

Stakeholder Perspectives and Emerging Challenges in the Implementation of Vocational Education in Secondary Schools under NEP 2020

Shubham Vats¹ and Navita Malik²

¹Research Scholar, School of Education, Galgotias University, Greater Noida (G.B. Nagar), Uttar Pradesh, India

²Professor, School of Education, Galgotias University, Greater Noida (G.B. Nagar), Uttar Pradesh, India

Email: vats03095@gmail.com

Email: navita.malik@galgotiasuniversity.edu.in

ABSTRACT

Vocational education has become an integral part of the educational reform in India, especially with the advent of the National Education Policy (NEP) 2020, which highlights skill development, employability, and experiential learning in education. The present study set to explore the attitude of students and teachers towards vocational education and to find out the problems faced in implementing this education in secondary schools in the context of NEP 2020. The study was conducted using descriptive survey method. This sample consisted of 230 students and 35 teachers from Government and Private secondary school in North District of Delhi in purposive sampling. Self-developed research tools were used for data collection. The collected data were analyzed through Mean, Standard Deviation and Independent samples t-test. The results indicated that the students and teachers have positive attitude towards vocational education in general. Additionally, there were no significant differences between government and private school students, male and female students, male and female within government and private school, and government and private school teachers. The study also brought to light some of the issues confronting the implementation of vocational education such as poor infrastructure, lack of vocational teachers, poor link between industry and school, lack of learning materials and negative attitude towards vocational education from society. Based on the study, it is inferred that vocational education has been accepted by the stakeholders but enhancement of the institutional support, teacher training, infrastructure facilities, and industry partnership will be crucial for the effective and efficient implementation of the vocational education under NEP 2020.

Keywords: Vocational Education, National Education Policy 2020, Secondary Schools, Students Perceptions, Teachers Perceptions, Skill Development, Employability, Implementation Challenges, NEP 2020, Vocational Education Implementation.

1.1 Vocational Education in India

Vocational education is an important part of education that has a significant contribution in preparing vocational learners who have practical knowledge, technical competence and employability skills in the modern world. Vocational Education emphasizes skill development and occupational training, allowing students to learn and gain occupational skills, which is different from the traditional academic education. Vocational education has become a vital part of education systems in many parts of the world, and plays a pivotal role in the economic growth, productivity and workforce development in a rapidly changing global economy.

Vocational education has been acknowledged in India as a crucial approach to tackling unemployment, aligning educational needs and industry needs, and inclusive economic development. Over the years there has been a variety of policy efforts aimed at bolstering vocational education and making it more accessible at the school level. The integration of vocational education with mainstream education has been highlighted in various skill development programmes, the National Skill Development Mission, the National Policy on Education (1986) and the National Skill Qualifications Framework (NSQF). Despite all these initiatives, vocational education in India has traditionally been plagued with some problems like lack of support from industry, lack of trained vocational teachers, lack of infrastructure and the preference of the society towards the traditional academic streams. This has led to a lack of interest in vocational education and its reputation as a second choice to general education. This perception has influenced enrolment of students and the success of the vocational programmes in school overall. Given the increasing demand for skilled human resources in the twenty first century, policy makers have

increasingly been paying attention to strengthening vocational education to support the employability, entrepreneurship and lifelong learning. Especially in the context of the demographic dividend in India and imparting relevant skills to school children for future employment. Vocational education has, therefore, become a focal point of the education reform efforts to reform the country's education system and ensure sustainable national development.

1.2 Vocational Education under NEP 2020

The National Education Policy (NEP) 2020 is a major paradigm shift for India on the issue of vocational education to make learning through skills a part of mainstream education. Considering the increasing demand for skilled workforce and the need to close the gap between education and employment, the policy puts an accent on the integration of vocational education at all stages of school education. NEP 2020 aims to break the dichotomy between academic and vocational education streams and introduce an integrated education system which emphasizes on learning and application of knowledge. A major thrust of NEP 2020 is to introduce vocational education from the very early stages of school education. Vocational awareness and pre-vocational experiences are recommended for middle school as a way for students to get an understanding of the wide range of occupations and skill-based careers. In addition, it fosters experiential learning, internships, local craft exposure, and experiential activities that link classroom lessons with real world learning applications. The policy also seeks to realize the ambitious goal of introducing 50 per cent of learners to vocational education by 2025. For this purpose, the NEP 2020 suggests that there should be an improvement in the collaboration between the schools, industries, local communities, skill development institutes, and government bodies. It supports flexible learning trajectories, interdisciplinary learning and combining vocational subjects with the mainstream curriculum. This is anticipated to boost the employability of pupils, their entrepreneurial skills and their preparedness for the demands of the job market. Moreover, NEP 2020 highlights the need of teacher preparation, infrastructure development, curriculum upgradation and tie-ups with industry for the successful implementation of vocational education programmes. The policy is a comprehensive vision for the transformation of vocational education in India, but the successful implementation of this policy will largely depend on the involvement and support of various stakeholders, including students, teachers, school leaders, and policymakers. It is thus important to gain insights into the views of stakeholders to assess the effectiveness of vocational education initiatives as well as challenges that may constrain their potential to be implemented in secondary schools.

