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Impact of Vocational and Non-Vocational Education on Employment and Social Standing in Rohilkhand Regions of Uttar Pradesh

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Abstract

This research paper evaluates the effects of vocational education compared to traditional, non-vocational education in rural areas of the Rohilkhand region of Uttar Pradesh. The results indicate that vocational education significantly impacts incomes, unemployment, poverty, and social status in rural areas. The study reveals a strong positive association between changes in income, unemployment, poverty, and social status, with advancements in one field often linked to advancements in others. The impact on education is most notable at higher secondary and secondary education levels, with lower effects at graduate and postgraduate levels. Vocational education, particularly those with GTI, ITI, DDUSDP, UPSDP, and NSDP qualifications, reported noticeable increases in income levels and decreased unemployment rates. Traditional education had a less significant impact on income and unemployment. To maximize its impact, it is crucial to address implementation challenges, enhance community participation, and improve collaboration. The findings suggest that vocational education has had a more substantial impact on income, unemployment reduction, and social status enhancement compared to traditional education. The paper also highlights the gaps in the implementation and execution of skill development programs and suggests areas for improvement to enhance their effectiveness.

Keywords: Skill development, training, vocational education, employment and poverty

Introduction:

Skill development programs are a key strategy in India's efforts to combat unemployment, poverty, and social exclusion, particularly in rural regions where educational and economic opportunities are often limited. According to the Ministry of Skill Development and Entrepreneurship, over 4 crore people in India are engaged in skill development initiatives, with a significant focus on rural areas. Vocational education plays a crucial role in enhancing the skills of individuals, providing them with opportunities for income generation and social mobility. In Uttar Pradesh, the most populous state in India, the rural economy is heavily dependent on agriculture, and unemployment rates are higher than the national

average, especially among women and youth. As of the 2021 National Sample Survey, only 12% of rural women in Uttar Pradesh have received formal skill training, despite the large number of schemes aimed at boosting rural employment.

The contradiction between vocational and non-vocational education marks a significant juncture in creating individual trajectories and societal structures, influencing not only employment opportunities but also social standing and overall well-being (Ganie, 2022). Vocational education is frequently seen as a means of achieving quick employment and financial independence due to its focus on practical skills and direct application to certain industries or professions (Ullah & Malik, 2020). This style of education prepares individuals with the competencies required for certain jobs, promoting a clear link between training and workforce engagement (Panth & Maclean, 2020). Indeed, vocational training, often provided at the high school or post-secondary level, focuses on the hands-on implementation of gained skills, integrating the education sector with the world of employment (Fatima et al., 2020). Since they are essential to the nation's industrialization and development, qualified workers who possess the necessary knowledge, skills, and competencies play a crucial role (Fitrian & Sugiyono, 2020).

Formal education plays a key role in societal growth by arming individuals with fundamental skills, critical thinking talents, and specific expertise necessary for numerous occupations (Iliescu et al., 2025). Every country's progress depends heavily on education (Akorli & Timothy, 2021). The system promotes creativity, intellectual curiosity, and a thorough awareness of the world by including a broad range of subjects, such as the humanities, sciences, arts, and social sciences (Patil & Gaupale, 2021).

In the Rohilkhand region, which encompasses districts like Bareilly, Budaun, and Moradabad, socio-economic challenges such as poverty and low literacy rates persist. Vocational education is seen as a vital tool for addressing these issues, providing individuals with practical skills that align with the local job market. However, the impact of these educational programs on key socio-economic indicators such as income, unemployment, poverty, and social status is not always clear. This study aims to evaluate the effects of vocational education in comparison to traditional, non-vocational education in the rural areas of Rohilkhand, examining how these educational pathways influence the socio-economic conditions of individuals in the region.

Review of literature:

There are notable disparities in employability outcomes between vocational and non-vocational schooling when compared to employment rates in the Uttar Pradesh region of Rohilkhand. Numerous studies suggest that vocational education improves employment prospects more successfully than non-vocational courses. Rates of Employment Participants in vocational training have a 70% employment rate, but non-participants only have a 50% employment rate (Bhatt et al., 2024). Vocationally qualified people typically land positions faster after school, though this benefit may wane over time (Forster et al., 2016). The typical monthly wage for those with vocational training is INR 18,000, 29% more than that of their counterparts without training, who make INR 14,000 (Bhatt et al., 2024). According to longitudinal research, vocationally trained people's incomes have been steadily increasing over the past five years, averaging a 7% annual increase (Bhatt et al., 2024). Higher rates of self-employment, especially in the non-farm sector, are correlated with vocational education, underscoring its function in promoting entrepreneurship. Disparities in gender and caste influence the number of vocationally prepared people who choose to work for themselves (Choudhury et al., 2024). Vocational education may result in less flexibility in career changes later in life, indicating a possible trade-off between short-term

job stability and long-term adaptability, even while it clearly offers advantages in initial employment and income (Forster et al., 2016).

