to build strong professional competence.

Students' perceptions regarding the quality of vocational education were largely favourable, with 85% rating the overall quality as good to excellent. Similarly, about 70% of respondents reported that vocational subjects aligned with their interests and were delivered through engaging teaching methods. These findings suggest that the introduction of vocational subjects has contributed to increasing student engagement and interest in skill-based learning. Nevertheless, the effectiveness of vocational education largely depends on the availability of practical training opportunities. While 71% of students acknowledged the presence of practical sessions, a significant proportion reported either the absence of such sessions (15%) or the existence of practical components that were planned but not yet implemented (14%). This indicates gaps in the operational execution of vocational programmes.

The perception of career preparedness among students further reflects the importance of practical exposure. About 65% of students reported that vocational education had prepared them well for future careers or further education, while 27% felt somewhat prepared. Students who experienced regular practical training expressed higher levels of preparedness. Additionally, 62% of respondents believed that there is a reasonable balance between academic and vocational subjects in the school curriculum, though 14% suggested that more

instructional time should be allocated to vocational courses. A significant majority of students (86%) also believed that vocational education enhances future opportunities, reflecting a generally positive outlook toward skill-based education.

Despite these encouraging findings at the school level, several structural challenges continue to affect the broader vocational education and training ecosystem in Assam. One of the major issues is the shortage of regular instructors in government-run Industrial Training Institutes. In many cases, instructors are appointed on a contractual basis, requiring frequent contract renewals. This arrangement may affect the continuity and quality of vocational training. Furthermore, many institutions continue to operate with outdated equipment and machinery, particularly in engineering trades, which limits students' exposure to modern technologies.

Institutional quality assessment also reveals disparities in performance. Another important challenge is the limited alignment between vocational courses and local economic resources. There is a need to design new courses that correspond with the industrial and economic potential of the state. Sectors such as textiles, organized retail, transport and logistics, beauty and wellness, tourism, food processing, and engineered wood furniture offer considerable employment potential and should be integrated more effectively into vocational curricula. Additionally, the participation of private sector industries in policy-making and curriculum development remains limited, which restricts the alignment of vocational education with labour market demands.

Conclusion

The present study highlights the growing importance of vocational education in bridging the gap between academic learning and employment opportunities in Assam. In line with the vision of the National Education Policy 2020, vocational education has gradually been introduced in senior secondary schools to promote skill development and work-oriented

learning among students. The findings indicate that a majority of students are aware of vocational education programmes and perceive them as beneficial for their future career prospects. Popular vocational subjects such as IT, healthcare, and computer applications demonstrate students' interest in skill-based education that aligns with contemporary employment demands.

However, the study also reveals several challenges affecting the effective implementation of vocational education in the region. Issues such as inadequate infrastructure, shortage of trained instructors, outdated equipment in training institutions, and limited practical exposure continue to hinder the quality and effectiveness of vocational programmes. Furthermore, insufficient industry collaboration, lack of awareness among parents, and limited alignment of courses with local economic opportunities remain significant concerns.

Therefore, strengthening institutional support, improving training facilities, enhancing instructor training programmes, and fostering stronger partnerships with industries are essential for the successful implementation of vocational education. Addressing these challenges can contribute significantly to improving employability, promoting skill development, and supporting inclusive socio-economic development in rural areas of Assam.

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