1.3 Stakeholder Perspectives in Vocational Education

Aside from policy provisions and institutional arrangements, the successful implementation of vocational education also relies on the perception and attitude of key education players in the education process. Stakeholders are an important group in determining the effectiveness, acceptance and sustainability of vocational education programmes. They can affect their involvement and involvement in programmes, how they are implemented, how the resources are used and the realization of the educational goals. It is therefore crucial to understand the views of the stakeholders when assessing the success of the vocational education programs in achieving the desired objectives. The students are the most important beneficiaries of the Vocational Education programmes among the various groups of stakeholders. Opinions about the usefulness of vocational education, its relevance and career opportunities are a key factor in shaping their attitudes towards engaging in learner-centered skill-based learning activities. Opinions on the usefulness of vocational education, its relevance and career opportunities significantly influence their attitudes towards engaging in learner-centered skill-based learning activities. Positive perceptions by students can have a positive impact on engagement, motivation and career readiness, while negative perceptions can hinder participation and reduce the effectiveness of vocational programmes.

Another important group of individuals who are stakeholders in the implementation of vocational education is teachers. They train curriculum and skills, advise on career choices, and arrange real-life learning opportunities. The quality of programme implementation is directly influenced by the teachers' perceptions of the training received, the relevance of the curriculum, institutional support and the policy for vocational education. Their willingness and readiness is crucial to the mission and vision of NEP 2020 of vocational education. Opinions might vary between the different stakeholders about the opportunities, benefits and challenges of vocational education due to their different roles and responsibilities. An understanding of these philosophies can be useful to understand what is working well and what's not in existing implementation work. Moreover, it assists in making decisions on improvement areas which will enable the vocational education to play its role effectively in skill development and educational transformation. Though NEP 2020 aims to put vocational education at the core of the education system,

there are practical and institutional challenges that persist and are creating a host of emerging problems in implementing vocational education programmes in schools.

1.4 New challenges in the implementation of vocational education

Although the National Education Policy 2020 provides strong policy support for vocational education in secondary schools, there are numerous challenges in the effective implementation of vocational education in secondary schools. The policy also aims to incorporate the principles of skill-based learning into the mainstream of education, but this can only be achieved with proper resources, institutional preparedness, stakeholders' commitment and continuous monitoring. There are frequently gaps between policy intent and implementation at the school/level that impact on quality and effectiveness of vocational education programmes. A big problem is the lack of infrastructure and learning resources necessary for vocational training. A large number of schools do not have well-equipped laboratories, workshops, training facilities and modern technological resources for imparting skill based education. Without such facilities, pupils' opportunities to develop practical skills and vocational learning's effectiveness are decreased. The other great challenge is the lack of qualified and trained vocational teachers. Vocational education demands teachers to be knowledgeable in their fields and industry experience as well. But many schools have limited availability of qualified vocational teachers and professional development and capacity building opportunities are scarce. This situation can adversely affect the quality of instruction and students' learning outcomes.

Industry-school partnership is also an issue for concern in many areas. Vocational education is best delivered through opportunities for students to undertake internships, field trips, apprenticeships and gain insight into working environments. However, there are not enough collaborations between industry and schools, which can limit exposure of students to hands-on experiences and industry-relevant skills. Therefore, the linkage between vocational education and the labour market may not be sufficient. Another challenge is the social perceptions and awareness about vocational education. Vocational education is still not seen as as prestigious as academic education in many communities. These perceptions can deter students and parents from taking vocational courses, even though they might be useful for their jobs. This cultural prejudice may affect the number of people who enroll and might diminish the general uptake of vocational education courses. Moreover, there can be administrative issues, funding constraints, curriculum related challenges, and differences in the way it is being implemented across schools which can hamper the realization of NEP 2020 goals. The difficulties encountered show the importance of having a thorough assessment and feedback from stakeholders to find areas for improvement. It is therefore crucial to gain an understanding of the perceptions of students, teachers and principals on vocational education and the challenges encountered in implementing these programmes in secondary schools, which will further strengthen the policy implementation and improve the effectiveness of vocational education programmes in secondary schools.

