

Examining India's Vocational education system and enhancing the abilities of instructors employed by vocational Training facilities

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Abstract - When it comes to preparing workers with the industry-specific skills needed to keep up with an economy that is always changing, India's vocational education system is crucial. Nevertheless, instructors' low abilities frequently impede the efficacy of these programs in vocational training centres. The training that is given does not always meet the needs of the market since many teachers do not have up-to-date knowledge in technology, effective teaching methods, and experience in the field. Tackling these difficulties calls for an all-encompassing strategy to improve teacher skills. This gap can be filled by initiatives like organised capacity-building programs, collaborations with businesses, and the adoption of contemporary pedagogical practices. Another way to keep teachers current with trends is to encourage them to participate in ongoing professional development and make use of digital resources. Improved vocational training and a more employable workforce that can fuel India's long-term economic growth may both be achieved through a more robust instructional framework.

Keywords: India, Vocational Education, Employed, Training Facilities

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1. INTRODUCTION

When it comes to moulding India's workforce and economy, the vocational education system is crucial. Skilled workers are in high demand in many different areas, including manufacturing, healthcare, construction, IT, and the service industry, due to the country's fast population growth and economic development. Equipping students with the technical skills needed to thrive in certain crafts or professions is the goal of vocational education, which tries to bridge the gap between academic understanding and practical application (Ali, M. 2015). Outdated curriculum, inadequate infrastructure, low levels of awareness regarding vocational training paths, and a social preference for conventional academic education are some of the obstacles that India's vocational education system must overcome. To guarantee that vocational education in India remains high-quality, relevant, and scalable, it is essential to address these difficulties and improve the skills of instructors hired by vocational training institutions (Delluc, A. 2012).

The importance of vocational education in combating unemployment and promoting economic growth has been acknowledged for quite some time. But in India, it is frequently neglected in favour of more conventional forms of schooling. Consequently, many graduates do

not possess the necessary skills to be employed, and the workforce is often unprepared to meet the expectations of business (Enemark, D. 2012). The government and other interested parties have responded to the skills deficit by putting more emphasis on vocational training programs. A more organised strategy for skill development has been made possible by programmes like the Skill India Mission, the National Skill Development Corporation (NSDC), and the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) (Maclen, R. 2017). It is the responsibility of the vocational training program teachers, however, to ensure that these endeavours are successful. These teachers are the system's backbone; they have a direct impact on the training and instruction that pupils get.

There is an immediate need to focus on improving the skills of vocational educators. Teachers at many schools are woefully unprepared when it comes to industrial experience, new technology, and current trends in education. Because of this shortcoming, there is a misalignment between classroom instruction and the abilities that employers value. Moreover, a great number of vocational educators continue the cycle of failure since they are also graduates of the same antiquated institution (Kazmi, S. W. 2017). Improving this situation calls for a shift

in attitude towards lifelong learning, creativity, and flexibility, in addition to providing these educators with professional development opportunities. In light of the fact that developments in AI, robots, and digital technologies are altering the worldwide labour market, this is of utmost importance within the context of the Fourth Industrial Revolution (Madhukar, I. 2013).

Increasing the competence of vocational educators presents a complex set of problems. The first issue is the dearth of options for professional development that are specifically designed to meet their demands. A combination of theoretical knowledge and practical experience is necessary for educating vocational instructors, who differ from more conventional teachers. One example is the need for an automobile repair teacher to be well-versed in both the theory and practice of engine mechanics, as well as current innovations in electric and hybrid vehicle technology (Nazim, M. 2011). programs for professional development need to be relevant to certain industries, grounded in reality, and in line with international norms. Second, many sectors of the nation, especially those in rural and semi-urban regions, suffer from a severe lack of trained teachers. The quality of education is further compromised since training centres are sometimes forced to engage unqualified workers due to this scarcity. The vocational training industry needs to make an effort to recruit exceptional people by providing them with attractive remuneration, opportunity for career progression, and acknowledgement for their work if they want to solve this problem (Arrow, K. J. 2017).

2. LITERATURE REVIEW

Sahasrabudhe, A. D. (2021) Vocational training should be a part of regular schooling, according to the National Education Policy (NEP) 2020. It need more industrial cooperation and better teacher preparation. The implementation of vocational education is hindered by societal bias, inadequate infrastructure, and a shortage of competent teachers, among other problems. There are still big gaps in industry-relevant knowledge among teacher training programs that emphasise pedagogy and technology integration. Although the government's initiatives to foster collaborations and apprenticeships between academics and business show promise, they will not be successful unless they are better synchronised with the needs of industry.

