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“Status of Vocational Education in Bihar”

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Abstract

The development of human civilization has been based on the knowledge and skills passed down from generation to generation, which have allowed people to traverse, adapt to, and manage their social and natural circumstances. As the cornerstone for wealth, well-being, and democratic participation, education plays a pivotal role in economic growth, societal change, and national advancement. Notably, vocational education has a critical role in national progress by integrating economic, social, and demographic development and strengthening institutional and individual capability. The Twelve Five Year Plan (2012-2017) places a strong emphasis on the idea that education is essential for the development of human resources, especially in developing countries. Nelson Mandela emphasized that education is crucial for nation-building and healing, and its impact goes beyond skill development. Furthermore, as Twining (1987) claims, the content of vocational education serves as the foundation for many aspects of everyday life, illustrating the ubiquitous significance that education plays in both individual lives and society systems.

Keywords – Vocational Education, Skills Development, Economic Growth, Social Change, Bihar.

CHAPTER-1

INTRODUCTION

1.1 Introduction

Human civilization has developed over the long run because of the transmission of information and abilities from one age to another. The human species has learned to confront and control natural forces, as well as to live and survive in its environment, through its cumulative experiences.

Education is hailed as a catalyst for fundamental societal reform and major national progress, promoting rapid technological advancements and economic growth. It serves as the foundation for economic prosperity, societal well-being, and political stability, influencing an individual's ability to lead a fulfilling life. Aside

from improving efficiency, education is an effective tool for increasing democratic involvement and improving overall individual and communal quality of life.

The meaning of schooling is featured in public advancement objectives, strikingly in the accentuation on training's development, quality improvement, and openness to all fragments of society. Instruction works on individual and institutional abilities by connecting monetary, social, social, and segment improvements that are basic for public development.

The direction of a nation's advancement is unequivocally subject to the development and improvement of training. Subsequently, non-industrial nations should recognize schooling as the underpinning of their improvement endeavors, with the essential objective of developing HR. Instruction, as Nelson Mandela so wonderfully noticed, affects country building and compromise.

Twelve Five Year Plan (2012-2017) focuses on the importance of education in national development by improving the quality of education and ensuring the equal opportunities for all segments of the society.

Broadly, education increases the skills of individuals and organizations and provides a mechanism for the tightly interconnected economic, social, cultural, and demographic changes that become described as national development (Adams, 2002).

So, education is the heart of the development process and development of human resources is the main purpose of education. It has been rightly quoted, by Nelson Mandela that "The power of education extends beyond the development of skills we need for economic success. It can contribute to nation building and reconciliation."

As described by Twining (1987), "the content of vocational education is the *hidden hand* behind most aspects of everyday life".

1.2 History of Vocational Education in India

Vocational Education in India has ancient origins dating back to the epic and Vedic periods, evident in the inclusion of vocational skills like carpentry, smithy, foundry work, and weaving in education. While explicit details were scarce during medieval India, archaeological findings highlighted the advanced nature of vocational skills during that era. However, the formalization of technical education in India commenced with the establishment of the "Survey School" in Madras (now Chennai) by English traders in 1794. This institution not only aided British surveyors but also trained Indian individuals in modern land survey techniques. Subsequently, technical education expanded across the nation and was passed down through generations, marking the inception of modern technical education in India. Hence, many significant recommendations were made during pre- and post-independence period, study of which gives a clear perspective for vocational education.

1.2.1 Vocational Education in Pre- Independence Period

The verifiable direction of professional education in India aligns with Europe's beginnings, but development was limited until the country gained independence. The English spread out the Review School in Madras in 1794 to get ready personnel for land auditing, basically for traveler purposes. The prerequisite for specific staff for various establishment projects like roads, rail lines, and military stuff upkeep nudged the groundwork of particular schools and planning colleges across India during the common rule.

Throughout the nineteenth century, committees and commissions highlighted the value of technical education to economic progress. However, the emphasis was mostly on generating qualified professionals to operate the

colonial government, rather than promoting industrial progress in India. The early twentieth century saw a surge in demand for technical education, which led to its incorporation into high school curricula and the development of engineering institutions.

The period between 1944 and 1947 marked a significant shift. Reports like the Abbot-Wood Report, the Technical Education Committee, and the Sarkar Committee recommended comprehensive reforms, leading to the establishment of All India Council for Technical Education (AICTE) in 1945. This era signified a transition from stagnation to dynamism, with a policy shift aimed at predicting future manpower requirements and fostering organized efforts in technical education.

Overall, the evolution of Vocational Education in India underwent significant transformations during British rule, culminating in a policy shift towards dynamism and foresight in the years preceding independence.

1.2.2. Vocational Education in Post- Independence Period

Since India's independence in 1947, the landscape of Vocational Education has seen a remarkable transformation from a limited number of institutions to a widespread network facilitating substantial growth. Initially, in 1947, there were only a few dozen institutions offering engineering and technician-level education, with admissions that didn't align with the country's growing need for skilled manpower.

Efforts to reform and expand technical education gained momentum with commissions like the Radhakrishnan Commission (1948) emphasizing the necessity for new engineering colleges and universities. Subsequent initiatives included the Working Group on Technical Education and Vocational Training (1959) and the introduction of the Apprentices Act (1961) to provide practical training to engineers and diploma holders.

The Kothari Commission (1964-66) aimed to vocationalize and specialize technical education, proposing the establishment of polytechnic institutes. The National Policy on Education (1968) reiterated the need for technical education reforms and led to the formation of the Damodaran Committee in 1970. This committee highlighted the importance of polytechnic education and influenced policies for several years.

Significant strides continued through the 1980s and 1990s, with recommendations from the AICTE restructuring polytechnic education and the implementation of the National Policy on Education in 1986, which set guidelines for qualitative and quantitative development in technical and management education sectors.

The subsequent five-year plans witnessed substantial growth in technical institutions, especially through private initiatives, and the launch of programs like the Technical Education Quality Improvement Programme (TEQIP) and Technician Education III, supported by the World Bank.

The Eleventh and Twelfth five-year plans focused on expansion, upgradation, and the continual improvement of technical education. Efforts were directed at enhancing intake capacity, improving quality, and aligning technical education with the evolving needs of the economy. The plans emphasized synergy with technology and other initiatives to elevate the overall quality of education in various sectors, including architecture, town planning, management, pharmacy, and hotel management.

Despite shortcomings in the pre-independence era, India has experienced substantial progress and expansion in Vocational Education post-independence, continually evolving and adapting to meet the demands of a growing economy and technological advancements.

1.3. Vocational Education

Vocational Education has become increasingly crucial in the contemporary age of science and technology, serving as a key component in human resource development. Recognizing its pivotal role, successive five-year plans in India have prioritized its growth and advancement. Dr. B.R. Ambedkar's insight highlights the indispensable nature of Vocational Education in a world where scientific training is imperative for a nation's survival and the well-being of its populace.

Currently, technical education refers to post-secondary courses and practical training aimed at preparing technicians for supervisory roles. On the other hand, vocational training focuses on lower-level education for skilled or semi-skilled workers, usually offered at secondary or senior secondary levels. In India, vocational education typically occurs at these levels, while technical education spans various degrees (Diploma, Undergraduate, Postgraduate, and Research) in specialized fields such as engineering, accountancy, management, nursing, medicine, and more, facilitating technological development and economic progress.

This distinction between Vocational Education lies in their focus: technical education centers on occupations reliant on technical knowledge and scientific principles, while vocational education prepares individuals for direct employment in trades, industries, or commerce. The latter emphasizes the development of psychomotor, cognitive, and effective skills necessary for efficient operation within a chosen trade.

Various commissions and reports have highlighted the diversification and establishment of institutions catering to vocational pursuits, offering specialized courses matching the aptitudes and interests of students. These institutions fall into three main categories: those providing degree, post-degree, and research courses; institutions offering diploma courses (polytechnics); and those providing vocational and industrial training. These institutions cover a wide array of subjects ranging from engineering, technology, and architecture to arts, handicrafts, and skill-specific training aimed at producing partially skilled or semi-skilled workers.

Overall, the spectrum of Vocational Education in India encompasses institutions offering comprehensive courses, from degree-level training to skill-focused vocational programs, all contributing significantly to human resource development and the country's overall progress.

1.4. Objectives of Vocational Education

1. Addressing Labor Market Needs.
2. Skill Development.
3. Social Inclusion.
4. Employability.
5. Economic Growth.
6. Career Advancements.
7. Entrepreneurship Development.
8. Technology and Innovation.
9. Lifelong Learning.
10. National Development.

1.5. Importance of Vocational Education

1. Addressing Inequality.
2. Personal Development.
3. Employability.

4. Diverse Career Paths.
5. Meeting Industry Standards.
6. Economic Development.
7. Global Competitiveness.
8. Meeting Skill Demands.

The Secondary Education Commission of 1952-53 stressed the importance of enhancing vocational efficiency in secondary education. The objectives outlined included:

1. **Attitude Shift:** Encouraging a new perspective that appreciates the dignity of all forms of work, fostering a sense of respect for various occupations, and instilling the belief that national prosperity and personal fulfillment stem from active participation in work.
2. **Work Ethics:** Cultivating a mindset among students that emphasizes completing tasks efficiently and artistically, akin to the dedication of their teachers, thereby ensuring this attitude permeates every aspect of school life.
3. **Technical Skill Development:** Promoting the acquisition of technical skills and efficiency at all educational levels to equip individuals with the competence needed to contribute to industrial and technological progress, producing a workforce capable of driving advancement in these sectors.

Furthermore, the National Policy on Education (NPE) of 1986, modified in 1992, emphasized the introduction of structured and meticulously executed vocational education programs. These programs aimed to:

1. **Enhance Employability:** The primary goal was to improve the employability of individuals by offering vocational courses that aligned with industry needs. This was intended to bridge the gap between the demand and supply of skilled manpower.
2. **Diversified Education:** The policy advocated for generic vocational courses at the higher secondary level, transcending specific occupational fields. These courses were designed to provide alternatives for individuals considering higher education but lacking specific interest or direction.

In essence, both the Secondary Education Commission and the National Policy on Education underscored the importance of instilling a respect for work, fostering a strong work ethic, and providing structured vocational education programs aimed at enhancing employability and offering diverse educational pathways.

1.6. Role of Vocational Education

Education, particularly Vocational Education, bears immense importance beyond economic development; it's a catalyst for social, political, and individual progress. Originating from the British rule in India, technical training emerged from the need to train personnel for various infrastructure and military projects. Since then, while India has seen significant progress in technical education after independence, it still needs substantial improvement and expansion to meet the population's needs.

Technical and Management education play pivotal roles in propelling diverse sectors like industrial and infrastructure development. They contribute to understanding existing knowledge, fostering new knowledge, and applying these to enhance living standards, particularly for those in poverty.

Eighth Five-Year Plan (1992-1997) rightly emphasized that technical education, inclusive of management education, is a potent means of creating skilled manpower necessary for various developmental tasks. Despite the high costs involved, seen as investments, these contribute directly to socio-economic development.

Education, as argued by **Hallak (1990)**, impacts more than economic growth; it's interconnected with individual and societal development. It fosters creativity, enhances social cohesion, improves health, fosters economic and technological advancements, encourages socio-cultural changes, and supports democracy, equality, and ecological development.

Akpomie (2009) asserts the crucial role of Vocational and Technical education in a nation's technological, industrial, and economic progress. These forms of education:

- Act as hubs for transforming dreams into practical ventures.
- Develop technical and conceptual skills for the modern workforce.
- Propel technological advancements.
- Combat poverty and idleness.
- Lead towards self-reliant and sustainable livelihoods.

Overall, the effective implementation of Vocational Education holds the potential to combat poverty and its associated challenges, contributing significantly to a nation's advancement and prosperity.

1.7. Profile of Bihar

Bihar is one of the Eastern states of India. The enchanting beauty with diverse cultures of its society is eye-catching. It is surrounded by West Bengal from East, Uttar Pradesh from West, Nepal from North and Jharkhand from South. So, on that basis, the rich flora and fauna is seen here. The land is gifted with many resources like- minerals, rivers, fertile soil, forest, balanced climate and dust free environment, which are utilized for economic development of the state by its people.

Bihar, the fourth state of India came into existence on 1950. The State has a total area of 94,163 Sq. km, which is about 2.86% of total land surface of India. The Bihar plain is split by the river Ganges, which flows from west to east. The other rivers are the Sone, Punpun, Falgu, Karmanasa, Durgawati, Kosi, Gandak, Ghaghara, etc. Three main cultural regions converge in the state: Magadha, Mithila, and Bhojpuri. Bihar is also the world's third-most populous sub national entity.

Figure - 1



1.7.1. History

The derivation of the name Bihar from the Sanskrit ***vihara*** (Buddhist monastery) reflects the prominence of such **communities** in the region in ancient times. In **ancient and classical India**, the area that is now Bihar was considered a center of power, learning, and culture. From Magadha arose India's first empire, the Maurya Empire, as well as one of the world's most widely adhered-to religions: Buddhism. Magadha empires, notably under the Maurya and Gupta dynasties, unified large parts of South Asia under a central rule. Another region of Bihar is Mithila which was an early center of learning and the center of the Videha kingdom.