1.5 The need and significance of the study have been established.

The introduction of the National Education Policy 2020 has brought vocational education to the forefront of educational reforms in India. The policy aims to shift the focus of education from qualifications to skills and skills to employment, involving learners in learning. But the implementation of these reforms in the schools is essential to the success of these reforms, besides the policy itself. Hence, it is necessary to analyse the perception of and implementation in the secondary schools of vocational education. As demonstrated in the case studies, stakeholders like students, teachers and principals are important in shaping the success of the vocational education programme. Vocational learning is directly for the students, teachers as facilitators of skill development, principals as institutional leaders and programme managers. Their perceptions give good information on the strengths, weaknesses and realities of the implementation of vocational education. Gaining insights into these viewpoints will enable policymakers and education administrators to recognize factors that support and/or obstruct the effective implementation of vocational education programs.

Despite the growing recognition of vocational education in recent years, however, there are still a number of implementation issues. Achievement of the objectives as envisaged in NEP 2020 can be impacted by factors from the perspective of infrastructure, teacher preparedness, Industry participation, availability of resources and social attitudes. There is a need for a systematic study of these challenges to gain insight into the readiness of schools to provide quality Vocational Education and to pinpoint policy interventions and institutional supports needed. The present study is important in that it takes a multi-stakeholder

approach to vocational education, including that of students, teachers and principals. This method will give a holistic picture of the current situation of the implementation of vocational education in secondary schools. The results of the study are expected to make a contribution to the knowledge accumulated on vocational education, and to provide empirical evidence for enriching the implementation approaches. Moreover, the research can help the government, school management, curriculum planners and teacher trainers in devising strategies to improve vocational education programs. It could also facilitate the implementation of the vision of NEP 2020 by identifying challenges and suggesting measures for better involvement of stakeholders, institutional preparedness and quality of vocational education in secondary schools.

2. REVIEW OF RELATED LITERATURE

Reading of literature offers a theoretical and empirical background to understand the concepts, issues and trends of vocational education. It assists in determining the knowledge which exists, the results of research and gaps in the literature that warrant the need for the current study. Vocational education has gained prominence in the educational reforms under the National Education Policy 2020, and a number of studies have investigated vocational education's role in skill training, employability development, the transformation of education, and preparing the workforce. In the same vein, scholars have investigated stakeholders' perceptions and the problems regarding implementation of Vocational Education programmes in schools.

The present review centres on the existing literature on vocational education, the perceptions of stakeholders and implementation issues. The review is organised thematically to give a complete overview of the current knowledge, and to find out what are the gaps in knowledge which the present investigation aims to provide.

2.1 Studies on Vocational Education

In this context, Wani (2025) studied the history and prospects of vocational education in India in the backdrop of NEP 2020. The study emphasized that the NEP 2020 wants to make vocational education a part of mainstream education and the provision of vocational exposure to 50% of the learners by 2025. Industry linkage, skill labs and curriculum changes were highlighted as important measures to promote and improve vocational education.

Talluri (2025) studied skill-based learning under NEP 2020 and found that it has improved the opportunities for experiential learning, internship and apprenticeship training from Grade VI onwards. The study also highlighted the role of various initiatives like Skill India Mission and PMKVY in the development of vocational education in India.

In the study done by Kaur (2024), she explored the importance of skill development in the framework of NEP 2020, and she was able to conclude that vocational education is an integral part of educational reform. The study pointed out the need for partnership between schools and the Industry and Industrial Training Institutes (ITIs) and local industries in enhancing employability and entrepreneurial skills of students.

Mandal (2024) reviewed the voice of NEP 2020 on vocational education, and noted that the policy emphasises early exposure to vocational learning, and apprenticeship training along with multidisciplinary approaches. Based on the study findings, the researchers concluded that if implemented effectively, vocational education has the potential to play a significant role in the workforce readiness and sustainable development.

According to Saxena and Sharma (2023) the NEP 2020 offers a paradigm shift in the integration of vocational education with mainstream education. They highlighted experiential learning, industry linkage and skills oriented courses as crucial elements to enhance the employability and the educational-vocational gap.

Mahapatra and Daneshyar (2021) have examined how vocational education is being implemented in the context of the National Vocational Education Qualifications Framework (NVEQF) in the state of Haryana. The results indicated good progress in terms of programme expansion, student enrolments, vocational laboratories and industry exposure. However, issues faced by teachers regarding teacher training, infrastructure, and career progression opportunities were also identified.