Muthuprasad, T., (2021) Curriculum relevance and practical training possibilities are impacted by India's vocational education system's issues with inadequate industry involvement. International examples, such as Germany's dual system, demonstrate the value of collaborative efforts between businesses and schools. Strategies that India can implement include updating its curricula to reflect changing market demands and requiring teachers to undergo training in business settings. Vocational trainers' technical and pedagogical skill sets need serious improvement if we want to see better results from our programs.

Mincer, J. (2018) The COVID-19 pandemic's impact on online learning highlighted deficiencies in India's vocational education system, especially when it came to providing students with hands-on experience. These difficulties were exacerbated by the fact that neither students nor teachers had easy access to digital information and technologies. Blended or online learning settings necessitate effective teacher training programs that utilise ICT resources and approaches. To guarantee equal access to vocational training, it is crucial to address the digital gap, particularly in rural regions.

Murphy, K. M., (2016) Potential areas for improvement in teacher preparation can be found by comparing the vocational training systems of India, Germany, and China. Instructors in Germany, for instance, are required to complete comprehensive vocational education programs that include both classroom instruction and real-world experience. Educators in India might benefit from models that encourage lifelong learning and provide them with specialised training. Training kits and required industry experience are two examples of structured support systems that might bring India's instructors up to speed with international norms.

Oketch, M. O. (2015) Policy implementation encounters obstacles, especially in rural regions, despite the fact that the Ministry of Skill Development and Entrepreneurship runs several skill development programs. The system is not as successful as it might be due to the shortage of competent vocational teachers. The importance of programs that provide educators with current information in both technical and pedagogical areas cannot be overstated. It is suggested that in order to improve the results of vocational education in India, the public and commercial sectors work together, with a focus on quality assurance procedures and incentives for instructors.

3. METHODOLOGY

3.1 Design of study

One of the most common study techniques in school is the scientific method. With rules that create a notion that can be used again to forecast and control future events, the investigator has a Delhi of knowing the truth in a particular situation. A case study is used in the applied research to get information. According to Bell (1999), case studies clarify circumstances. To put it simply, case study researchers concentrate on the school, the teacher, and the child (Cohen and Manion, 1994). According to Adelman et al. (1976), case studies may offer a wealth of information and encourage action. It might be costly and time-consuming to make a lot of observations here. According to Cohen and Manion (1994), many educational research policies are self-explanatory due to descriptive studies of specific conditions, linkages, processes, viewpoints, orientations, outlooks, and current procedures.

Following a pre-test of the survey questionnaire and a random selection of instructors, field research will begin, and any necessary modifications will be made prior to dissemination.

3.2 Data sources

3.2.1 Primary data

The study will mostly concentrate on primary data collected from a large number of instructors in vocational training centres in Delhi/NCR using a semi-structured survey form; as a result, quantitative data will be used in the research.

3.2.2 Secondary data

Secondary data will be gathered from official credentials, reports, literature, and the internet.

3.3 Target population

The sample population for the study would include all kinds of instructors and trainers who are currently employed by vocational training facilities in the Delhi/NCR region. Instructors who teach theoretical courses, instructors who oversee practical lectures in workshops, and teachers who teach practical subjects related to their profession will all be included in the survey form.

3.4 Sampling

Teachers and trainers employed by the vocational training facilities in the Delhi/NCR region will make up the study's population. A tiny percentage of the selected population—teachers in particular—exhibited some degree of carelessness when completing the survey questionnaires. The cross-sectional study approach will be used to randomly choose instructors and vocational education institutions. The total sample size for this study will be 500 respondents.

3.5 Data analysis

The data gathered through the use of questionnaires will be coded and examined. To do Research Delhi, statistical tests like as ANOVA, T-test, or any other pertinent test will be conducted using Excel and the Statistical Package for Social Sciences (SPSS).

4. RESULTS

Three parts were used for the data analysis: the first part dealt with the information gathered from the students, the second with the information gathered from the instructors, and the third with the replies from the principals and HOSs.