The area which is now known as Bihar did not bear that name till the **12th century**. The term Bihar, identical with the modern town of Bihar Sharif, is mentioned first in the Muslim account of **13th century**, which refers to the destruction of its fort by the Turkish invader **Bakhtiyar Khilji**. Later the province came to be known as Bihar after the town. In 1912, the foundation took place by naming as **Bihar – Orissa Province** and in 1936, Orissa separated from Bihar (**First Division of Bihar**). Whereas in 15 November 2000, the **Second Division of Bihar** took place and by this way the Jharkhand separated from the Bihar.

1.7.2. Physical Features and Climate

Bihar lies in the eastern part of India. It is broadly quadrilateral in shape. This is a land locked state, although it is connected to the sea by Haldia port. It has some of the most fertile lands in India.

Bihar lies between 24°20'10" N and 27°31'15" N latitudes and 83°19'50" E and 88°17'40" E longitudes in the Lower and Middle Gangetic region. It extends 345 km from north to south and 483 km from east to west. The river Ganga flows from west to east by dividing into two unequal parts.

The geographical area of Bihar having 12th rank all over India in area wise. As per the Census 2011, the total population of Bihar is 104,099,452 which is 8.6% of the country's total population. The geology of Bihar is quite balanced as it consists both younger and older formations of rock. The plain was formed by filling up of a vast trough by the detritus carried by rivers down the southern slopes of newly uplifted Himalayas. Here, The following types of rock are found- Dharwar Rocks, Vindhyan Rocks, Tertiary Rocks, Quaternary Rocks. On the basis of physical and structural conditions, Bihar can be divided into three physiographic units, which are as

- **Shivalik Range** (North-Western part of West Champaran, 32 km long and 6 to 8 km wide.)
- **The Bihar Plain** (Formed by river Ganga.)
- **The Southern Plateau Region** (Made up of hard rocks consisting of gneiss, schist and granite.)

The climate of Bihar is in according to other parts of the country. It enjoys extreme cold in winter or during rainy season and intense summer season as well. This makes Bihar rich in terms of climate. Several factors (like- Distance from sea, Movement of Air from Bay of Bengal and Arabian sea, etc) affects the Bihar climate. Because, it completely lies in the sub-tropical region of temperate zone and its climatic type is Humid Subtropical. So, we can say that Bihar has a continental monsoon type of climate.

1.7.3. Administrative Division

Due to the population and the geographical area, The Bihar has been divided into **9 divisions** and **38 districts** for meaningful management. These 9 divisions hold the responsibility of all 38 districts and it has its own headquarters, which are as following -

S.N.	Divisions	Headquarters	District
1.	Patna	Patna	Patna, Nalanda, Buxar, Kaimur, Rohtas, Bhojpur.
2.	Magadha	Gaya	Aurangabad, Gaya, Jahanabad, Arwal, Nawada.
3.	Saran	Chhapra	Gopalganj, Siwan, Saran.
4.	Tirhut	Muzaffarpur	Muzaffarpur, Sitamarhi, Seohar, Viashal, West Champaran, East Champaran.
5.	Darbhangha	Darbhangha	Samastipur, Madhubani, Darbhanga.
6.	Koshi	Saharsha	Saharsha, Supaul, Madhepura.
7.	Purnia	Purnia	Purnia, Arariya, Kishanganj, Katihar.
8.	Bhagalpur	Bhagalpur	Bhagalpur, Banka.
9.	Munger	Munger	Begusarai, Jamui, Khagaria, Lakhisarai, Munger, Shekhpura.

- The administration of Bihar is divided into -
 - a) Division.
 - b) District.
 - c) Sub – Division.
 - d) Block.
 - e) Gram Panchayat.

1.7.4. People

As per the Census 2011, the total population of Bihar is 104,099,452 which is 8.6% of the country's total population. But in 1961, the total population of Bihar was 46,455,610 and it was considered as the 8th in rank in terms of population.

1.7.5. Literacy Rate

Literacy is a bridge for socio – economic progress of the society. According to the Census of India 2011, the literacy rate of Bihar was 61.8% in total.

	Bihar	India
Male	71.2 %	80.9%
Female	51.5%	64.6%
Total	61.35%	72.75%

Literacy rate in Bihar and India 2011 (Rural + Urban)

Growth rate of literacy rate of Bihar (1951 – 2011)

Years	Male	Female	Total
1951	22.68	4.22	13.45
1961	35.85	8.11	21.98
1971	35.86	9.86	22.86
1981	47.11	16.61	31.86
1991	51.37	21.99	36.68
2001	60.32	33.57	46.94
2011	71.20	51.50	61.35

1.8 Education in Bihar

The history of history of education in Bihar is very old. Because Bihar has been a major center of learning since ancient times, which is based on the fact that the earliest universities such as Nalanda and Vikramshila existed here. The Nalanda University was famous for providing education in Political Science and Economics, while Vikramshila was known for education in Tantra. Unfortunately, in medieval period, this system of education was destroyed by the invading armies. Later, when the British ruled the country, education still remained neglected.

Bihar saw a revival in education development during the later part of British rule when they established a University at Patna besides other centers of higher learning such as – Science College, Patna, Prince of Wales Medical College (now Patna Medical College and Hospital), and Bihar Engineering College (now N.I.T, Patna).

During the 1960s, the education minister Satyendra Narain Sinha initiated educational reforms in Bihar. But due to lack of effective implementation, major/needed changes could be initiated.

In Bihar, here is a huge gap between demand and supply due to inadequate educational infrastructure. Now, the gap is much more due to increment in population. As a result, the students of this state migrate to other states to achieve higher education. However, in spite of such shortcomings in the state, the students of Bihar have good representation at IITs, IIMs, NITs, and AIIMS, etc. The structure of education in Bihar follows the common educational pattern of 10+2+3 system as laid down by the National Policy on Education (NPE) 1986 and soon, it will be going to replace by 5+3+3+4 pattern of NEP 2020. In 2008, Bihar became the first state by framing its own curriculum, which is known as the Bihar Curriculum Framework 2008 and it was framed on the basis of N.C.F.2005.

1.9 Need and Justification of the Study

Vocational Education is concerned with energize the individual by enhancing their skills by which they can explore a quality of life within the society. After India's independence various Commissions and Committees give emphasis to Vocational Education. Commissions like Radhakrishnan (1948), Mudaliar (1952), Kothari (1964-66), National Policy of Education (1986), National Knowledge commission (2005) and Committees like, Thacker Committee (1959), Rama Rao Committee (1995) and others recommended it as a basic requirement for the elevation of the society. The Eleventh Plan emphasizes education as a central tool for achieving rapid and inclusive growth. It outlines a comprehensive strategy to strengthen the education system in all levels. Accordingly, the plan focused to foster overall development for national growth.

In today's technological era, there is a crucial need for the expansion of Vocational Education (TVE) systems. TVE plays a crucial role in contributing to the economic growth of developing nations by providing skilled manpower aligned with industry and global demands. Despite rapid progress in TVE in post-independence India, the current scenario reveals inefficiency and a considerable scope for improvement, considering the population size. The Eleventh Five-Year Plan (2007-12) aimed to achieve a 15% annual growth in the intake of Technical Education institutions to meet the demands of the growing economy. It also envisioned establishing new institutions focusing on Management, Technology, Industrial Research, Training, Planning, and Architecture. However, the present status of Technical Education is not satisfactory, as the emphasis has predominantly been on general education, leaving TVE in a less favorable position. Efforts are required to bridge this gap and enhance the efficiency and significance of Vocational Education in India.

Despite the establishment of prestigious technical institutions like IITs in India, the benefits of technical education have predominantly been confined to developed regions, excluding the underdeveloped North Eastern states. The North Eastern region faces challenges such as limited institutions for Vocational Education, inadequate infrastructure, and minimal facilities. This neglect has led to a proliferation of issues within the region's technical education system. Therefore, there is a pressing need to reevaluate and address the state of Vocational Education in the North Eastern region, ensuring inclusivity and development.

The present study is designed as to study the Status of Vocational Education in Bihar. Vocational Education in the state started in the year 1924 with the establishment of first technical institution as Bihar Engineering College at Patna, which is now known as National Institute of Technology, Patna. Although, the Patna University came into existence in 1917 and it was the 7th oldest university of the Indian subcontinent. Later many departments and universities came into existence. TVE in Bihar is at an early stage with limited infrastructure and facilities. The state heavily relies on Central Government allocations for sending students, particularly in Engineering, Computer, and IT studies, leading to additional education costs and a high rate of unemployment among educated individuals. The current state of Vocational Education in Bihar is characterized by a lack of academic progression and limited opportunities for those, who are unable to pursue higher education.

Recognizing the critical need for improvement in Vocational Education in Bihar, the investigator proposes a thorough and systematic study to assess its current status. The study aims to fill a gap in existing research, as literature review indicates a lack of comprehensive studies on Vocational Education in Bihar. Anticipated outcomes include positive impacts, increased relevance, and the identification of remedial measures for enhancing the quality of Vocational Education in the state.

1.10 Statement of the Problem

The current state of Vocational Education in Bihar is subpar, necessitating significant improvement. The study focuses on the origin and development of such education in Bihar, examining aspects like physical infrastructure, academic facilities, curriculum, teachers' profiles, and administrative issues. It also addresses challenges faced by students and teachers in Technical and Vocational institutions. The study aiming to provide recommendations for the enhancement of Vocational Education in the state.

“Status of Vocational Education in Bihar”

1.11 Operational Definitions of the Terms used

1. **Status** – It represents the Present position of any system or any level.
2. **Vocational Education** – Vocational Education focuses more hands-on and skill-oriented, concentrating on specific occupations or trades, making individuals job-ready in a shorter period. For example - Carpentry, Coding, Graphic Design, Animation, Automotive repair Cooking, etc.

1.12 Research Questions

- 1) What is the origin and development of Vocational Education in Bihar?
- 2) What is the present status of Vocational Education in Bihar?
- 3) What are the problems of Students and Teachers in the institutions of Vocational Education in Bihar?
- 4) What are the steps to be taken for the improvement of Vocational Education in Bihar?

1.13 Objectives of the Study

*On the basis of above questions, the following objectives are formulated by the Investigator:

- 1) To find out the Origin and Development of Vocational Education in Bihar.
- 2) To find out the present status of Vocational Education in Bihar.
- 3) To find out the problems of Students and Teachers in the institutions of Vocational Education in Bihar.
- 4) To make recommendations for the improvement of Vocational Education in Bihar.

CHAPTER-2

REVIEW OF RELATED LITERATURE

2.1 Introduction

The review of related literature is an executive part of any research. It is an important aspect of the study by which one can able to determine the issues or problems within the context. According to **Efron & Raved (2019)** ‘A literature review is a systematic examination of the recorded literature about one’s related topic. It critically analyses, evaluates and synthesizes research findings, theories and practices produced by the scholars and researchers that are related to an area of focus.’ It is a comprehensive study related topic from books, theses, Journals, articles, magazines and newspapers, and encyclopedias. Nowadays, the source can be anything because of digitalization.

This chapter includes all the related literature review that is relevant to Vocational Education. In order to make the study systematic and effective, a thematic and chronological approach was adopted for presentation of the available literature related to study. The study consisted of studies conducted in abroad and India which are as following –

2.2 Studies conducted in Abroad

2.2.1 Studies related to Development of Vocational Education

King (1993) states that Vocational Education and Training (TVET) is concerned with four main issues; the diversity of locations in which TVET is delivered, the nature of different client groups, curriculum, control and the role of the state.

Maebuta (2011) through a study on ‘*Vocational Education and Training in Peace Education*’ highlights the policy and practice mechanisms that contribute to advancing Vocational Education and Training as a peace education initiative.

Amedu (2013)’s study on ‘*Vocational and Technical Education: A tool for sustainable development in Nigeria*’ which focused on the importance of Vocational and Technical Education towards enhancing sustainable development in Nigeria. He also marked that the challenges arise from lack of TVE teachers, lack of basic facilities to lack of awareness of the programme. TVET is a tool for development of both individuals and nation.

Kadir, Nirwansyah and Bachrul (2016) conducted a case study entitled ‘*Vocational Education and training in Indonesia: Challenges and opportunities for the future*’. The study discussed about the development and the future for Vocational education in Indonesia, Indonesian qualifications framework and its implications and the policy challenges and opportunities for Vocational education in Indonesia.

2.2.2 Studies related to Status of Vocational Education

Turner (1993) in the article entitled '*Planning Vocational Education and Training: the case of Namibia*' focused on Vocational Education access to higher education and inter- relationship between the various levels of educational system.

Ziderman (1997)'s study on '*National Programmes in Vocational Education: Economic and Education relationship*'. In this study, it states about the relative importance of secondary Vocational Education in national education and training programmes, with emphasis on developing countries. The study concludes with a discussion of measures to improve the link between Vocational education systems and labour market needs and employment opportunities.