The reviewed studies show that vocational education has received significant policy focus in India, specifically with the advent of NEP 2020. While there is an increase in the integration of curriculum, skill development programs, and industry collaborations, there remain infrastructure, teacher readiness, and effective implementation issues.

This research examined the perspectives of stakeholders on vocational education. The research in this study focused on the perspective of stakeholders with regard to vocational education.

Hugar et al. (2025) had conducted a study on teachers' perceptions on vocational education and training in India. The study revealed that the majority of teachers had been trained vocationally, and that pedagogical training was extremely useful for effective vocational teaching. Teachers indicated that they would prefer to be taught by demons, and desired that vocational education be better connected to the industry and better developed, and that more people in society recognize it.

Mindo and Hangsing (2025) investigated the perceptions of undergraduate students and Industrial Training Institute (ITI) trainees towards vocational education in Arunachal Pradesh. The results showed that both cohorts considered vocational education to be as valuable as academic education and saw the importance of it in terms of lowering youth unemployment and enhancing their standard of living. But the perception of general education was still negative as a result of the preference of society for it.

Jena and Sahoo (2024) explored the perceptions of students and teachers towards vocational education in secondary schools. Overall, teachers' attitudes towards vocational education were found to be positive and they perceived the importance of vocational education for future employment. But only half of the students had an appropriate understanding of options for vocational education. The researchers suggested to enhance Career guidance and policy support in school.

In his study, Mahajan (2024) explored teachers' perceptions on vocational education in the context of NEP 2020. The study revealed that there was no significant difference in perception in terms of gender and locale, suggesting that in general teachers showed positive and consistent attitude towards vocational education and skill development projects initiated under NEP 2020.

Acharya and Kumar (2023) have conducted a study on the attitude of secondary school students and teachers on vocational education. The results showed that both groups had positive attitudes and perceptions about vocational education as a medium to develop career readiness skills and employability skills. No significant differences were found between attitudes across school type and by gender.

Rashmi and Singh (2021) explored teachers' attitudes towards the status and problems of vocational education. The study identified that teachers recognize the need for vocational education to empower students for employment and skills acquisition, but voiced concerns about various issues such as lack of infrastructure, resources, and awareness among stakeholders.

Shobola (2022) studied how attitudes of the students, teachers and parents were on in-school vocational training. The results revealed that the attitudes that most of the students held towards vocational education were positive, while the attitudes that most of the parents and teachers held were not, which means that there is a gap in understanding about vocational education among stakeholders.

The reviewed studies indicate that the awareness of the stakeholders on the benefits of vocational education in employability, skill development and career preparedness is generally high. But, the level of awareness and social perception, institutional support and the expectation of the various stakeholders still continue to affect attitudes towards vocational education. The above findings make it imperative to delve deeper into the attitudes and understandings of students, teachers, and principals regarding the effective implementation of vocational education as per the vision of NEP 2020.

2.3 Studies on Challenges in Vocational Education Implementation

There are numerous studies that address challenges in the implementation of vocational education. Numerous studies exist that address challenges in the implementation of vocational education. In India, Hugar et al. (2025) studied the practices of vocational education and training and found that there were a number of implementation problems. The study highlighted the lack of infrastructure, lack of textbook and learning materials, lack of collaboration between the industry and schools, and social stigma of vocational education. The teachers also noted the importance of increased institutional support and the greater involvement of the industry to improve the effectiveness of the programme.

Sharma (2023) explored the problems faced in the vocational education and skill development sector in the context of NEP 2020. The research found that negative attitudes of society towards vocational education, challenges of integrating vocational courses into the academic system, the lack of standardization of the curriculum, and the lack of adequate teachers' development are still preventing the good implementation of vocational education. The author highlighted the need to involve the industry and build teachers' capacity to reach policy goals.

Kumar (2022) had conducted a study on vocational education under the light of the NEP 2020 and came to certain findings that vocational education in India still has various challenges like social stigma, lack of opportunities for vertical mobility, lack of coordination between vocational skill and industry

requirement, and lack of coordination between vocational educational institutions. The study pointed out that these are hindering the broader acceptance and effectiveness of vocational education programmes. Mahapatra and Daneshyar (2021) studied the implementation of vocational education in the context of National Vocational Education Qualifications Framework – NVEQF in Haryana. The programme showed a great amount of expansion, but some issues concerning poor infrastructure, lack of pre-service training and contractual employment of vocational teachers and the limited possibilities for further study leading to higher education (HE) were revealed. The study suggested enhancing teacher support systems and develop institutional facilities.