4.1 Section-1: students' responses

From 20 schools, the researcher chose 500 pupils as a sample. In South Delhi, there are ten government schools and ten private schools where vocational education is offered. The sample was given a questionnaire that the investigator had specifically

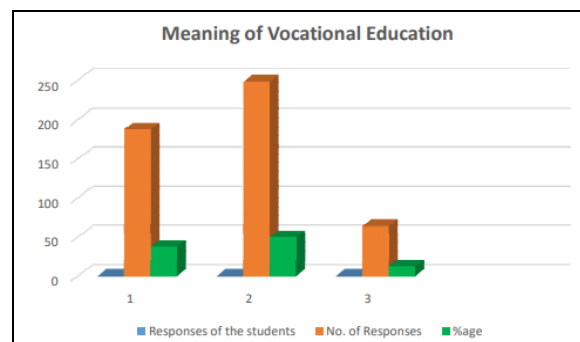
created for the pupils of these schools in order to learn more about their current situation and issues. The survey was created in English. There are fifteen closed-ended and open-ended things in all. Frequencies have been derived by grouping the answers to open-ended questions. Sometimes a subject gives more than one reaction. Thus, there are more replies overall than there are topics. The replies were analysed item-by-item by the researcher, who then summarised the results in a generalised format.

The responses of students who provided a range of replies about the significance of vocational education are gathered and grouped as follows in Table 1:

Table 1: Meaning of Vocational Education

Sr. No.	Responses of the Students	No. of Responses	%age
1	Study of a Vocational Course in the school and It is an art of Hand	188	37
2	It is the Education for earning livelihood and help us in future Employment	248	50
3	This is the Education which is parallel to the general education	64	13
	Total	500	100

According to Table 1, the majority of students (50%) enrolled in vocational courses because they would aid them in their future careers and provide for their basic needs. 37% of students said that vocational education is a subject they take in school and an art form, even though some students were unsure of what it actually meant.



Graph 1: showing various meanings of vocational education

The types of replies from students who provided different definitions of vocational education are displayed in Graph 1. Rather than providing a definition, half of the students immediately saw the value of vocational education and said that the courses will help them find work in the future. Therefore, it can be said that the majority of students support vocational education since it helps us prepare for future employment by allowing us to make a living. Few pupils believe that vocational education is an educational program that runs concurrently with general education.

Students provided a range of answers when asked why they had enrolled in vocational courses, as shown in Table 2.

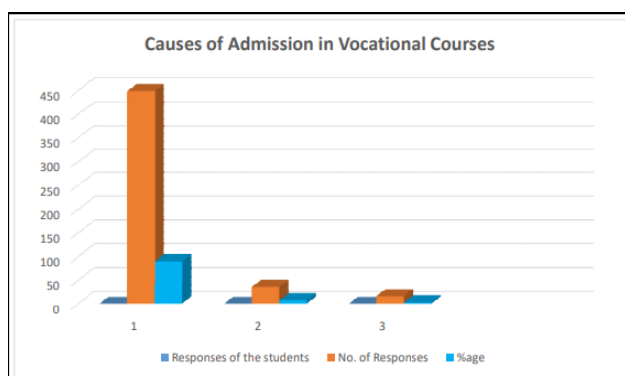
Table 2: Causes of Admission in Vocational Courses

Sr. No.	Responses of the Students	No. of Responses	%age
1	It is a good source of starting profession, earning livelihood and get employment	448	90
2	It does mental development and full utilization of time	36	7
3	It is very costly seeking outside the school	16	3
	Total	500	100

According to Table 2, half of the students in the sample said that vocational education was a significant source of income. Students choose these courses because they believe they are an excellent way to start a career and find work. To put it another way, 90% of students said that vocational courses helped them find work overall.

More than 90% of students said that it is an excellent way to start a career and find work, as shown in Graph 2.

The students are adamant that after completing vocational training, they may begin their career, which would provide them with income and a means of subsistence. Additionally, they can find work.



Graph 2: showing Causes of Admission in Vocational Courses

Few students said that vocational education was a waste of time and that receiving instruction from outside, private sources was too expensive.

4.2 Section 2: Teacher's opinion and responses towards vocational education.

Three Vocational Stream instructors were chosen for the sample from each school. Sixty instructors were given the surveys. There were sixteen open-ended and closed-ended things on it. Frequencies have been determined by grouping the answers to open-ended questions. Sometimes a subject will give more than one reaction. As a result, there are more replies

overall than there are subjects. After analysing each response item by item, the researcher synthesised the results into a generalised statement.