Although its effects vary greatly across rural and urban India, vocational education (VET) is a significant component that affects employment rates and social standing in both settings. VET is linked to greater career prospects and higher earnings in metropolitan areas, but the benefits are less noticeable in rural areas. This suggests that job creation and stronger educational infrastructure are crucial in these places. VET holders earn higher average daily pay for both regular and casual workers, and their unemployment rates are lower than those of ordinary secondary graduates (Agrawal, 2012). People with more education are less likely to work in rural agriculture, which may indicate a trend toward professional professions (Pradhan et al., 2018). But there is still a high rate of unemployment among VET holders, especially in rural areas (Agrawal, 2012). Vocational training improves economic standing and social mobility in urban regions, but its social benefits are limited in rural areas due to a lack of good employment prospects. Access to VET and subsequent employment results varied significantly by gender and caste, impacting social standing across several groups (Choudhury et al., 2024). Even while VET has the potential to enhance job outcomes, there are still obstacles to overcome, especially in rural areas where training programs are less accessible and effective. This discrepancy calls into question fair development and the necessity of focused initiatives to increase VET's influence in various geographical areas.

Vocational graduates have greater employment rates in their early careers, but this trend may reverse later in life, especially in systems that place a strong emphasis on particular abilities (Hampf & Woessmann, 2017). Vocational education may impede one's ability to adjust to shifting job markets later in life, which could be detrimental even while it offers immediate employment benefits (Hampf & Woessmann, 2017) (Hanushek et al., 2017). Graduates of vocational programs frequently find jobs sooner than their non-vocational peers, facilitating a quicker transition from school to the workplace. Long-Term Effects on Wages and Careers Vocational education tends to lose its initial employment benefit over time. Vocational training skills may lose value more quickly, and people may find it difficult to adjust to technological advancements, which could affect their chances of finding long-term employment and earning a living (Brunello & Rocco, 2015) (Brunello et al., 2015). Vocational education may result in reduced predicted long-term value, especially for individuals with higher post-secondary education, although it does not always provide a disadvantage in employment at later ages (Brunello & Rocco, 2015).Variability in Different Situations Depending on the national environment and the particular architecture of vocational systems, the effect of vocational education on labor market outcomes can differ. Varying results in terms of career advancement and pay raises might result from variations in the definition and application of vocational education (Bol & Förster, 2025). Vocational training can lessen employment precarity in certain situations during the school-to-work transition, but it has no discernible impact on unemployment risk after a person enters the workforce (Korpi et al., 2003). The study examines the contribution of vocational education to Indonesian human development. The conceptual analysis conducted in this research paper highlights the importance of vocational education for human development. The study's conclusion states that the goal of vocational education is to produce a generation with the right kind of skills and morals (**Rahardjo, 2020**). The significance of technical education and vocational training for Nepal's sustainable development is covered in this paper. A key component of Nepal's national sustainable development is Technical Education and Vocational Training (TEVT). An effort has been

made in this research article to use TEVT to support sustainable development. The elements of education for sustainable development and the obstacles to it are highlighted in this study **(Bagale, 2015)**. The implementation, issues, and role of government in vocational education are covered in this research study. The results of this study indicate that occupation and employment serve as the foundation for vocational education. In the modern day, having a robust system of vocational education is crucial for every nation. Vocational education contributes to the nation's development. The importance of vocational education has been acknowledged by the Indian educational system. However, there are other regions where the implementation of vocational education is encountering difficulties **(Kaushik, 2014)**. The level of awareness and interest in vocational education among students from scheduled tribes has been examined. The sample for this study was gathered from students in districts of Madhya Pradesh where tribal populations are prevalent. This study employed both qualitative and quantitative data. The results of this research indicate that while students have limited knowledge about vocational education, they select certain vocations to improve their skills and support their livelihoods **(Goswami at all, 2023)**.

Objectives of the Study:

- We aim to assess vocational education compared to traditional education in terms of enhancing income, creating employment opportunities, reducing poverty, and improving social status.
- To compare the outcomes of vocational education programs such as ITI, GTI, DDUSDP, UPSDP, and NSDP with traditional education in terms of income improvement, employment opportunities, poverty reduction, and social status enhancement.