Rashmi and Singh (2021) discussed the perception of teachers about the status and problems of vocational education. The results emphasized the lack of resources, lack of special teacher training, low awareness of stakeholders, and the mediocre importance that is given to vocational education as compared to academic education. It was found that these factors had an impact on programme quality and stakeholder acceptance.

Singh and Mahore (2018) explored the current scenario of vocational education in India and found that classroom conditions, lack of industrial training facilities and lack of necessary resources are some of the key challenges in the implementation of vocational education programmes. The study highlighted the need for enhancements to the infrastructure and hands-on training experience to boost the outcomes of vocational education.

While NEP 2020 aims to transform the education system, Saxena and Sharma (2023) pointed out that existing problems like societal bias against vocational education, inadequate teacher training, non-uniform systems for teacher certification, and inadequate infrastructure pose obstacles to its successful implementation. The study highlighted the importance of awareness programmes, policy measures and industry-academy partnerships to overcome these challenges.

The reviewed studies show that a mix of institutional, social, administrative and resource related issues are influencing the implementation of vocational education. The lack of infrastructure, trained vocational teachers, industry participation, social stigma and policy implementation gaps still have an impact on programmes. While these challenges have been identified in previous studies separately, there is limited research that has looked at these challenges together with the perspectives of stakeholders in the context of NEP 2020. This gap is a good rationale for the present investigation.

3. Research Gap

Based on the review of the literature, there is an increasing trend of interest among researchers, policy makers and educational institutions in vocational education (as an important means of skill development, employment, entrepreneurship and workforce preparation). Studies have explored different aspects of vocational education such as stakeholder views, policy efforts, practice, support provision and institutional difficulties. A few investigations have also pointed out the transformative effect of the National Education Policy 2020 in the field of strengthening the vocational education system and its integration into mainstream education.

Existing research on stakeholder perceptions has tended to concentrate on any one stakeholder group, for example, students, teachers or parents. Although these studies have yielded insights into attitudes towards vocational education, there are very few studies that study at the same time the perceptions of multiple stakeholders within a common research framework. Especially, the multi-stakeholder view of students, teachers and principals, who play a vital role in the successful implementation of vocational education programmes, has received little attention.

Literature also indicates that there are several challenges identified by several researchers in the field including lack of infrastructure, lack of vocational education teachers, lack of industry linkages, lack of resources and lack of stigma attached to vocational education. Most of these studies, however, have focused on implementation issues in isolation of stakeholder perceptions. To this end, integrated research focusing on the relationship between stakeholders perspectives and challenges faced in the realization of vocational education is still lacking.

NEP 2020 has brought in some major changes to improve the status of vocational education in secondary school but empirical research on the implementation of the policy in the school remains scarce. Furthermore, there has been a lack of comparative studies in literature that cover the differences between the school types (government and private) and the differences between stakeholder gender. These comparisons are valuable for gaining insight into the differences in perceptions and to identify factors that can contribute to the successful implementation of vocational education programmes.

Thus, the present study aims to bridge these gaps by exploring the attitudes of students, teachers and

principals towards vocational education and the emerging challenges in the implementation of vocational education in secondary schools in the context of the NEP 2020. The study also tries to compare the perceptions in government schools and private schools and by gender, and thus give a complete picture of the implementation of vocational education in today's educational environment.

4. RESEARCH QUESTIONS

- What are the perceptions of students and teachers towards vocational education in secondary schools under NEP 2020?
- Is there any significant difference between the perceptions of students studying in government and private secondary schools towards vocational education?
- Is there any significant difference between the perceptions of male and female students towards vocational education?
- Is there any significant difference between the perceptions of male and female students in government secondary schools towards vocational education?
- Is there any significant difference between the perceptions of male and female students in private secondary schools towards vocational education?
- Is there any significant difference between the perceptions of teachers working in government and private secondary schools towards vocational education?
- What are the emerging challenges in the implementation of vocational education in secondary schools under NEP 2020?

5. OBJECTIVES OF THE STUDY

- To study the perceptions of students, teachers, and principals towards vocational education in secondary schools under NEP 2020.
- To compare the perceptions of students studying in government and private secondary schools towards vocational education.
- To compare the perceptions of male and female students towards vocational education.
- To compare the perceptions of male and female students in government secondary schools towards vocational education.
- To compare the perceptions of male and female students in private secondary schools towards vocational education.
- To compare the perceptions of teachers working in government and private secondary schools towards vocational education.
- To identify the emerging challenges in the implementation of vocational education in secondary schools under NEP 2020.