Tanvi, Murtaza and Sadia (2013) in the article entitled '*Vocational Education and Training in Bangladesh: why it is not working?*' represent the current scenario of VET programs in Bangladesh, where the people with Vocational and Technical skills are in short supply and also a mismatch in jobs and skills. It also identifies the problems with the current VET programs such as i) Curriculum of VET has not been updated for long time; ii) Lack of awareness about VET which are alarming barrier for developing this sector; iii) Job market, people think that choosing VET will narrow down the job opportunities; iv) Social acceptance, only 'weak student' can go for Vocational education. It is the mind-set of the people that VET students are not intelligent enough to continue general education; v) Cost of VET, people believe that cost of attending Vocational education is higher than general education; vi) Shortage of skilled instructors; vii) Policy, efficient and well educated are not interest in the job of VET instructors, less salary and other benefits which were one of the problems. It concluded by giving specific recommendations on three perspectives: Curriculum, Students and Teacher.

Bhurtel (2015) conducted a study on '*Vocational Education and Training in workforce Development*' discussed about TVET is an important strategy for solving problems of unemployment and unskilled workforce.

2.2.3 Studies related to Problems and Facilities of Vocational Education

Al- Ali (1993) conducted a study on '*Vocational Education in Kuwait*'. The study revealed that despite having vast economic resources, Kuwait has been suffering from an obvious lack of skilled and semi- skilled manpower in almost all the sectors of the economy. Further it also pointed out that despite the realization of the need for Technical and Vocational institutions their role has not lived up to their full potential.

Kennedy (2011) examined the problems and funding of Vocational and Technical Education and the efforts that were made towards providing sufficient equipment for effective teaching in Vocational and Technical Education. Further, the study concluded that government should provide necessary facilities in tertiary institution for effective teaching and learning in Nigeria.

Usman, Celement and Raihan (2013) conducted a study on '*Problems of Development of Vocational Education in Katsina state, Nigeria*'. It was found that there was i) Inadequate finance to buy modern equipment and materials for practical works; ii) Inadequately equipped laboratory and workshop; iii) Shortage of library and research facilities in the schools for the teachers and students; iv) Inadequate number of teachers and less number of competent technical teachers/ instructors in the institution; v) Lack of in-service programmes for Technical teachers to upgrade their skill deteriorate problem; vi) Poor salaries and incentives for the teachers in Technical and Vocational institutions. The study also revealed that majority of the students was not motivated to go for technical education. There was production of incompetent graduates from Technical and Vocational institutions in which the graduated students could not compete with the challenges in work places.

2.2.4 Studies related to Management and Administration of Vocational Education

Haung and Lee (2012) in their study *Strategic management for competitive advantage: a case study of higher Vocational Education in Taiwan*, revealed that higher Vocational Education institutions in Taiwan face the pressure of an oversupply of student places and fierce competition from domestic and international institutions. Furthermore, the study showed that institutional performance depends on the match between the State of the environment surrounding the institutions and their use of resources.

Kari (2015) discusses *Germany's Vocational Education and Training (VET)*, focusing on two models: dual-track VET with apprenticeships and classroom teaching concurrently, and school-based VET with full-time classroom study. The dual-track system faces challenges, including difficulty in finding capable apprentices, some youths struggling to secure apprenticeships, and concerns about responding to rapidly changing market demands. There's also a potential issue of skills acquired becoming outdated in a knowledge-based economy, leading to unemployment pressure on older individuals.

Joseph and Godstime (2016) investigated *effective teaching and learning strategies for practical skills in Nigeria's Technical and Vocational training programs*. The study revealed that many existing teaching strategies were outdated, and the most effective methods included the use of demonstration, inquiry, project, and assignment methods in these institutions. This emphasizes the importance of employing contemporary and impactful teaching approaches in Vocational Education in Nigeria.

Geleto (2017) investigated *Technical Vocational Education Training (TVET) curriculum development in Ethiopia, finding similarities with competency-based processes in Australia and the Philippines*. The study highlighted challenges, such as a lack of local expertise and frequent changes in occupational standards, hindering effective implementation of the reformed TVET approach. Additionally, the Ministry of Education's practice of updating or replacing standards led to resource wastage and discontent among institutions, management, instructors, and students.

2.3 Studies conducted in India

Keeping in mind that the education system should cater to the needs of the manpower requirement for the economic development of the country. Government of India has accorded high importance to vocational education and training. While elaborating on the essence and role of Education, the National Policy on Education (NPE), 1986 (as modified in 1992) has recognized that Education develops manpower for different levels of the economy. The NPE also envisages the introduction of systematic, well-planned and rigorously implemented programmes of vocational education, which can be rigorously implemented to enhance employability, reduce the mis-match between demand and supply of skilled manpower and to provide an alternative to those pursuing tertiary education, without particular interest or purpose. The policy envisages that efforts will be made to provide children at the higher secondary level with generic vocational courses which cut across several occupational fields and which are not occupation specific.

2.3.1 Studies related to Development of Vocational Education

Sen (1989) undertook a study on *Development of Technical education in India and State policy- A historical perspective which traced the different strategies that follow in the past in developing Technical education in India*. The study reported the technical education and training in Pre- independence period, the foundation of

Technical education laid in India and a period of transition from 1944-47. The study further showed the technical education and training after independence from 1947 and after, the number of reforms were introduced to satisfy the growing needs and demand.

Karkare, Rawat, and Mali (2013) compared the development of technical education in India by examining institutions like IIT, NIT, and private engineering colleges against international benchmarks. The study found that many Indian institutions have yet to effectively transition from undergraduate teaching to research-focused entities. It highlighted recent adaptations in industry-linked engineering education and stressed the importance of collaborative strategies between industry, government, and academia to address future technological challenges in India.

In their **2014** study on *Engineering and Technical Education in India*, **Kavin, Anbumani, Ramesh Kumar, and Syed Zabiullah** identified challenges such as profit-driven and expensive engineering institutes, a shortage of qualified IT faculty, and a reluctance among engineering graduates to pursue teaching careers. Despite a high number of technical graduates, job opportunities remained limited in mediocre industries. The study emphasized the need for reforms, highlighted opportunities and threats in technical education, and concluded that effective government policies are crucial for industrialization, job creation, and poverty eradication.

Gupta (2016) traced *the historical development of Science and Technical education in India*. The study examines the emergence of Scientific and Technical education in India and the early developments of Technical education during the British rule, the post war transition and the rapid development of science and technical education in Independent India, which gradually introduces various strategies and expanded in multi fold after the independence and which were still progressing.

2.3.2 Studies related to Status of Vocational Education

Venkatram's (2010) study on *Vocational Education and Training (VET) in India* found slow progress in establishing vocational schools and enrollments. The sluggish growth was attributed to negative attitudes towards manual work and the perception that vocational education is only for the economically disadvantaged or educationally backward individuals. Despite major interventions to strengthen institutions, particularly public-funded ones, the measures were deemed inadequate in achieving the broader goal of creating a substantial skilled workforce in the country.

Joshi's 2013 study on *Vocationalisation of Education in India* highlighted challenges in providing skill-based education due to a demand-supply mismatch for skilled workers. The decline in the labor market for those without higher degrees, high dropout rates at the secondary level, and a lack of emphasis on academic skills in vocational systems were identified. Other challenges included insufficient private sector participation, failure to meet industry needs, limited opportunities for skill upgrading, lack of clear certifications for the informal sector, and issues faced by training institutions. The study emphasized the importance of understanding trainee apprehensions and challenges in Vocational Education and Training (VET).

In **Kotamraju's 2014** article on *the Indian Vocational Education and Training (VET) system*, the author outlines the current status and challenges. The key points include the need for a common curriculum for unskilled workers, a more flexible VET system for semi-skilled individuals, and the elevation of skilled workers' competencies to international standards through public or private partnerships. Kotamraju recommends adopting a comprehensive organizational strategy to address the diverse missions within the Indian workforce education system.

In **Verma's 2017** study on *Vocational Education in India*, the author highlighted successful government policies and initiatives but identified key challenges in the implementation of Vocational Education. Problem areas included a mismatch between labor market needs and training skills, insufficient focus on emerging areas, outdated syllabi and equipment, inadequate practical training for real-world applications, low social acceptability, limited employment opportunities, poor overall enrollment, inadequate industrial participation, outdated training modules and courses, inappropriate mediums of instruction, and a lack of practical knowledge.

2.3.3 Studies related to Problems and Facilities of Vocational Education

Bhargava's 1991 study on *students in the Vocational Education stream* found that the majority perceived vocational education as purposeful, interesting, and crucial for employability and national development. However, the study identified shortcomings, including only 35% of schools having trained staff, a lack of proper guidance, and inadequate physical facilities for vocational education.

Goel's 2011 study on *Vocational Education and Training (TVET) in India for sustainable development* identified key problems contributing to low performance, including the non-availability of courses in emerging areas, inadequate infrastructure, challenges in attracting quality teachers, financial constraints, lack of institutional flexibility, limited industry participation, and outdated curricula. The study recommended adopting strategies like expanding and upgrading VET and higher technical education, promoting research in educational institutions, and redesigning the school-level educational pattern to facilitate skill development.

In **Pant's 2011** study on *Technical education in North Eastern India*, challenges were identified: outdated syllabi, minimal course additions, lacking Institute-Industry Interaction, faculty flight, insufficient quantity and quality of qualified faculty, a shortage of Ph.D. holders, limited efforts in quality assurance through agencies like NAAC and NBA, compromises in faculty selections, inadequate infrastructure, and weak student placement links. The study recommended remedies to address these issues and enhance the role of technical institutions in shaping India's position in the evolving global economic order.

In their **2017** examination of *Indian Higher Technical Education*, **Waghmare, Datar, and Hire** highlighted the quantitative growth in engineering education, yet expressed concern about declining quality due to inadequate standards and monitoring by regulatory bodies. Factors affecting quality included insufficient physical infrastructure, political interference leading to poor governance, lack of autonomy, ineffective industry linkage, and a shortage of self-motivated faculty. The study proposed achievable suggestions for improvement, such as Industry-Institute Interaction, innovative practices, learning societies, incentives for teachers and researchers, resource mobilization, student-centered education, job-oriented courses, international collaboration, examination reforms, and the establishment of Internal Quality Assurance Cells (IQAC) and libraries.

2.3.4 Studies related to Management and Administration of Vocational Education

Bhattacharya's 1992 investigation on *the Design and Development of an Interactive Teaching-Learning System for Technical Education* showed a notable improvement in students' performance scores in the State Board of Technical Education (SBTE) examination. However, the study found a poor correlation between scores in the SBTE examination and students' problem-solving abilities.

Singh, Malhotra, and Rasewatt's 2015 study on *the qualitative assessment for the improvement of Technical Education using Total Quality Management (TQM)* analyzed the current state of technical education in India. The study identified factors contributing to the degradation of technical education at both lower and higher levels and emphasized the importance of TQM, incorporating design inbuilt quality and manufactured quality,

as a remedy for declining standards. It highlighted four major areas for problem resolution: Input, Curriculum, Resources, and Research.

2.4 Summary of Literature Review

The literature review for this study on Vocational Education extensively drew from diverse sources, including books, journals, research papers, doctoral theses, websites, and various publications, encompassing national and international perspectives. The focus encompassed the development, challenges, facilities, status, and management of Vocational Education, both in India and globally. The existing literature highlighted common issues such as infrastructure, curriculum, faculty, and facilities. Despite varied studies conducted in different regions, there is a noticeable gap in significant research, particularly in Bihar, indicating a pressing need for the present study. The diverse aspects covered in the literature analysis contribute to understanding the crisis and potential solutions in Vocational Education. The investigator acknowledges the limited available material but emphasizes its relevance for determining the current status of Vocational Education in Bihar.



CHAPTER-3

RESEARCH METHODOLOGY

3.1 Introduction

Kothari (2004), ‘Research methodology is a systematic study towards problem solving in scientific way’. So, it can be understood as the techniques by which we can identify, select, interpret and analyze the information related to our topic.

A methodology offers the understanding of best practice at a specific place. The term “Research method” simply refers to the methods/techniques to conduct the research. So, the operations are based upon this.

This chapter deals with the concerning procedure for the study. The main aim of this study is to know the Status of Technical and Vocational institutions in Bihar taking into consideration the different aspects such as Origin and Development, Present Status, Quality of Vocational Education and the Problems of students and teachers. Hence, every care has been taken to achieve the stated objective.

3.2 Method and Procedure

In the present study, the investigator adopted the **Descriptive Survey Method**, in which the emphasis is given to the information provided by the participants (Such as - Heads of the institutions/ Principals, Teachers and Students). The purpose of this study is to know the present status in terms of Administration, Curriculum, Physical Infrastructure, Academic Facilities, Teacher’s Profile, Governance, Leadership and Management, Curricular aspects, Infrastructure and Learning Resources, Student Support and Progression, etc.

3.3 Population

A population refers to the group of individuals, who have common characteristics.

The population of the study comprised of all the Principals, Teachers and Students in Government Technical and Vocational institutions in Bihar. The following table shows the population of the study –

Type of Institution	No. of Institution	No. of the Head of Institution
Vocational Institutions (Government Industrial Training Institute)	149	149
Total	149	149

Source: Directorate of Employment Training, Government of Bihar.

So, on that basis the **target population** is the **Bihar**, that have **9 divisions** and **38 districts**.