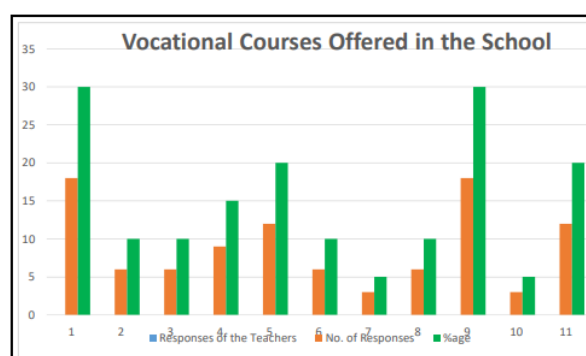
Regarding the first item, "What Vocational Courses are offered in the school?" for instructors A number of replies from the teachers are listed in Table 3.

Table 3: Vocational Courses Offered in the School

Sr. No.	Responses of the Teachers	No. of Responses	%age
1	Health Care and Beauty Culture	18	30
2	Travel and Tourism	6	10
3	Horticulture	6	10
4	Office Secretary-ship	9	15
5	Stenography and Computer Application	12	20
6	Banking	6	10
7	Electrical Technology	3	5
8	Food Service and Management	6	10
9	Fashion Designing and Clothing Construction	18	30
10	Textile Designing, Dying and Printing	3	5
11	IT Application	12	20

Table 3 indicates that according to the 30% of professors that answered, the most popular courses among students are Fashion Design and Clothing Construction, Health Care, and Beauty Culture.

More structural and financial support from the government is needed to enhance vocational courses. Both Hindi and English versions of the most recent books on vocational courses should be available. Schools should have access to advanced teaching aids and new technology. A trained teacher should be hired on a full-time basis. There should be separate spaces for each subject. The government should supply sufficient resources for vocational courses. Adequate provisions should be made for basic infrastructure and equipment, such as computer sets, the internet, and generators.



Graph 3: showing Vocational Courses Offered in the School

When asked, "What Vocational Courses are offered in the school?" the number and percentage of instructors who provided different answers are displayed in Graph 3. 18 teachers listed health care and beauty culture, 6 listed travel and tourism, 6 listed horticulture, 9 listed office secretaryship, 12 listed stenography and computer applications, 6

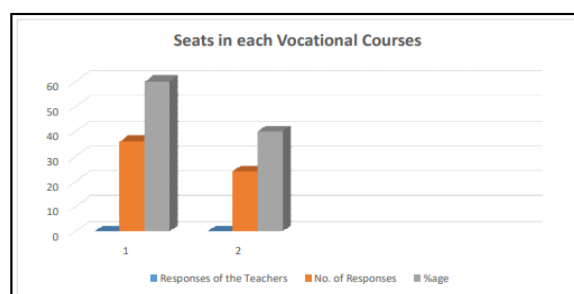
listed banking, 3 listed electrical technology, 6 listed food service and management, 18 listed fashion design and clothing construction, 3 listed textile design, dyeing, and printing, and 12 listed IT application as one of the many courses offered in schools' vocational education programs. It is recommended that schools begin offering a variety of vocational courses.

Table 4 presents the instructors' answers to question 2, which asked about the overall number of seats available in the schools' vocational courses.

Table 4: Seats in each Vocational Courses

Sr. No.	Responses of the Teachers	No. of Responses	%age
1	40 seats	36	60
2	30 seats	24	40
	Total	60	100

Table 4 makes it evident that 60% of instructors said there were 40 seats available in each vocational course, whereas 40% said there were 30 seats available in each of the schools' vocational courses.



Graph 4: showing Seats in each Vocational Courses

According to Graph 4, 24 instructors indicated that there were 30 seats in each vocational course, but 36 teachers indicated that there were 40 seats in each.

4.3 Section-3: principals/hos's views

The sample also included the principals of each school, as was previously noted. A timetable for the interview was created by the investigator. There were sixteen questions in the interview agenda. Open-ended and closed-ended questions were also included. After grouping the answers to open-ended questions, frequencies were determined. In some instances, a subject may provide several replies. The number of subjects is consequently less than the total number of replies. The researcher compiled the replies into a generalised statement after doing item-by-item analysis.