Research Methodology:

The study is based on primary data collected from 120 respondents in the Rohilkhand region. The respondents were categorized based on their educational backgrounds, divided into vocational education categories (ITI, GTI, DDUSDP, UPSDP, and NSDP) and traditional education categories (Middle, Secondary, Higher Secondary, Graduate, and Post Graduate). The analysis examines how these educational qualifications have affected the respondents' income, unemployment, poverty, and social status. The data was presented in tabular and graphical formats to illustrate the findings.

Data Analysis and Discussion:

Table-1

Vocational Course	Skilled People (Y)	Non-Vocational Course	Non-Skilled People (X)
ITI	22	Middle	20
GTI	42	Secondary	30
DDUSDP	36	Higher Secondary	38
UPSDP	16	Graduate	24
NSDP	4	Post-graduate	8

Sources: Primary Data

As per table - 1 t, possible choices are:
Dependent variable: Skilled People-Y (number of skilled people).

Independent variables: Non-Skilled People-X (number of non-skilled people) and possibly education level (Non-Vocational Course) encoded numerically.

Since "Non-Vocational Course" is categorical (education levels), encode has it numerically or as dummy variables for regression.

Based on the number of non-skilled individuals (Non Skilled People X) and education level (encoded as Education Level Code), the multiple linear regressions analysis predicts the number of skilled individuals (Skilled People Y) as follows:

R-squared: 0.969, meaning that the model accounts for around 96.9% of the variation in skillful individual.

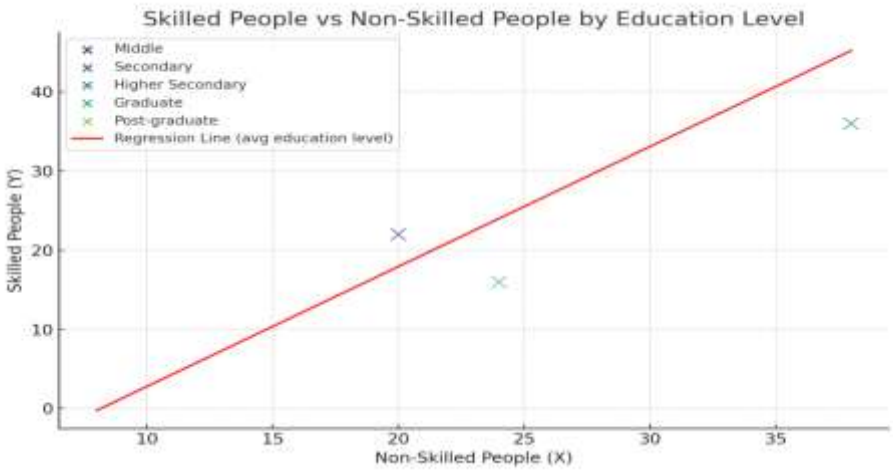
Coefficients: Constant intercept: -9.86 (p=0.166, not statistically significant)

1.52 (statistically significant, p=0.015) for non-skilled people X.

Code for Education Level: -4.21 (p=0.070, slightly significant).

There is a significant positive link between the number of skilled people and the number of unskilled people. The number of skilled individuals declines as education level rises (from middle to post-graduate), according to the education level's negative coefficient, but this effect is only somewhat significant. With a high R-squared value, the model provides a good fit to the data. With education level denoted by colour, the regression results are visualized to highlight the relationship between skilled and non-skilled individuals.

Figure -1



Sources: Primary Data

Table-2 Impact of Skill Development Programmes (Vocational Education) on Income, Unemployment, Poverty and Social Status in Rohilkhand Regions (Skilled People -Y) of Rural Areas

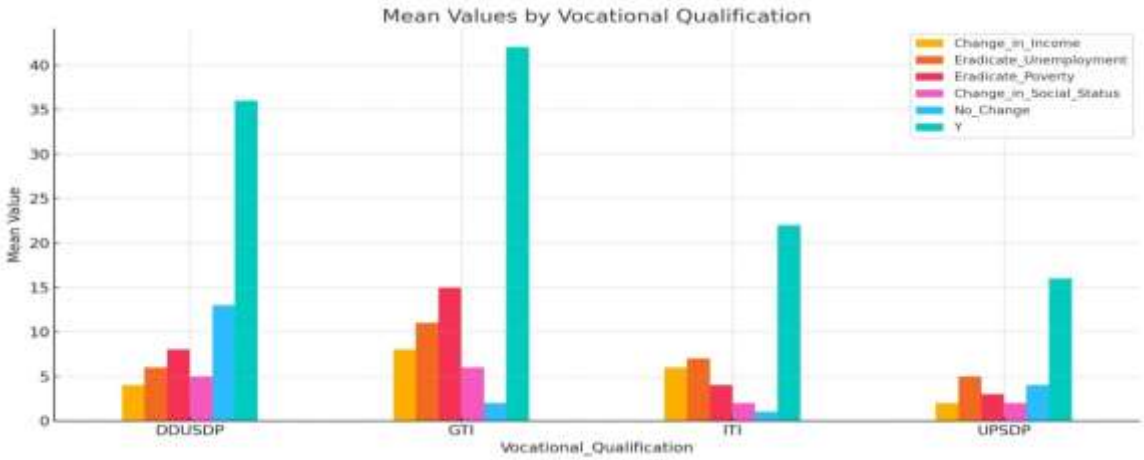
Vocational Qualification	Change in Income	Eradicate Unemployment	Eradicate Poverty	Change in Social Status	No Change	Total Skilled People -Y
ITI	6	7	4	2	1	22
GTI	8	11	15	6	2	42