3.4 Sample

It seems impossible to test the entire population at a time. Sampling is an element of research because of its significant impact on the quality of the findings/result. In other words, a sample refers to a smaller and manageable portion of a larger group/population.

Considering the population of the study, drawing representative sample for the Heads of the institution was simple as each institution is headed by one person. A representative sample was taken from **1 division** (i.e.- **Purnia**) of the state, in which total of 2 government colleges were identified for sample from the districts that comes under this division. Whereas, the total of 120 Students and 08 Teachers was drawn using **Simple Random Sampling Technique**. In the course of obtaining data for the study, in some of the respondents did not respond the questionnaires and some questionnaires were discarded and due to that, reduction happened in sample size. Further, the researcher interviewed the officials of Directorate of Employment & Training Labour Resources Development Government of Bihar. The following table shows the Sample of the study -

Type of Institution	No. of Institution	<u>Respondents</u>	
		Students	Teachers
Vocational Institutions (Government Industrial Training Institute)	2	120	8
Total	2	120	8

3.5 Research Tools

The research requires several data collection tools or techniques. The tools may differ from one to others as per the nature of research.

3.5.1 Type of Tools used

For collecting the concerned information, there are the following tools constructed by the investigator-

- 1) Questionnaire for the Students.
- 2) Questionnaire for the Teachers.
- 3) Interview Schedule (Offline) for government officials.

3.5.2 Construction of the Tools

The major tool for collecting information for this study was the Questionnaire. The investigator prepared and developed the three sets of questionnaires towards conducting the present study. The construction of the questionnaires was time consuming and was little bit lengthy as it involves several steps. The investigator has developed the items consisting of closed ended items in Yes/No form and also MCQ types. Open ended items also be taken care to enable the respondents to express their views, opinions and provide suggestions wherever necessary and some scale items. The items were constructed keeping in view the following:

- a) The Research questions and Objectives of the study.
- b) *Online consultation and guidelines taken from the Head of the institution for the construction of good questionnaire.*

3.5.3 Description of the Tools

After framing the Questions, the first draft was submitted to the supervisor for her critical review. Considering her suggestions some items were modified. Since the questionnaires were not intended for scoring procedure, so reliability and validity were not established. However, in order to establish content validity, the questionnaires were subjected to expert's supervision. The questionnaires were given to the supervisor of the investigator and as per her suggestions and criticism, the questionnaire was improved by dropping few items. The questionnaires comprised of sections and number of items as indicated below:

1. Questionnaires for Students

The questionnaires comprised of seven sections –

- a) Physical infrastructure (2 items)
- b) Academic facilities (2 items)
- c) Curriculum (3 items)
- d) Administration (3 items)

Overall, it is comprised a total of **10 items** and provisions were made for obtaining problems and suggestions from the respondents after every section.

2. Questionnaires for Teachers

The questionnaire comprised of six sections –

- a) Teachers' profile (4 items)
- b) Physical infrastructure (6 items)
- c) Academic facilities (5 items)
- d) Curriculum (4 items)
- e) Administration (6 items)

This includes a total of **25 items** and finally space was provided for obtaining problems and suggestions of the respondents after every section.

3.5.4 Try-out

After preparation of the questionnaires, preliminary try-out of the questionnaires was conducted in two institutions, to determine the suitability of the tool. After trying out, it was found that the percentage of the un-responded items in the questionnaires was very less. However, in consultation with the Supervisor few items were dropped and new items were added by reframing the original items. Therefore, all the necessary corrections done for the data collection.

3.5.5 The Interview Schedule (Offline)

An interview plays an important role in data collection through face to face or online communication between investigator and participants. **Mc Namara (1999)**, Interview is useful to follow-up with individual respondents after questionnaires to further investigate their responses. In order to guide the investigator, the interview schedule was prepared by which the investigator can gather the data from the officials of the State Board of Technical Education, Bihar and the Directorate of Employment and Training, Labour Resources Department Government of Bihar.

1. Preparation and Execution of the interview:

Preparing and conducting an interview was not an easy task, however the number of steps taken into consideration towards its smooth execution. The interview schedule was clear in terms of fulfillment of the study need. Before formation of interview questions, the following decision was kept in mind –

- a) What type of information should be taken?
- b) Depth of topic for the information.
- c) Method of framing the question.
- d) Sequence of the questions.

By the above decision, the investigator have clarity towards the nature of questions. The officials from whom the information is to be gathered was also prepared by appointments through emails and setting a convenient online meeting for the interview.

Before starting the interview, it was ensured that everyone both (interviewer and interviewee) were relaxed and comfortable towards the interview. Firstly, the investigator gave his own introduction by mentioning the purpose of interview to the respondent. The confidentiality of the information gathered from the respondent was maintained and it is used only for the study. The interview however started by asking the series of open-ended question as prepared by the investigator for obtaining the information. After collection of required information, the investigator thanked the respondent for the cooperation and giving the valuable time.

3.6 Sources of Data

The data was collected by the investigator from the sample on the basis of the objectives of the study. Both (Primary and Secondary) sources of data were used. Primary sources of data were from the Directorate of Employment and Training, (Labor Resources Department) Government of Bihar through the interview and its concerning colleges through the set of questionnaires. Whereas, the secondary sources of data include reference books (Crown and Bihar Samsamyiki), various texts, journals, magazines, survey of research in education and book reviews, etc.

3.7 Data Collection

After the tool finalization, the investigator personally visited the vocational institutions in two different districts (**Purnia**, and **Katihar**) of Bihar for data collection and the questionnaire was distributed by the help of the Government of Bihar through digital platform. This activities for data collection were indeed tiresome and involved a lengthy process which took almost twenty-nine days starting from preliminary visit for permission from the Head of the institutions to carry out the study and conducting interviews from the officials. The investigator personally took permission from the officials for the study. Accordingly, the investigator also got the permission to visit the library of the concerning institutes. Data collection through questionnaire took more time as compared to the interview. In some case, the respondents did not respond the questionnaire booklet.

3.8 Analysis of Data

To achieve the objectives of the study, the data was analyzed in which the **Simple percentage** was used for analyzing the **quantitative data** and **content analysis** was used for **qualitative data**.

3.9 Conclusion

The chapter includes a description of the research method and procedure that was adopted to collect, summarize, present and analyze the data. Here, the emphasis was given to describe about how tools were developed and used for the study of the population selected by the investigator.

CHAPTER-4

ANALYSIS AND INTERPRETATION OF DATA

4.1 Introduction

In any research, the data analysis plays an important role by establishing relations between information that is taken in order to achieve the study result on the basis of research gap. The gathered data is huge and complex. Therefore, the meaningful presentation of such data is made for the expected conclusions. Whereas, the interpretation process is adopted by the researcher to analyze, to make valid explanations by the research relations and to draw the conclusion. Thus, analysis and interpretation of data provides a way to answer the concerning questions.

In this chapter, the data collected from the population is presented, analyzed and interpreted on the basis of research objectives in systematic manner.

4.2 Objective (1) To find out the Origin and Development of Vocational Education in Bihar –

The year 1924 marked as the beginning of the establishment of first technical institution as Bihar Engineering College at Patna (now N.I.T Patna). This was the 6th engineering college in India. The State Board of Technical Education (SBTE) Patna is responsible for evaluation and certification of six semester diploma courses of all the Polytechnic Institution affiliated by the SBTE Bihar. Initially, this department was under control Department of Industry. In 1978, it was separated and established as an independent department as Department of Science and Technology. After independence, industrial revolution took place and to fulfill the needs of the nation for technological manpower, Bihar Institute of Technology, Sindri was started as College of Mechanical and Electrical Engineering at Patna in the year of 1949. It was later shifted to Sindri on 17th November 1950. After that, the Muzaffarpur Institute of Technology was established in the year 1954. The SBTE formally took place on dated 31st May 1955 under the Science, Technology and Technical Education Department, Government of Bihar. Since its formation the board is giving efforts for curricular standard of Polytechnic Institutions of this state. In 2007, the Department of Information Technology came as an independent Department from the Department of Science and Technology. At present, 38 engineering colleges and 46 Polytechnic institutions are functioning in Bihar. Out of 46 polytechnic institutions, there are 2 Government Women's Polytechnic Institute, which are at Muzaffarpur and Patna. In June 2023, the department has been renamed as Department of Science, Technology & Technical Education to reflect the actual nature of the work being functioned by the department.

The Directorate of Employment & Training (DET) is working under the Department of Labour Resources, Government of Bihar. In the beginning, the Industrial Training Institutes were functioning under the direct supervision of the Director General of Employment & Training (DGE&T),

New Delhi, Ministry of Labour, Government of India. Since 1956 the administration of Industrial Training Institutes (ITI) under the Craftsmen Training Schemes has been transferred to the State government. DET functions with the major objectives of providing Vocational Training to the youths in Bihar. To achieve these objectives the DET runs a variety of long-term and short-term training programmes in Industrial Training Institutes in the State. The Directorate of employment and training is the apex organization for development and coordination at state levels for the programmes relating to vocational trades to meet the skilled manpower requirements for technology and industrial growth in the country. To ensure a steady flow of skilled worker in different trades for industry, as well as raise the quality & quantity of industrial production by scientific training. Industrial Training Institutes are under the administrative and financial control of this Directorate.

4.3 Objective (2) To find out the present status of Vocational Education in Bihar –

4.3.1 Present Status of Vocational Institution

Responses from the students

A.) Physical Infrastructure

Table – 4.1

Infrastructural facilities provided in Vocational Institutions

Facilities	Vocational Institutions (N=120) (N%)	
	Yes	No
Proper Classrooms	113 (94.2%)	7 (5.8%)
Library	79 (65.8%)	41(34.2%)
Laboratory	98 (81.7%)	22(18.3%)
Tutorial room	26 (21.7%)	94(78.3%)
Auditorium	35 (29.2%)	85(70.8%)
Students' Common room	53 (44.2%)	67(55.8%)
Visitor's Room	24 (20%)	96(80%)
Sport Complex	78 (65%)	42(35%)
Playground	107 (89.2%)	13(10.8%)

It was observed from the table 4.1, that proper classrooms, library, laboratory, sports complex and playground in majority of the vocational institutions were provided as affirmed by 94.2%, 65.8%, 81.7%, 65%, and 89.2% respectively. However, other infrastructure facilities such as Tutorial room, Auditorium, Students' Common room, Students' Common room and Visitor's Room were found lacking in both Vocational institutions.

Table – 4.2

Facilities provided in the Campus

Facilities	Vocational Institutions (N=120) (N%)	
	Yes	No
Hostel	111(92.5%)	9(7.5%)
Workshop	78(65%)	42(35%)
Transportation	34(28.3%)	86(71.7%)
Drinking water	120(100%)	0
Canteen	0	120(100%)
Separate & Clean Washroom	90(75%)	30(25%)
Health center	15(12.5%)	105(87.5)
Guidance & Counselling	40(33.3%)	80(66.7%)
Internet	68(56.7%)	52(43.3%)

A close observation of table 4.2 reveals that majority 92%, 65%, 100%, and 75% students of vocational institutions respectively stated provision of hostel, workshop, drinking water, separate and clean washroom facility. Whereas, lack of different facilities such as transportation, canteen, health center, guidance and counselling and internet facilities were found in the institutions.

B.) Academic Facilities**Table – 4.3****Types of audio-visual aids provided in the classroom (T.L.M)**

Type of Aids	Vocational Institutions (N=120) (N%)	
	Yes	No
E-Books	76(63.3%)	44(36.7%)
Maintained Black/White Board	107(89.2%)	13(10.8%)
Computer	94(78.3%)	26(21.7%)
Projector	78(65%)	42(35%)
VR equipment	6(5%)	114(95%)

It may be observed from the table 4.3, that in almost both Vocational institutions have E-book, Maintained Black/White Board, Computer and Projector are provided in the classroom as indicated by 63.6%, 89.2%, 78.3% and 65% respectively. However, the VR equipments were not installed properly in the classroom.

Table – 4.4**Types of extra - curricular programmes organized in the institution (Teaching-Learning Process)**

Extra-curricular	Vocational Institutions (N=120) (N%)	
	Yes	No
Seminar	94(78.3%)	26(21.7%)
Educational tour	82(68.3%)	38(31.7%)
Industrial visit	95(79.1%)	25(20.8%)
Field trips	52(43.3%)	68(56.7%)

Table 4.4 shows the responses related to non-academic programmes organized in Vocational institutions. Firstly, it is seen from the table that 78%, 68.3%, and 79.1% students of vocational institution stated seminar, educational tour and industrial visit respectively were organized in the institutions. However, only a small percentage 43.3% responded in field trips.

C.) Curriculum**Table – 4.5****Existing Curriculum**

Items		Vocational Institutions (N=120)
		(N%)
Course Content	Useful	120(100%)
	Not Useful	0
Availability of Textbooks	Yes	120(100%)
	No	0

From table 4.5, it is seen that 100% students of vocational institutions were positively stated that the course content taught to them were useful for their future occupation and also it is evident from the above table that the no any students were facing the problem with regard to availability of related textbook as affirmed by 100% students.