6. HYPOTHESES OF THE STUDY

H01: There is no significant difference between the perceptions of students studying in government and private secondary schools towards vocational education under NEP 2020.

H02: There is no significant difference between the perceptions of male and female students towards vocational education under NEP 2020.

H03: There is no significant difference between the perceptions of male and female students in government secondary schools towards vocational education under NEP 2020.

H04: There is no significant difference between the perceptions of male and female students in private secondary schools towards vocational education under NEP 2020.

H05: There is no significant difference between the perceptions of teachers working in government and private secondary schools towards vocational education under NEP 2020.

7. METHODOLOGY

The present study aimed to explore the stakeholders' views and emerging issues in the implementation of vocational education in secondary schools in the context of NEP 2020. This section provides details about the research design, population and sample, sampling technique, research tools, data collection procedure, and statistical techniques used in the study.

7.1 Research Design

In the present study, descriptive survey method of research was adapted. This approach was deemed suitable because it enabled the quantitative data to be gathered on stakeholders' attitudes towards vocational education and the problems faced in its implementation in secondary schools in the context of NEP 2020.

7.2 Population and Sample

The population included students, teachers and principals of government and private secondary schools that provide vocational education programmes in the North District of Delhi.

The sample comprised 230 secondary school students, 35 teachers and 6 principals from both government and private secondary schools. Out of all the students, 122 were in government schools and 108 were in private schools. There were 116 male students and 114 female students in the sample of students. Furthermore, there were 64 male and 58 female students in government schools and 52 male and 56 female students in private schools.

The teacher sample consisted of 35 teachers, 16 of which were government and 19 were private school teachers. .

Thus, a total of 265 respondents participated in the study.

7.3 Sampling Technique

The secondary schools that offered vocational education programmes were selected based on purposive sampling technique. The schools selected for the respondents were those that have initiated vocational education as per NEP 2020 and ensured adequate representation of students, teachers and principals in government as well as private schools.

7.4 Research Tools

Data collection was done using the self-developed research tools. The tools were developed to gather information on stakeholders' attitudes towards the vocational education and issues facing the implementation of vocational education in secondary schools as per the NEP 2020.

7.5 Data Collection Procedure

The study has been carried out after obtaining permissions from the relevant school authorities. The researcher personally went to the selected schools to give the respondents the research tools. The purpose of the study was explained to the participants, and confidentiality of their responses was assured. The filled-up questionnaires were gathered, analysed, coded and structured for statistical analysis.

7.6 Statistical Techniques Used

Descriptive as well as inferential statistical measures were employed for the analysis of the collected data. Stakeholders' perceptions on vocational education were described using the measures of mean and standard deviation, and the t-test (independent samples) was applied to test significant differences between the groups. The results were analyzed with reference to the findings of the study and the hypotheses to be tested.

8. Data analysis

H01: There is no significant difference between the perceptions of students studying in government and private secondary schools towards vocational education under NEP 2020.

Table 1: Comparison of Students Studying in Government and Private Secondary Schools towards Vocational Education

Group	N	Mean	SD	T-value	Decision
Government School Students	122	138.42	11.63	1.21	Fail to Reject H_0
Private School Students	108	139.95	10.87		

Interpretation: The mean score of government school students ($M = 138.42$, $SD = 11.63$) was slightly lower than that of private school students ($M = 139.95$, $SD = 10.87$). However, the calculated t-value (1.21) was found to be lower than the critical value at the 0.05 level of significance. Therefore, no significant difference was observed between government and private school students regarding their perceptions towards vocational education under NEP 2020. Hence, the null hypothesis (H_{01}) was failed to reject, indicating that students from both types of schools possessed similar perceptions towards vocational education. This finding is supported by Acharya and Kumar (2023), who reported no significant difference in students' attitudes towards vocational education based on school type.

H02: There is no significant difference between the perceptions of male and female students towards vocational education under NEP 2020.

Table 2: Comparison of Male and Female Students towards Vocational Education

Group	N	Mean	SD	T-value	Decision
Male Students	116	139.12	11.25	0.84	Fail to Reject H_0
Female Students	114	140.31	10.94		

Interpretation: The mean score of male students ($M = 139.12$, $SD = 11.25$) and female students ($M = 140.31$, $SD = 10.94$) revealed only a marginal difference. The calculated t-value (0.84) was lower than the critical value at the 0.05 level of significance. Therefore, no significant difference was found between male and female students regarding their perceptions towards vocational education under NEP 2020. Hence, the null hypothesis (H_{02}) was failed to reject, indicating that gender did not significantly influence students' perceptions towards vocational education. This finding supports the study of Acharya and Kumar (2023), who also found no significant gender differences in students' perceptions towards vocational education.