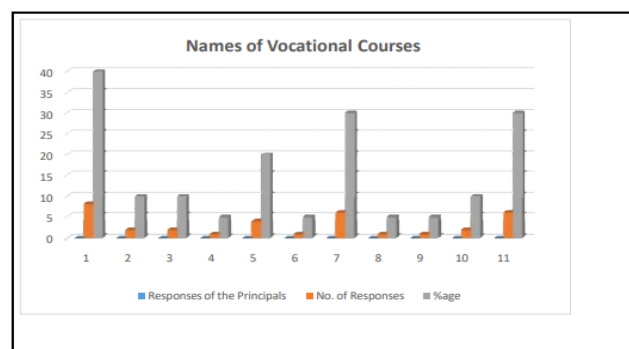
"What are the names of these Vocational Courses?" was the question posed to the school principals. They answered in accordance with the information in Table 5.

Table 5: Names of these Vocational Courses

Sr. No.	Responses of the Principals	No. of Responses	%age
1	Health Care and Beauty Culture	8	40
2	Travel and Tourism	2	10
3	Horticulture	2	10
4	Office Secretary-ship	1	5
5	Banking	4	20
6	Electrical Technology	1	5
7	Fashion Designing and Clothing Construction	6	30
8	Textile Design, Dyeing and Printing	1	5
9	IT Application	1	5
10	Food Service and Management	2	10
11	Stenography and Computer Application	6	30
	Total	---	---

Table 5 demonstrates that the principals provided the titles of the different vocational courses. Thirty percent said fashion design and clothing construction; five percent said textile design, dyeing, and printing; five percent said IT application; ten percent said food service and management; thirty percent said stenography and computer application; forty percent said health care and beauty culture; ten percent said travel and tourism; ten percent said horticulture; five percent said office secretary; twenty percent said banking.

According to Table 5, 40% of schools have access to health care and beauty culture. There were 40% and 30% of offered courses in fashion design, clothing construction, and stenography and computer application, respectively. However, the least offered courses were IT application, textile design, dyeing, and printing, office secretaryship, and electrical technology.



Graph 5: showing Names of these Vocational Courses

The principals provided the titles of the different vocational courses, as seen in Graph 5. Eight principals replied to the questions about health care and beauty culture, two about travel and tourism, two about horticulture, one about office secretaryship, four about banking, one about electrical technology, six about fashion design and clothing construction, one about textile design, dyeing, and printing, one about IT application, two about food service and management, and six about stenography and computer application.

When the question, "How many Vocational Courses are offered by your school?" was posed to the school principals Their answers are shown in Table 6.

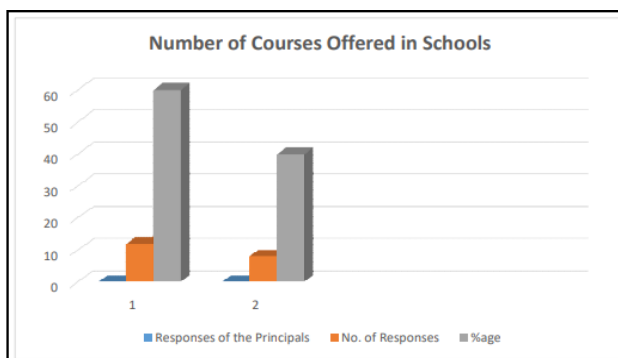
Table 6: Number of Courses Offered in Schools

Sr. No.	Responses of the Principals	No. of Responses	%age
1	One course	12	60
2	Two courses	8	40
	Total	20	100

Table 6 makes it evident that 60% of respondents said the schools only offered one course, while 40% said the institutions offered two.

15% of teachers said that these courses helped students become somewhat trained for their careers, while 15% said that they helped students become completely trained.

Twelve of the principals' twenty comments supported a single course, while eight suggested that the schools should provide two vocational courses.



Graph 6: showing Number of Courses Offered in Schools

According to Graph 4.6, the vast majority of respondents believed that schools ought to offer one course pertaining to vocational courses. However, in certain schools, two Vocational Education courses have to be offered.

5. CONCLUSION

India's system of vocational education is essential for producing a workforce with the necessary skills to satisfy the needs of its quickly expanding economy. But obstacles like out-of-date curricula, little industry connections, and a lack of qualified teachers make it less successful. It is crucial to fund ongoing professional development programs that concentrate on the newest pedagogical approaches, technological integration, and industry trends in order to improve the skills of teachers in vocational training institutions. Forming alliances with businesses may help teachers gain real-world experience and keep their education

current. Additionally, encouraging creativity and quality in instruction through awards and recognition can inspire teachers to meet higher expectations. India's vocational education system can empower its teachers, improve training quality, and eventually create a workforce that is capable, flexible, and in line with the changing demands of the labour market by filling these gaps.

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