Table – 4.6**Examination System**

System		Vocational Institutions (N=120)
		(N%)
Present examination system	Satisfied	120(100%)
	Not Satisfied	0
Type of examination	Semester	35(29.2%)
	Annual	85(70.8%)
Timely result declaration	Yes	118(98.3%)
	No	2(1.7%)

With regard to examination system in Vocational institutions, the above table 4.6 shows that majority 100% students expressed satisfaction with the present examination system followed in the institution. The analysis also reveals that semester and annual exams were followed as stated by the students, in which 29.2% students mentioned semester exam and 70.8% students mentioned annual exam being followed in the institution. Finally, in Vocational institution majority 98.3% students stated timely declaration of result with only an exception of 1.7%.

Table – 4.7

Co-curricular activities organized in the institution

Co-curricular activities	Vocational Institutions (N=120) (N%)
Yes	109(90.8%)
No	11(9.2%)

From table 4.7, it clearly shows that majority 90.8% students of vocational institution responded co-curricular activities organized in the institution.

D.) Administration

Table – 4.8

Mode of Admission

Mode of Admission	Vocational Institutions (N=120) (N%)
National level test.	24 (20%)
State level test	78 (65%)
Entrance + Interview	18 (15%)
Direct Admission	NA

Table 4.8 shows the responses of students related to mode of admission in Vocational institutions. It is observed that students' responses vary in admission such as 20% of students got admission through national level test, in some aspects the admission was made through entrance and interview, whereas the majority (65%) of students admitted through the state level test.

Table – 4.9

Fee structure & scholarship

Items		Vocational Institutions (N=120)
		(N%)
Fee Structure	Satisfied	108 (90%)
	Not Satisfied	12 (10%)
Scholarship /Stipend	Yes	82 (68.3%)
	No	38 (31.7%)

From table 4.9, it is observed that the fees charged by the institution was not a problem as a high percentage i.e. 90% students of Vocational institution respectively expressed satisfaction towards the fee structure. Further, with regards to scholarship and stipend in the institutions, 68.3% students of vocational institution affirmed that they receive scholarship from the Government while, 31.7% did not.

Table – 4.10

Reasons for pursuing the course

Reasons	Vocational Institutions (N=120)
	(N%)
Self interest	33 (27.5%)
Job oriented	84 (70%)
Pressure from parents	3 (2.5%)

The above table 4.10 shows the students' responses regarding the reasons for pursuing the particular course. Majority 70% respondents of vocational institution expressed job oriented was the main reason for pursuing the course. Further analysis says 27.5% respondents were shown self-interest towards the course, while 2.5% respondents pursuing the course due to the pressure from their parents.

4.3.2 Present Status of Technical and Vocational Institution

Responses from the TeachersA.) Teacher's Profile

Table – 4.11

Age group of teachers

Age	Vocational Institutions (N=08)
20 – 30 years	0
31 – 40 years	5 (62.5%)
41 years & Above	3 (37.5%)

Table 4.11 shows the different age group of teachers in Vocational institution. It is observed that in vocational institution 62.5% of teachers are between the ages of 31-40 years and remaining 37.5% falls under 41 years and above.

Table – 4.12

Educational qualifications of the teachers

Educational Qualifications		Vocational Institutions (N=08)
General Qualifications	B.A.	1 (12.5%)
	B.Sc.	
	B.Com.	
	M.A.	
	M.Sc.	
	M.Com.	
Professional	B.B.A.	
	M.B.A.	
	B.C.A.	
	M.C.A.	

Qualifications	B.Tech.	3 (37.5%)
	M.Tech.	
	ITI	4 (50%)
	Diploma	1 (12.5%)
	Apprenticeship	1 (12.5%)
Other Qualifications	PhD.	
	GATE	

With regards to the qualification of teachers in Vocational institutions, it is observed from the table 4.12, that majority of the vocational institution appointed teachers' holding ITI degree and Bachelor of Technology as expressed by 50% and 37.5%. Further, the table also shows that very few teachers have B.A., Diploma and apprenticeship qualifications.

Table – 4.13
Mode of appointment of the teachers

Mode of Appointment	Vocational Institutions (N=08)
Interview	2 (25%)
Written Test + Interview	3 (37.5%)
Academic Records	3 (37.5%)

Table 4.36 clearly reveals the mode of appointment of teachers in Vocational institution. It is observed from the table that the teachers were appointed through Interview, Written Test + Interview and Academic Records as affirmed by 25%, 37.5% and 37.5% respectively.

Table – 4.14

Type of Post

Type of Post	Vocational Institutions (N=08)
Permanent	2 (25%)
Ad-hoc	1 (12.5%)
Temporary	5 (62.5%)

The above table 4.14 shows that a more percentage 62.5% teachers of vocational institution responded temporary type of post, while 25% and 12.5% teachers of the institution responded temporary permanent and Ad-hoc respectively.

B.) Physical Infrastructure

Table – 4.15

Residential quarter/ Housing facility	Vocational Institutions (N=08)
Yes	0
No	8 (100%)

From table 4.15, it clearly shows that residential quarters and housing facility were not provided to teachers in vocational institution as 100% teachers responded this statement.

Table – 4.16

Staff Room

Staff Room	Vocational Institutions (N=08)
Yes	8 (100%)
No	0

It is seen from table 4.16 that in almost all vocational institutions have separate staff room as expressed by 100% teachers of the institution.

Table – 4.17

Common Room

Teachers' Common Room	Vocational Institutions (N=08)
Yes	8 (100%)
No	0

Table 4.42 indicates that 100% teachers of vocational institution responded in the affirmative with regard to teachers' common room.

Table – 4.18

Different facilities provided in teachers' Common Room

Facilities	Vocational Institutions (N=08)	
	Yes	No
Magazines	2 (25%)	6 (75%)
Journals	1 (12.5%)	7(87.5%)
Newspapers	5 (62.5%)	3(37.5%)
Lockers for each teacher	5 (62.5%)	3(37.5%)
Large tables for reading & Writing.	5 (62.5%)	3(37.5%)

Regarding the different facilities provided in teachers' common room, it is observed from table 4.18 that in most of the Vocational institutions the facilities were good.

Table – 4.19

Class Room

Classroom		Vocational Institutions (N=08) N (%)
Adequate number of Classroom	Yes	8 (100%)
	No	0
Condition of Classroom	Satisfied	8 (100%)
	Not Satisfied	0

From table 4.19, it is observed that 100% teachers of Vocational institution positively stated that institution have adequate number of classrooms. Further, with regard to the condition of classroom in the institution majority of the teachers were satisfied as expressed by 100% respondents of the institution.

Table – 4.20

Facilities for teachers in the Institute

Facilities Provided	Vocational Institutions (N=08) N (%)	
	Yes	No
Separate rest room	1 (12.5%)	7(87.5%)
Medical Facilities	3 (37.5%)	5(62.5%)
Parking Facilities	5 (62.5%)	3(37.5%)
Drinking water facility	8 (100%)	0
Adequate power supply	5 (62.5%)	3(37.5%)
Transport facility	2 (25%)	6 (75%)

With regards to the facilities provided for teachers in vocational institutions 100% teachers stated Drinking water facility, an equal percentage of 62.5% mentioned Parking Facilities and Adequate power supply, while only 37.5%, 25% and 12.5% expressed provision of Medical Facilities, Transport facility and separate rest room respectively.

C.) Academic Facilities

Table – 4.21

Facilities and Equipment in Laboratory

Facilities & Equipment		Vocational Institutions (N=08) N (%)
Availability of Laboratory	Yes	6 (75%)
	No	2 (25%)

Adequate equipment & machines	Yes	5 (62.5%)
	No	3 (37.5%)
Latest machines & equipment	Yes	7 (87.5%)
	No	1 (12.5%)

A close observation of table 4.21 reveals that in almost all vocational institutions' latest machines and equipment were available as expressed by 87.5% teachers. Further, 75% teachers disclosed the availability of laboratory and 62.5% teachers stated that equipment and machines were adequate in the institution.

Table – 4.22

Teaching – Learning material**Teaching aids**

Teaching aids	Vocational Institutions (N=08) N (%)	
	Yes	No
Well equipped	8 (100%)	
Not Well equipped		0

Table 4.22 clearly shows that a thumping percentage 100% teachers of vocational institution expressed well equipped teaching aids in the institution,

Table – 4.23

Audio - Visual aids for teaching

Audio – Visual aids	Vocational Institutions (N=08) N (%)	
	Yes	No
Computer assisted	7 (87.5%)	1(12.5%)
LCD/LED Projectors	7 (87.5%)	1(12.5%)
Overhead projectors	4 (50%)	4 (50%)

With regards to the audio- visual aids use for teaching a larger percentage of 87.5%, 87.5%, and 50% teachers in vocational institution affirmed computer assisted, LCD/LED projector and overhead projector respectively.

Table – 4.24

Teaching methods used in class session

Teaching method	Vocational Institutions (N=08) N (%)	
	Yes	No
Discussion	7 (87.5%)	1(12.5%)
Lecture	7 (87.5%)	1(12.5%)
Demonstration & Illustration	6 (75%)	2(25%)
Project	7 (87.5%)	1(12.5%)
Presentation	6 (75%)	2(25%)

From table 4.24, it is observed that 87.5%, 87.5%, 75%, 87.5% and 75% teachers in vocational institution expressed about the teaching method use in the classroom which includes the discussion, lecture method, demonstration cum illustration method, project and presentation respectively.

Table – 4.25

Programmes organized in institution

Extra-curricular	Vocational Institutions (N=08) N (%)	
	Yes	No
Seminar	7 (87.5%)	1(12.5%)
Workshop	8 (100%)	0
Educational tour	6 (75%)	2(25%)
Field trips	3 (37.5%)	5(62.5%)
Industrial visit	7 (87.5%)	1(12.5%)

With regards to different programmes organized in Vocational institutions, it is seen from table 4.25 that programmes such as seminar, workshops, educational tour and industrial visit dominated the list of programmes organized in the institutions with responses as high as 87.5%, 100%, 75% and 87.5% teachers responded in favour of the respective programmes.

D.) Curriculum

Table – 4.26

Existing Curriculum

Existing Curriculum	Vocational Institutions (N=08) N (%)
Heavy	0
Moderate	7 (87.5%)
Light or Easy	1 (12.5%)

Table 4.26 shows the opinion of teachers regarding the existing curriculum in Vocational institutions, majority 87.5% teachers in the institution respectively expressed the existing curriculum as moderate, while only 12.5% teachers of vocational institution reported the existing curriculum as light or easy.

Table – 4.27

Completion of Syllabus

Problem in completion of syllabus	Vocational Institutions (N=08) N (%)
Yes	1 (12.5%)
No	7 (87.5%)

In addition, it is seen that the teachers do not face problem in completing the syllabus on time as evident from the positive response of 87.5% teachers of the institution respectively. (Refer table 4.27).

Table – 4.28

Organized Co-curricular activities in the institution

Organized co-curricular activities	Vocational Institutions (N=08) N (%)
Yes	8 (100%)
No	0

Table 4.28 shows the teachers' views with regard to co-curricular activities organized in the institution. It is observed that co-curricular activities were organized in the institutions as affirmed by 100% teachers of vocational institution.

Table – 4.29

Participation of teachers in Co-curricular activities

Co-curricular activities	Vocational Institutions (N=08) N (%)	
	Yes	No
Academic	8 (100%)	0
Games & Sports	7 (87.5%)	1(12.5%)
Cultural	7 (87.5%)	1(12.5%)
Social	4 (50%)	4 (50%)

Further, with regards to teacher's participation in different co-curricular activities, it is observed from table 4.29 that in vocational institutions the percentage of teachers participate in academic by 100%, games and sports by 87.5%, cultural activities by 87.5% and less social interaction is stated by 50%.

E.) Administration**Table – 4.30****Non-teaching staff**

Non-teaching staff	Vocational Institutions (N=08)
	N (%)
Sufficient	3 (37.5%)
Not Sufficient	5 (62.5%)

With regard to adequacy of non- teaching staff in the institution, majority (62.5%) of respondents stated that there is not the sufficient number of non-teaching staff in the institution. Though, the 37.5% of respondents were saying that there is the number of non-teaching staff were sufficient in their domain.

Table – 4.31**Attendance**

Attendance	Vocational Institutions (N=08)
	N (%)
Maintained	8 (100%)
Not Maintained	0

It is observed from table 4.31 that in vocational institutions strict attendance for students and maintained as expressed by 100% teachers of the institutions.