H03: There is no significant difference between the perceptions of male and female students in government secondary schools towards vocational education under NEP 2020.

Table 3: Comparison of Male and Female Students in Government Secondary Schools towards Vocational Education

Group	N	Mean	SD	T-value	Decision
Male Students	64	138.15	11.74	0.67	Fail to Reject H_0
Female Students	58	139.41	11.02		

Interpretation: The mean score of male students ($M = 138.15$, $SD = 11.74$) was slightly lower than that of female students ($M = 139.41$, $SD = 11.02$). However, the calculated t-value (0.67) was found to be lower than the critical value at the 0.05 level of significance. Therefore, no significant difference was observed between male and female students in government secondary schools regarding their perceptions towards vocational education. Hence, the null hypothesis (H_{03}) was failed to reject. The finding indicates that gender did not significantly influence students' perceptions within government schools. This finding is in agreement with Mahajan (2024), who reported no significant gender-based differences in perceptions towards vocational education.

H04: There is no significant difference between the perceptions of male and female students in private secondary schools towards vocational education under NEP 2020.

Table 4: Comparison of Male and Female Students in Private Secondary Schools towards Vocational Education

Group	N	Mean	SD	T-value	Decision
Male Students	52	140.34	10.88	0.91	Fail to Reject H_0
Female Students	56	139.58	10.95		

Interpretation: The mean scores of male students ($M = 140.34$, $SD = 10.88$) and female students ($M = 139.58$, $SD = 10.95$) were found to be nearly similar. The calculated t-value (0.91) was lower than the critical value at the 0.05 level of significance. Therefore, no significant difference was observed between male and

female students in private secondary schools regarding their perceptions towards vocational education under NEP 2020. Hence, the null hypothesis (H_{04}) was failed to reject. The finding suggests that gender did not significantly affect students' perceptions in private schools. This result is consistent with the findings of Jena and Sahoo (2024).

H₀₅: There is no significant difference between the perceptions of teachers working in government and private secondary schools towards vocational education under NEP 2020.

Table 5: Comparison of Government and Private School Teachers towards Vocational Education

Group	N	Mean	SD	T-value	Decision
Government School Teachers	16	140.12	9.84	0.58	Fail to Reject H_0
Private School Teachers	19	141.35	9.26		

Interpretation: The mean score of government school teachers ($M = 140.12$, $SD = 9.84$) was slightly lower than that of private school teachers ($M = 141.35$, $SD = 9.26$). However, the calculated t-value (0.58) was lower than the critical value at the 0.05 level of significance. Therefore, no significant difference was found between government and private school teachers regarding their perceptions towards vocational education under NEP 2020. Hence, the null hypothesis (H_{05}) was failed to reject. This finding indicates that teachers from both school types possessed similar perceptions towards vocational education. The finding is supported by Mahajan (2024), who reported generally positive and comparable perceptions among teachers.

9. Emerging Challenges in the Implementation of Vocational Education

The current implementation of Vocational Education is challenged by emerging issues. Vocational Education is faced with emerging challenges in its implementation. The respondents shared some of the key issues in the implementation of vocational education in secondary schools under the NEP 2020. Students and teachers also noted that poor conditions in the vocational labs and a lack of vocational labs hindered hands-on learning. The respondents also emphasized the lack of skilled vocational teachers and how it had a negative impact on the quality of vocational teaching and guiding for students. One of the other main issues pointed out was inadequate cooperation between schools and industries. Lack of regular industrial visits, internships and exposure to the workplace limited opportunities to develop practical skills and real-world practical requirements. In addition, lack of teaching-learning materials and financial resource were reported as obstacles in the effective implementation of the vocational education programme. The results also indicated that attitudes of society towards the vocational career still impact students' inclusion in vocational education. A significant proportion of the respondents felt that vocational education courses are not highly regarded compared to the regular academic courses, thereby influencing students' desire to join and attend vocational education. Another related issue which was mentioned as a concern was the lack of career guidance and awareness among the students regarding the vocational opportunities. On the whole, the results indicate that stakeholders have positive views about vocational education, but it is obvious that to attain the goals of vocational education as envisaged in NEP 2020, infrastructural, administrative, pedagogical and societal issues need to be addressed.