Table – 4.32**Leave facilities in the Institution**

Type of Leave	Vocational Institutions (N=08) N (%)	
	Yes	No
Causal Leave	8 (100%)	0
Medical Leave	3 (37.5%)	5(62.5%)
Study Leave	1 (12.5%)	7(87.5%)

Earned Leave	3 (37.5%)	5(62.5%)
Maternity Leave	3 (37.5%)	5(62.5%)
Paternity Leave	3 (37.5%)	5(62.5%)

Further, with regards to type of leave facilities 100% teachers in vocational institution stated that they can avail casual leave, and others forms of leave such as medical leave, earned leave, maternity leave and paternity leave can also avail as stated by 37.5%(each) teachers in that leave. It is however disappointing, to see that only 12.5% teachers of vocational institution stated that they can avail study leave. (Refer table 4.32)

Table – 4.33

Promotion & Service rules

Items		Vocational Institutions (N=08)
		N (%)
Prospect for Promotion	Yes	4 (50%)
	No	4 (50%)
Paid according to workload	Yes	5 (62.5%)
	No	3 (37.5%)
Provision of increment annually	Yes	3 (37.5%)
	No	5 (62.5%)

From table 4.33, it is observed that there is salary paid according to work load as expressed by 62.5%. Further, with regards to prospect for promotion of 50% teachers in vocational institution. It also clearly shows that the provision of salary increment annually was less.

Table – 4.34

Member in different kind of Committee

Different Committees	Vocational Institutions (N=08) N (%)	
	Yes	No
Student welfare & Discipline Committee	4 (50%)	4 (50%)
Anti-Ragging Committee	0	8 (100%)
Development Committee	5 (62.5%)	3 (37.5%)
Library Committee	2 (25%)	6 (75%)
Sports Committee	2 (25%)	6 (75%)
Examination Committee	3 (37.5%)	5 (62.5%)

With regards to the membership of teachers in different kind of committees, it is observed from table 4.34 that teachers were assigned in different committees to execute the administrative work. In vocational institutions, 62.5%, teachers stated members in Development Committee, while 100%, 75%, 75% and 62.5% teachers stated the members were not involved in the different committees such as Anti-Ragging Committee, Library Committee, Sports Committee and Examination committee respectively. Also, the Student welfare & Discipline Committee recorded the equal percentage (50-50) in participation and non-participation of teachers in this committee.

Table – 4.35

Teaching Profession

Attendance	Vocational Institutions (N=08) N (%)
Satisfied	5 (62.5%)
Dissatisfied	3 (37.5%)

The above table 4.35 clearly shows that the teachers were satisfied with the teaching profession as positively stated by 62.5% teachers of Vocational institution.

4.4 Objective (3) To find out the problems of students and teachers in the institutions of vocational education in Bihar-

4.4.1 Problems faced by the students of Vocational institutions.

(A). Problem related to Physical Infrastructure (Responses of Students)

1.) Building and infrastructural facilities –

1. Non availability of different infrastructural facilities like- tutorial room, auditorium, students' common room, and visitor's room.

2.) Facilities in college campus -

1. There were no provision of canteen facility, no health center, no transportation, no internet and no guidance and counselling facility.

(B.) Problems related to Academic facilities (Responses of students)

1.) Teaching learning materials –

1. There were no any virtual reality equipment.

2.) Extra-curricular activities –

1. The field trips were less as compared to industrial visit, educational tour and seminar.

(C.) Problems related to Administration (Responses of Students)

1. Lack of adequate number of teachers.

2. Delay in disbursement of scholarship/ stipend on time.

4.4.2 Problems faced by the teachers in Vocational institutions.

(A). Problem related to Physical Infrastructure (Responses of Teachers)

1. There were no any residential facilities provided by the institution.

2. Lack of separate rest room, medical facilities and transport facilities.

3. Also the lack of overhead projectors was recorded.

(B.) Problems related to Curriculum (Responses of Teachers)

1. 87.5% of teachers were saying the curriculum on moderate side and 12.5% teachers stated the curriculum on light or easy side.

2. In which, 12.5% teachers were stated that they were facing problem in completing the syllabus.

3. In the context of co-curricular activities, 50% teachers were not participated in social activities.

(C.) Problems related to Administration (Responses of Teachers)

1. Insufficient non- teaching staff to carry out day-to- day activities.
2. The provision of study leave in the institution was not there.
3. Lack of provision regarding salary increment and promotion.
4. There were no any teachers' participation in anti-ragging committee.
5. Lack of library, sports and examination committee.
6. Few (37.5%) teachers were unsatisfied regarding their profession.

4.5 Objective (4)- To make recommendations for the improvement of Vocational Education in Bihar.

4.5.1 Students' recommendations for the improvement of Vocational Education in Bihar.

1. There is the need to develop infrastructural facilities regarding tutorial room, auditorium, students' common room, and visitor's room.
2. The provisions to be made in order to formulate canteen facility, health center, transportation, internet and guidance and counselling facility.
3. VR equipment should be arranged and functioned in the campus.
4. The field trip's importance should be equal to other visits and tours.
5. The adequate number of teachers should be recruited.
6. The disbursement of scholarship/ stipend should be on time.

4.5.2 Teachers' recommendations for the improvement of Vocational Education in Bihar.

1. The residential facilities should be provided by the institution.
2. The institution must have separate rest room, medical facilities and transport facilities.
3. Overhead projectors should be arranged and functioned in the campus.
4. In-service training should be given in order to adopt the new work environment.
5. The participation in social activities should be increased.
6. The recruitment of non- teaching staff should be made to carry out day-to- day activities.
7. The provision of study leave in the institution should be there.
8. Provision should be made regarding salary increment and promotion.
9. Teachers' participation must be encouraged in different committee by which the proper activities can be managed.
10. The institution should arrange meeting in which all faculty can convey their job satisfaction.

CHAPTER-5

FINDINGS AND DISCUSSION OF THE STUDY

5.1 Introduction

The current study focuses on the evolution and current state of vocational education in Bihar. It includes physical infrastructure, academic facilities, curriculum, administration, and instructor profiles. It also explores the difficulties encountered by both students and teachers in this educational sector. Chapter I outlines the study's aims and research questions. Chapter IV presents an objective study and interpretation of data obtained from principals, teachers, and students.

This chapter discusses the study's findings and links to relevant literature to support the research outcomes.

5.2 Findings and Discussion

5.2.1 Origin and Development of Vocational Education in Bihar.

Vocational Education and Training offers lower-level education and training in several engineering and non-engineering trades. Government ITIs offer vocational training under the Directorate of Employment, Skill Development, and Entrepreneurship.

- Vocational Education in the state began in 1924 with the founding of the first technical college, Bihar Engineering College in Patna, which is now known as the National Institute of Technology, Patna. However, Patna University was founded in 1917 and is the seventh oldest university in the Indian subcontinent. Later, many departments and universities were established. TVE in Bihar is in its early stages, with little infrastructure and facilities. The current situation of vocational education in Bihar is marked by a lack of academic advancement and limited options for those who are unable to pursue higher education.
- 148 Government ITIs (Woman ITI) with capacity of around 25,000 youth and more than 1153 Private Training Institutes known as ITCs with training capacity of more than 94,000 are functioning under the administrative control.
- The department operates 148 Industrial Training Institutes across 38 districts in the state. In which, 43 Women ITI and 105 General ITI are here. Total 5 ITI (including one WITI) in Purnia and total 4 ITI (including one WITI) in Katihar.
- There are two types of training courses - (a) Training in engineering Trades, and (b) Training in Non-engineering Trades.
- The Administrative Council of Labour & Employment Department oversees the Directorate of Employment, Skill Development, and Entrepreneurship, which was previously known as the Directorate of Employment and Craftsmen Training. The Directorate of Employment & Craftsmen Training became a full-fledged Directorate in 1986, overseen by a Director. The department operates under two branches- i) Craftsmen wing and ii) Employment wing.

- **i) Craftsmen wing** - The Directorate General of Training (DGT) in the Ministry of Labour, Govt. of India, initiated Craftsmen Training Scheme (CTS) in the year 1950 for imparting skills in various vocational trades to meet the skilled manpower requirements for technology and industrial growth of the country.
- Under the constitution of India, vocational training is the concurrent subject. The development of training schemes at national level, evolution of policy, laying of training standards and norms, conducting the examinations, certification, etc. are the responsibilities of the Central Govt. whereas the implementation of the training schemes largely rests with the State Govts. State Government is advised by State Council for Vocational Training (SCVT) having representatives from different fields.
- The Directorate General of Training developed the Craftsmen Training Scheme in 1950. It provides training programs ranging from six months to two years that cover more than 130 distinct disciplines. Prerequisites for admission in these courses range from eighth to twelfth grades. After completing the course, participants take the All India Trade Test (AITT). Those who pass obtain a National Trade Certificate.
- **. ii) Employment wing** - The Employment wing of the Directorate of Employment & Training, under the administrative control of the Department of Labour, Employment & Training, Govt. of Bihar, is responsible for administration of the network of Employment Exchanges and University Employment & Information Guidance Bureau in the whole of the State of Bihar, with the mission to collect, process and disseminate all information relating to job opportunities to all job seekers in order to provide job assistance to them.
- The Apprentices Act, 1961 was enacted with the objective of regulating the program of training of apprentices in the industry by utilizing the facilities available therein for imparting on-the-job training. Ministry of Skill Development and Entrepreneurship is the administrative ministry responsible for implementation of the Act.

5.2.2 Present status of Vocational Education in Bihar in terms of:

1. Physical Infrastructure

a) Lack of Infrastructural facilities -

- With regard to infrastructural facilities, it was found that proper classrooms, library, laboratory, sports complex and playground in majority of the vocational institutions were provided as affirmed by 94.2%, 65.8%, 81.7%, 65%, and 89.2% respectively. However, other infrastructure facilities such as Tutorial room, Auditorium, Students' Common room, Students' Common room and Visitor's Room were found lacking in both Vocational institutions as affirmed by the students 78.3%, 70.8%, 55.8% and 80% respectively. Due to that reason, the infrastructural facilities were lacking.

b) Classroom -

- Both Vocational institutions have the provision of well ventilation and lighting in the classroom which suggest that there is the improvement in facilities provided such as proper lighting and ventilation inside the classroom as confirmed by the 94.2% students.

c) Common room -

- There was absence of student's common room in the institutions while, both institutions 100% have provision of teacher's common room. The facilities in teachers' common room which also includes Magazines and Journal were reportedly found to be provided in less than 25% of the institutions.

d) Residential quarters for teachers and students' hostel -

- With regards to the residential quarters for teachers it was found that in vocational institutions 100% teachers affirmed non-availability and no provision of residential quarters.
- There were provisions of student's hostel in most of the institutions 92.5%.

e) Toilet facility -

- It was found that separate toilet facilities for both male and female students were provided in the campus.

f) Lack of different facilities in the institution -

- The students reported lack of Transportation, Canteen, Health center and Guidance and Counselling in the institution. While, Separate rest room (87.5%), Medical (62.5%) and Transportation (75%) facilities for teachers were not available in the institution.

2. Academic Facilities**a) Classroom –**

- There is the lack of VR equipment.

b) Teaching-Learning Process -

- The field trips were less.

3. Curriculum**a) Examination system-**

- In Vocational institutions, institutes under NCVT and trades with the duration of two years follow semester examination and the institute under SCVT and trades with the duration of one year follow annual examination system.
- The study found that 93.3% students were satisfied towards the present examination system with the exception of 6.7% students. However, with regard to timely declaration of results 98.3% students in Vocational institution reported satisfactory with the exception of 1.7% students of the institution.

d) Co-curricular Activities-

- It was discovered that vocational institutions organize co-curricular activities such as games and sports, as well as intellectual and cultural activities, and that students and faculties are encouraged to participate in these activities.
- The study shows that only 50% teachers take part in social organization.

4. Administration

a) Satisfactory conduct of Admission-

- Admissions are conducted satisfactorily ranging from common entrance test conducted at State and National level, and merit, entrance test & interview as expressed by the students in Vocational institutions.

b) Satisfactory with fee Structure and scholarship/ stipend

- It was found that students in Vocational institutions were satisfied with the fees charged by the institution. 68.3% students were getting scholarship while 31.7% students were not getting scholarship.

c) Faculty member and non- teaching staff

- The study revealed that there exists inadequate number of faculty members and non-teaching staff.

d) Leave and responsibility

- Permanent instructors in vocational schools had access to earned leave, medical leave, casual leave, and maternity leave, whereas ad-hoc and temporary teachers received no money for their leave. Other types of leave, such as study leave, were mentioned by only a few teachers.
- It was also found that the institutions have different kind of committees to plan and execute administrative work and teachers were the member in that different committees.

e) Promotion and service rules

- Although there were prospect for promotion for teachers in Vocational institutions, it was found that there were dissatisfaction among teachers as reported by 62.5% teachers in the institutions regarding no any salary increment annually.

5. Teachers' Profile

a) Educational qualifications and teaching experiences-

- In terms of educational qualification it was found that 50% teachers in Vocational institutions, diploma was the highest degree they had obtained; very few teachers have attended bachelors or master's degree.

b) Mode of appointment and type of post-

- It was found that mode of appointment of teachers was done mostly through written test and interview and academic records in Vocational institutions, while appointment through interview was reported by 25% teachers in the institution. Further, the study also revealed that appointment of ad-hoc and temporary teachers still exists in the institutions and found that 62.5% teachers in the institutions have temporary type of post.

CHAPTER-6

IMPLICATIONS, RECOMMENDATION AND CONCLUSION

6.1 Introduction

The thesis concludes with recommendations for vocational education in Bihar based on the study's findings and implications. The chapter will end with ideas for future research.

6.2 Implications of the study

- The study found that technical and vocational education in Bihar is slow and requires improvement. Effective execution NCVT rules is crucial for improving the quality of vocational institutions in Bihar. This includes ensuring adequate infrastructure and facilities. The study found that inadequate funding is a barrier to the growth of technical and vocational schools.

The study also portrays the presence of private sector in vocational institutions, and with the support of the Government i.e., Public Private Partnership (PPP) mode under the Labour resource department. A uniform policy is adopted in ITIs under SCVT and NCVT to ensure parallel to each other. The present study has also revealed lack of qualified teachers in the institution, and these issues cannot be overlooked. It may be stated that the state government should take the matter seriously in recruitment process or appointment of the teachers with efficiency and transparency. The study suggests that giving institutions more latitude to assign seats can boost enrollment in vocational colleges.

- Vocational Education provides individuals with specialized knowledge and competencies in a variety of occupations, promoting effective goal attainment.
- It improves students' competences by teaching both fundamental and advanced skills for everyday living.
- This education exposes students to a variety of academic and practical skills, preparing them for future work. It fosters specialized professionalism by establishing confidence and aptitude in certain areas.
- Vocational education broadens knowledge of science and technology while stressing occupational skills. It boosts productivity and efficiency in a competitive world while providing possibilities for skill development. As society grows and technology advances, this education evolves, providing updated skills to meet the changing difficulties of the workplace.

Therefore, this study can assist policymakers in understanding the challenges of Vocational Education, curriculum framers in developing curriculum to meet society's needs in emerging areas, and administrators in managing and strengthening institutions for betterment.

6.3 Recommendations to improve Vocational Education in Bihar

1. To ensure equal access for students with special needs, infrastructure should be disabled-friendly and barrier-free, including the installation of ramps.
2. Curriculum should be regularly reviewed and revised to align with industry and local market needs. Introduce creative programs to prepare pupils for future occupations.
3. Institutions should have autonomy over admissions, course selection, and texts to enhance the quality of vocational education.
4. To develop more employment and hire more skilled instructors at the institution. Maintaining transparency and a proper selection process is crucial for recruiting.
5. Increase investment in vocational institutions to ensure appropriate administration. Local difficulties and interference, such as landowner rights, should not obstruct development initiatives.

6. To implement a feedback mechanism in all vocational institutions. Collecting students' feedback and establishing key performance indicators to evaluate instructor's performance.
7. To provide residential quarters for teachers especially in remote and rural areas.

6.4 Suggestions for further research

This research examines Vocational Education in Bihar, focusing on infrastructure, academic facilities, curriculum, administration, and teachers' profile. There could be some restrictions, and given the study's limitations, the following are recommended for further investigation:

1. A study may be taken up to examine the women's or female participation in Vocational Education and Training.
2. The research might examine the quality of teachers in Vocational Education towards professionalism.
3. A comparative study may be taken up to assess Vocational Education and Training with other states of India.

6.5 Conclusion

This research examines the state of Vocational Education in Bihar, finding both advantages and disadvantages. While growth is clear, there has been a noticeable deterioration in educational quality, indicating a need for reform. Quality is dependent on skilled instructors, students, well-designed programs, and suitable infrastructure. Challenges include a considerable disparity between demand and existing facilities, a lack of institutions, and little engagement from the corporate sector. Addressing core difficulties and student-teacher concerns is critical. Implementing feedback from stakeholders, such as students, teachers, and principals, is critical for growth. Collaboration between the Bihar government, national initiatives, and private organizations is critical for long-term progress. Constructive collaboration with business, academia, and research agencies is encouraged to improve the state's technical and vocational institutions. **Akpomie (2009)** asserts that *"No nation can move forward technologically, industrially and economically without developing a strong partner initiative in the creation of wealth, poverty reduction and employment generation with required skills. These skills include technical human and specific skills to cope with the challenges of the future since Vocational and Technical education is a vital tool for the sustainable advancement of any nation"*.

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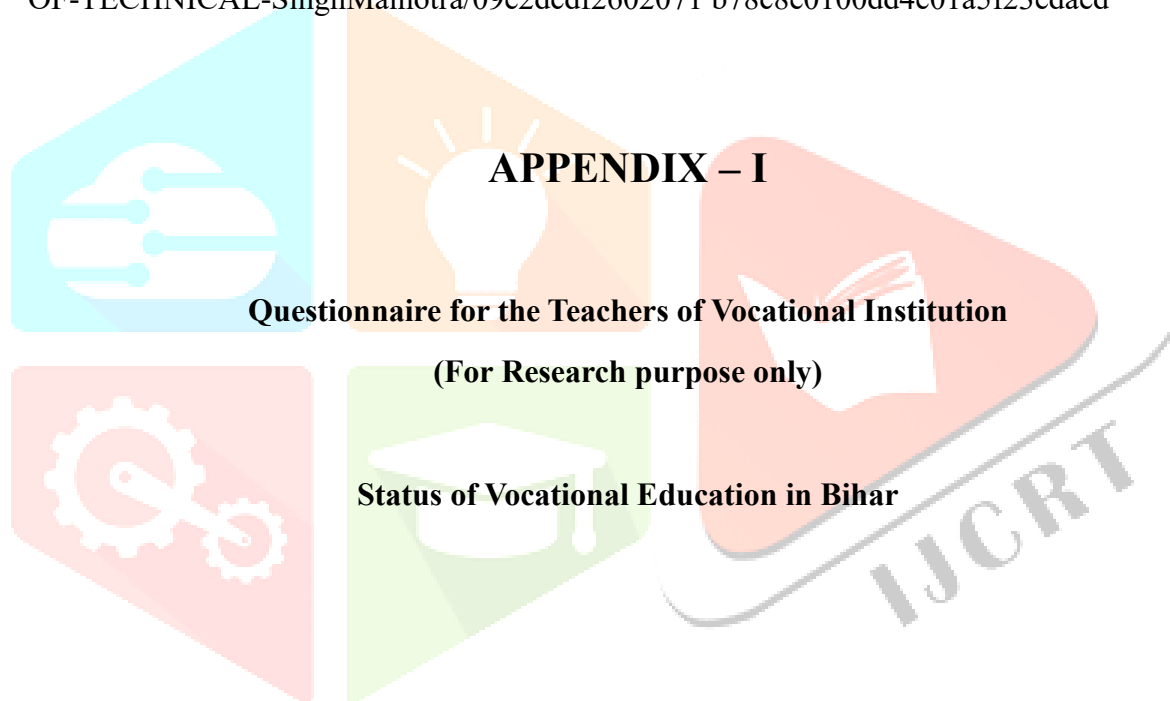
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Investigator

NIRBHAY KUMAR

22SEED16

Supervisor

Dr. T. SUMALINI

(Assistant Professor)

DEET, University of Hyderabad.

This Questionnaire has been prepared to gather information regarding the provision of Vocational Education in the State, Bihar. Kindly provide your free and frank response and your responses will be used only for research purpose and it shall be kept confidential.

INSTRUCTIONS

1. The following is a list of questions, please read them carefully and reply by making a tick mark (Yes/No) to the response you think to be most appropriate.
2. You can tick (Yes/No) more than one option wherever applicable.
3. Please do not fill whichever is not applicable.
4. There are 'Yes' or 'No' answers.
5. Kindly do not leave any question or item blank unless it is not applicable to you.

Thank You

NIRBHAY KUMAR



1. Email *

2. Email *

3. Your Name / आपका नाम *

4. Age / आयु *

Mark only one oval.

☐ 20 - 30

☐ 31 - 40

☐ 41 years & Above / 41 वर्ष से ज्यादा

5. Gender / लिंग *

Mark only one oval.

☐ Male / पुरुष

☐ Female / महिला

☐ Transgender / अन्य लिंग

☐ Don't want to reveal / प्रकट नहीं करना चाहते

6. Background / पृष्ठभूमि *

Mark only one oval.

☐ Rural / ग्रामीण

☐ Urban / शहरी

7. Category / कोटि *

Mark only one oval.

☐ General / सामान्य

☐ EWS

☐ OBC / ओबीसी

☐ SC / एससी

☐ ST / एसटी

8. Parents' Education / आपके अभिभावक की शिक्षा *

Mark only one oval.

☐ Illiterate / अनपढ़

☐ 5th / पाँचवी पास

☐ 8th / आठवीं पास

☐ 10th / दसवीं पास

☐ UG / स्नातक

☐ PG / स्नातकोत्तर

☐ Ph.D. / पीएचडी

General questions / सामान्य प्रश्न

This section contains total of 4 questions / इस खंड में कुल 4 निम्नलिखित प्रश्न हैं-

9. 1. What is your institute name? / आपके संस्थान का नाम क्या है? *

10. 2. District, where your institute is located / जिला, जहां आपका संस्थान स्थित है ? *

11. 3. How do you assess students' progress towards Vocational skills? / आप व्यावसायिक कौशल की दिशा में छात्रों की प्रगति का आकलन कैसे करते हैं? *

Mark only one oval.

- ☐ Only through Formative Assessment / केवल रचनात्मक मूल्यांकन के माध्यम से
- ☐ Only through Summative Assessment / केवल योगात्मक मूल्यांकन के माध्यम से
- ☐ Through both Formative & Summative Assessment / दोनों रचनात्मक और योगात्मक मूल्यांकन के माध्यम से

12. 4. How do you address the diverse learning needs of students in the Vocational setting? / आप व्यावसायिक परिवेश में छात्रों की सीखने की विविध आवश्यकताओं को कैसे संबोधित करते हैं? *

Questionnaire Booklet / प्रश्नावली पुस्तिका

This section contains total of 25 questions. / इस खंड में कुल 13 प्रश्न हैं।

A.) Teacher's Profile / शिक्षक का प्रोफाइल**13. Q.1. What is your educational qualification? / आपकी शैक्षणिक योग्यता क्या है? ***

Check all that apply.

- ☐ B.A
- ☐ B.Sc.
- ☐ B.Com
- ☐ B.B.A
- ☐ B.C.A
- ☐ B.Tech
- ☐ M.A
- ☐ M.Sc.
- ☐ M.Com.
- ☐ M.B.A
- ☐ M.C.A
- ☐ M.Tech
- ☐ Option 13
- ☐ PhD.
- ☐ GATE
- ☐ I.T.I
- ☐ Other: _____

14. Q.2. What was your mode of appointment in the institute? / संस्थान में आपकी नियुक्ति का तरीका क्या था? *

Mark only one oval.

- ☐ Through Interview / साक्षात्कार के माध्यम से
- ☐ Through Written test & Interview / लिखित परीक्षा एवं साक्षात्कार के माध्यम से
- ☐ Through Academic Records / शैक्षिक रिकॉर्ड के माध्यम से

15. Q.3. What is your type of job? / आपकी नौकरी किस प्रकार की है? *

Mark only one oval.

- ☐ Permanent / स्थायी
- ☐ Ad-hoc / तदर्थ / अनौपचारिक रूप से
- ☐ Temporary / अस्थायी

B.) Physical Infrastructure / भौतिक मूलद्रांचा

16. Q.4. Are there any housing or residential facilities provided in your institution? / क्या आपके संस्थान द्वारा कोई आवास या आवासीय सुविधाएं प्रदान की गई हैं? *

Mark only one oval.

- ☐ Yes / हाँ
- ☐ No / नहीं

17. Q.5. Is there any staff room in your institution? / क्या आपके संस्थान में कोई स्टाफ रूम है? *

Mark only one oval.

- ☐ Yes / हाँ
- ☐ No / नहीं

18. Q.6. Is there any common room in your institution for the teachers? / क्या आपके संस्थान में कोई स्टाफ रूम है? *

Mark only one oval.

- ☐ Yes / हाँ
- ☐ No / नहीं

19. Q.7. What are the facilities provided in common room for you in the institution? ★
/ संस्थान में आपके लिए कॉमन रूम में क्या-क्या सुविधाएं उपलब्ध कराई जाती हैं?

Check all that apply.

- ☐ Journals
- ☐ Magazines
- ☐ Newspapers
- ☐ Lockers for each teacher
- ☐ Large table for reading & writing

20. Q.8. Do the institute have adequate number of classrooms? / क्या संस्थान के पास पर्याप्त संख्या में कक्षाएँ हैं? ★

Mark only one oval.

- ☐ Yes / हाँ
- ☐ No / नहीं

21. Q.9. What is the condition of the classroom? / कक्षा की स्थिति क्या है? ★

Mark only one oval.

- ☐ Satisfied / संतुष्ट
- ☐ Unsatisfied / असंतुष्ट

22. Q.10. What are the facilities for you in the institute? / संस्थान में आपके लिए क्या सुविधाएं हैं? *

Check all that apply.

- ☐ Separate rest room
- ☐ Medical Facilities
- ☐ Parking Facilities
- ☐ Drinking water facility
- ☐ Adequate power supply
- ☐ Transport facility

C.) Academic Facilities / शैक्षणिक सुविधाएं

23. Q.11. What are the facilities and equipment in the Laboratory? / प्रयोगशाला में क्या-क्या सुविधाएं एवं उपकरण हैं? *

Check all that apply.