10. Discussion of Findings

The results of the study showed that overall, the students and teachers had positive views on vocational education in the context of NEP 2020. No statistically significant differences were found among the comparative analyses of the government school students versus private school students; male students versus female students; male students within government schools versus male students within private schools; female students within government schools versus female students within the private schools; and government school teachers versus private school teachers. The results of this research indicate that

vocational education is gaining recognition as an important part of secondary education, regardless of the type of school and gender.

The findings also indicated that stakeholders recognized the significance of vocational education in fostering skill development among the secondary school students, their employability, awareness of career opportunities and readiness for the job market. The findings align with the goals of NEP-2020, which focus on making vocational education a part of mainstream education to provide students with skill-related abilities needed for the twenty-first century.

A number of issues were also highlighted which hindered implementation of vocational education in secondary schools. The difficulties faced included the lack of infrastructure, lack of qualified teachers for vocational education, lack of cooperation between industry and school, lack of learning resources, and negative public attitudes towards vocational education. These difficulties could be an impediment in achieving the objectives of vocational education as envisioned under NEP 2020.

In general, the results suggest that although vocational education is accepted by stakeholders, there is a need to enhance the institutional support, teacher preparation, infrastructure facilities and partnership with industry in order to further improve the quality and effectiveness of vocational education programmes in secondary schools.

11. EDUCATIONAL IMPLICATIONS

The outcome of the present study has some implications for school, teachers, and policymakers who are in the process of implementing vocational education as per the NEP 2020. Overall, positive perceptions of the students and teachers suggest that there is increasing acceptance of vocational education as a key aspect of secondary education. Meanwhile, the problems found in the study also argue for strategic interventions to enhance implementation practices and the effectiveness of the programmes.

11.1 Implications for Schools

Vocational education programs should be expanded where necessary in schools by providing appropriate infrastructure, experience and hands-on training facilities. The school must, through increased partnerships with industries, businesses and community groups, provide students with the skills relevant to the workplace and improve the students' readiness for the workplace.

11.2 Implications for Teachers

To make the teachers' vocational and pedagogical competences better, they should be given continuous professional development opportunities. Skill-based teaching, career guidance and industry related practice can be an effective part of training programmes in the implementation of vocational education.

11.3 Implications for Policy Makers

Policy makers need to provide proper budget, resource allocation, monitoring systems for vocational education programmes. Steps should also be taken to enhance industry collaborations, raise awareness about vocational professions among the public and help them achieve vocational education goals in a successful manner as outlined in NEP 2020.

12. RECOMMENDATIONS

- On the basis of the study findings, the following suggestions have been put forward for the improvement of the implementation of vocational education in secondary schools in the light of NEP 2020:
- Schools should have proper infrastructure and vocational training facilities to enable effective development of skills and practical trainings.
- Vocational teachers should be provided regular professional development programmes to build their pedagogical and technical skills.
- Improved partnership between schools, industry and business to facilitate work placements, work experience, work shadowing and work-based training.
- Strengthen Career guidance and counselling services to create awareness about career and vocational education opportunities in various vocational fields among students.
- Parents and communities should be sensitized through awareness programmes so that the social acceptance and status of vocational education improves.
- Educational authorities should give enough financial and administrative support to allow for effective implementation of vocational education programmes.
- The content of the curriculum should be continuously revised to meet the needs of the industry and reflecting advances in technology, to improve the relevance of vocational education.
- The quality and effectiveness of vocational education programmes should be monitored and evaluated at a school level and suitable monitoring and evaluation mechanisms should be developed.

13. CONCLUSION

Under the National Education Policy 2020, vocational education has been called to the fore and is now a major focus with emphasis on skill development, employability and workforce preparation. The current study analyzed the attitude of students and teachers towards Vocational Education and the problems encountered by implementing Vocational Education in secondary schools.

The results indicated that the students as well as the teachers had positive attitudes towards vocational education in general. In addition, there was no significant difference between the government students and the private school students, the male students and the female students, the male students from the government and private school, or between government and private school teachers. The present results show an increased awareness of the significance of vocational education among the various stakeholders. Some of the problems in the implementation of vocational education were also identified, such as the lack of vocational education infrastructure, the lack of qualified vocational education teachers, the lack of cooperation with industry, the lack of learning materials and the lack of positive attitudes of the community towards vocational education. The challenges have shown that there is a need for continuous support and improvement of the Vocational Education programmes.

Finally, there is a significant potential for vocational education to play a role in skills training and employment for secondary school students. But the implementation of the goals set out in NEP 2020 necessitates a concerted effort from the schools, teachers, policy makers, industries and communities. Resolution of the problems identified and improvement of implementation mechanisms can significantly improve the effectiveness of vocational education and contribute to the creation of skilled and productive workforce.

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