- ☐ Availability of Laboratory /
- ☐ Adequate equipment /
- ☐ Latest machines & equipment /

24. Q.12. What do you think about the teaching-learning material that is available in the institution? / संस्थान में उपलब्ध शिक्षण-अधिगम सामग्री के बारे में आप क्या सोचते हैं? *

Mark only one oval.

- ☐ Well equipped / अच्छी तरह से सुसज्जित
- ☐ Not Well equipped / अच्छी तरह से सुसज्जित नहीं

25. **Q.13. What are the audio-visual aids for teaching in the institution? / संस्थान में शिक्षण के लिए श्रव्य-दृश्य सामग्री क्या हैं?** *

Check all that apply.

- ☐ Computer assisted / कंप्यूटर सहायता प्राप्त
- ☐ LCD or LED Projectors / एलसीडी या एलईडी प्रोजेक्टर
- ☐ Overhead Projectors / ओवरहेड प्रोजेक्टर

26. **Q.14. What are the teaching methods used in the class session? / कक्षा सत्र में उपयोग की जाने वाली शिक्षण विधियाँ क्या हैं?** *

Check all that apply.

- ☐ Discussion / विचार-विमर्श
- ☐ Lecture /
- ☐ Demonstration & Illustration / प्रदर्शन और चित्रण
- ☐ Project / परियोजना
- ☐ Presentation / प्रस्तुति

27. **Q.15. What are the programmes (extra-curricular activities) organized in the institution? / संस्था में आयोजित कार्यक्रम (पाठ्येतर गतिविधियाँ) क्या हैं?** *

Check all that apply.

- ☐ Seminar / परिसंवाद
- ☐ Workshop / कार्यशाला
- ☐ Educational tour / शैक्षिक भ्रमण
- ☐ Field trips / क्षेत्र यात्राएं
- ☐ Industrial visit / औद्योगिक दौरा

D.) Curriculum / पाठ्यक्रम

28. Q.16. Existing curriculum in the institute? / संस्थान में मौजूदा पाठ्यक्रम *

Mark only one oval.

- ☐ Heavy
- ☐ Moderate
- ☐ Light or Easy

29. Q.17. Is there any problem in completion of syllabus? / क्या सिलेबस पूरा होने में कोई दिक्कत है? *

Mark only one oval.

- ☐ Yes / हाँ
- ☐ No / नहीं

30. Q.18. Organization of co-curricular activities in the institution? / संस्था में पाठ्य सहगामी क्रियाकलापों का आयोजन? *

Mark only one oval.

- ☐ Yes / हाँ
- ☐ No / नहीं

31. Q.19. Participation of teachers in co-curricular activities? / सह-पाठ्यचर्या संबंधी गतिविधियों में शिक्षकों की भागीदारी? *

Check all that apply.

- ☐ Academic / शैक्षणिक
- ☐ Games & Sports / खेल
- ☐ Cultural / सांस्कृतिक
- ☐ Social / सामाजिक

E.) Administration

32. Q.20. Number of non-teaching staff? / गैर-शिक्षण कर्मचारियों की संख्या? *

Mark only one oval.

- ☐ Sufficient / पर्याप्त है
- ☐ Not sufficient / पर्याप्त नहीं है

33. Q.21. Status of attendance? / उपस्थिति की स्थिति *

Mark only one oval.

- ☐ Maintained / रखरखाव
- ☐ Not Maintained / रखरखाव नहीं

34. Q.22. What are the leave facilities in the institution? / संस्थान में छुट्टी की क्या सुविधाएँ हैं? *

Check all that apply.

- ☐ Causal Leave / आकस्मिक अवकाश
- ☐ Medical Leave / चिकित्सा छुट्टी
- ☐ Study Leave / अध्ययन अवकाश
- ☐ Earned Leave / अर्जित अवकाश
- ☐ Maternity Leave / प्रसूति अवकाश
- ☐ Paternity Leave / पितृत्व अवकाश

35. Q.23. What are the promotion and service rules in the institution? संस्था में पदोन्नति एवं सेवा नियम क्या हैं? *

Check all that apply.

- ☐ Prospect for Promotion / पदोन्नति की संभावना
- ☐ Paid according to workload / कार्यभार के अनुसार भुगतान किया जाता है
- ☐ Provision of increment annually / प्रतिवर्ष वेतन वृद्धि का प्रावधान

36. Q.24. Are you the part of any following committee? / क्या आप किसी निम्नलिखित समिति का हिस्सा हैं? *

Check all that apply.

- ☐ Student welfare & Discipline Committee / छात्र कल्याण एवं अनुशासन समिति
- ☐ Anti-Ragging Committee / रैगिंग विरोधी समिति
- ☐ Development Committee / विकास समिति
- ☐ Library Committee / पुस्तकालय समिति
- ☐ Sports Committee / खेल समिति
- ☐ Examination Committee / परीक्षा समिति

37. Q.25. What do you think about your profession? / आप अपने पेशे के बारे में क्या सोचते हैं? *

Mark only one oval.

- ☐ Satisfied / संतुष्ट
- ☐ Unsatisfied / असंतुष्ट

APPENDIX – II

Questionnaire for the Students of Vocational Institution**(For Research purpose only)****Status of Vocational Education in Bihar****Investigator**

NIRBHAY KUMAR

22SEED16

Supervisor

Dr. T. SUMALINI

(Assistant Professor)

DEET, University of Hyderabad.

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2. You can tick (Yes/No) more than one option wherever applicable.
3. Please do not fill whichever is not applicable.
4. There are 'Yes' or 'No' answers.
5. Kindly do not leave any question or item blank unless it is not applicable to you.

Thank You

NIRBHAY KUMAR

1. Email *

2. Email *

3. Your Name / आपका नाम *

4. Age / आयु *

Mark only one oval.

☐ 16 - 18

☐ 18 - 20

☐ 20 - 22

☐ 22 and above / 22 वर्ष से ज्यादा

5. Gender / लिंग *

Mark only one oval.

☐ Male / पुरुष

☐ Female / महिला

☐ Transgender / अन्य लिंग

☐ Don't want to reveal / प्रकट नहीं करना चाहते

6. Background / पृष्ठभूमि *

Mark only one oval.

☐ Rural / ग्रामीण

☐ Urban / शहरी

7. Category / कोटि *

Mark only one oval.

☐ General / सामान्य

☐ EWS

☐ OBC / ओबीसी

☐ SC / एससी

☐ ST / एसटी

☐ Option 6

8. Parents' Education / आपके अभिभावक की शिक्षा *

Mark only one oval.

☐ Illiterate / अनपढ़

☐ 5th / पाँचवी पास

☐ 8th / आठवीं पास

☐ 10th / दसवीं पास

☐ 12th / बारवी पास

☐ UG / स्नातक

☐ PG / स्नातकोत्तर

☐ Ph.D. / पीएचडी

General questions / सामान्य प्रश्न

This section contains total of 4 questions / इस खंड में कुल 4 निम्नलिखित प्रश्न हैं-

9. **1. Do you know about the Vocational Education? / ***

क्या आप व्यावसायिक शिक्षा के बारे में जानते हैं?

Mark only one oval.

☐ Yes / हाँ

☐ No / नहीं

10. **2. If you are pursuing the vocational course, please specify your area: / यदि आप ***

व्यावसायिक पाठ्यक्रम कर रहे हैं, तो कृपया अपना क्षेत्र निर्दिष्ट करें:

Mark only one oval.

☐ Draughtsman Civil

☐ Electrician

☐ Fitter

☐ Information Communication Technology System Maintenance (ICTSM)

☐ Mechanic Diesel

☐ Mechanic Tractor

☐ Plumber

☐ Technician

☐ Welder

☐ Wireman

☐ Mechanic Electronics

☐ Other: _____

11. 3. What is your institute name? / आपके संस्थान का नाम क्या है? *

12. 4. District, where your institute is located / जिला, जहां आपका संस्थान स्थित है? *

Questionnaire Booklet / प्रश्नावली पुस्तिका

This section contains total of 13 questions. / इस खंड में कुल 13 प्रश्न हैं।

A.) Physical Infrastructure / भौतिक अवसंरचना

13. Q.1. What are the infrastructural facilities provided in your institution? / आपके संस्थान में प्रदान की जाने वाली बुनियादी सुविधाएं क्या हैं? *

Check all that apply.

- ☐ Classroom / कक्षा
- ☐ Library / पुस्तकालय
- ☐ Laboratory / प्रयोगशाला
- ☐ Tutorial room / ट्यूटोरियल रूम
- ☐ Auditorium / प्रेक्षागृह
- ☐ Students' Common room / छात्रों का कॉमन रूम
- ☐ Visitor's room / आगंतुक कक्ष
- ☐ Sport Complex / खेल परिसर
- ☐ Playground / खेल का मैदान

14. **Q.2. What are the facilities provided in your campus? / आपके कैंपस में क्या-क्या सुविधाएं दी जाती हैं?** *

Check all that apply.

- ☐ Hostel / छात्रावास
- ☐ Availability of Textbooks / पाठ्यपुस्तकों की उपलब्धता
- ☐ Drinking water / पीने का पानी
- ☐ Canteen / कैनटीन
- ☐ Separate Washroom / अलग वॉशरूम
- ☐ Health Center / स्वास्थ्य केंद्र
- ☐ Guidance and Counselling / मार्गदर्शन और परामर्श
- ☐ Workshop / कार्यगोष्ठी
- ☐ Internet / इंटरनेट
- ☐ Transportation / परिवहन

B.) Academic Facilities / शैक्षणिक सुविधाएं

15. **Q.3. What are the types of audio-visual aids (T.L.M) provided in the classroom? / कक्षा में प्रदान किए जाने वाले ऑडियो-विजुअल एड्स के प्रकार क्या हैं?** *

Check all that apply.

- ☐ E-Books / ई-पुस्तकें
- ☐ Black or White board / काला या सफेद बोर्ड
- ☐ Computer / कंप्यूटर
- ☐ Projector / प्रोजेक्टर
- ☐ VR equipment / वीआर उपकरण

16. **Q.4. What are the types of extra-curricular activities organized in the institution? ***
/ संस्था में आयोजित पाठ्येतर गतिविधियों के प्रकार क्या हैं?

Check all that apply.

- ☐ Seminar / परिसंवाद
☐ Educational tour / शैक्षिक भ्रमण
☐ Industrial Visit / औद्योगिक यात्रा
☐ Field trips / क्षेत्र यात्राएं

C.) Curriculum / पाठ्यचर्या

17. **Q.5. What do you think about the course content? / ***
आप पाठ्यक्रम सामग्री के बारे में क्या सोचते हैं

Mark only one oval.

- ☐ Useful / उपयोगी
☐ Not Useful / उपयोगी नहीं

18. **Q.6. Type of examination system followed in your institution. / आपके संस्थान में ***
किस प्रकार की परीक्षा प्रणाली का पालन किया जाता है?

Mark only one oval.

- ☐ Semester / सत्र
☐ Annual / वार्षिक

19. **Q.7. Timely declaration of results? / परीक्षा परिणामों की समय पर घोषणा? ***

Mark only one oval.

- ☐ Yes / हाँ
☐ No / नहीं

20. **Q.8. Present examination system? / वर्तमान परीक्षा प्रणाली? ***

Mark only one oval.

- ☐ Satisfied / संतुष्ट
- ☐ Unsatisfied / असंतुष्ट

21. **Q.9. Does your institution organize co-curricular activities? / क्या आपकी संस्था सह-पाठ्यक्रम गतिविधियों का आयोजन करती है? ***

Mark only one oval.

- ☐ Yes / हाँ
- ☐ No / नहीं

D.) Administration / प्रशासन

22. **Q.10. What is the mode of admission in your institution? / आपके संस्थान में प्रवेश का तरीका क्या है? ***

Mark only one oval.

- ☐ National level test / राष्ट्रीय स्तर की परीक्षा
- ☐ State level test / राज्य स्तरीय की परीक्षा
- ☐ Entrance + Interview / प्रवेश + साक्षात्कार
- ☐ Direct admission / सीधा प्रवेश

23. **Q.11. In the context of fee structure, you are- / शुल्क संरचना के संदर्भ में, आप हैं- ***

Mark only one oval.

- ☐ Satisfied / संतुष्ट
- ☐ Not satisfied / संतुष्ट नहीं

24. Q.12. Are you availing scholarship or stipend? क्या आप छात्रवृत्ति या वजीफा प्राप्त कर रहे हैं? *

Mark only one oval.

☐ Yes / हाँ

☐ No / नहीं

25. Q.13. Why are you pursuing the course? / आप कोर्स क्यों कर रहे हैं? *

Mark only one oval.

☐ Self interest / आत्म रुचि

☐ Job oriented / नौकरी पाने के उद्देश्य से

☐ Pressure from parents / माता-पिता से दबाव



Government Officials

1. What is the present status of Vocational education in the state?
2. What steps have been taken by the Government to improve Vocational education in the state?
3. What is your vision of Vocational education in Bihar in the near future?
4. What are the problems faced in Providing Vocational Education in the state?
5. What steps are taken or thought to be done for the remedy of the problems?
6. Suggestion for quality improvement of Vocational Education in Bihar?
7. Kindly give your suggestions or recommendations with regard to Vocational education in Bihar?

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