DDUSDP	4	6	8	5	13	36
UPSDP	2	5	3	2	4	16
NSDP	1	2	1	0	0	4

Sources: Primary Data

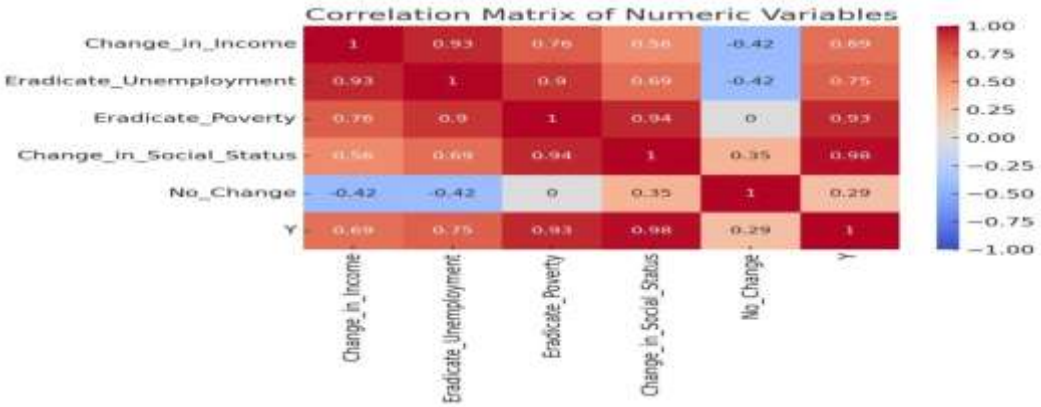
The bar plot displays the mean values of the numerical variables grouped by vocational qualification. This facilitates a clearer comparison of how each qualification typically impacts social standing, unemployment, poverty, income, and other related variables. The associations between the numerical variables are displayed in the correlation matrix heatmap. For instance, Eradicate Poverty (0.76) and Eradicate Unemployment (0.93) have a substantial positive correlation with changes in income. Eliminating poverty has a strong correlation with social status change (0.94). Eradicate unemployment and change in income does not negatively correlate.

Figure -2



Sources: Primary Data

Figure -3



Sources: Primary Data

Based on the data analysis about the effects of skill development programs (vocational education) on incomes, unemployment, poverty, and social status in rural Rohilkhand, the following are the key findings:

Disparities among professional qualifications: The highest median values for the majority of positive effect indicators, such as income change, unemployment reduction, poverty reduction, and social status change, are displayed by the GTI classification group. Additionally, the DDUSDP has medium-to-high values, particularly in the categories of poverty eradication and without change. In these indicators, the ITI and UPSDP groups exhibit relatively lower values. This suggests that the GTI program may be more effective in improving the social and economic outcomes in the studied regions.

Strong positive correlations have been shown between changes in income, unemployment, and poverty, indicating that improvements in one area are closely linked to improvements in other areas. The eradication of poverty is also strongly correlated with a change in social status, suggesting that a better social standing is linked to a decrease in poverty. The variable "Sin cambios" has a negative correlation with the majority of positive effect indicators, suggesting that the likelihood of positive results is lower when there are no changes.

The skill development programs, especially the GTI, appear to have a positive and significant influence on employment, income, poverty reduction, and social status. The strong correlations between these variables highlight the multifaceted advantages of vocational education in rural areas.

Table-3
Impact of Simple Education (Non Vocational Education) on Income, Unemployment, Poverty and Social Status in Rohilkhand Regions (Non Skilled People -X) of Rural Areas

Qualification	Change in Income	Eradicate Unemployment	Eradicate Poverty	Change in Social Status	No Change	Total Non-Skilled People -X
Middle	2	4	2	1	11	20
Secondary	5	7	10	2	6	30
Higher Secondary	6	9	12	3	10	38
Graduate	2	5	3	2	12	24
Post-graduate	2	0	3	1	0	8

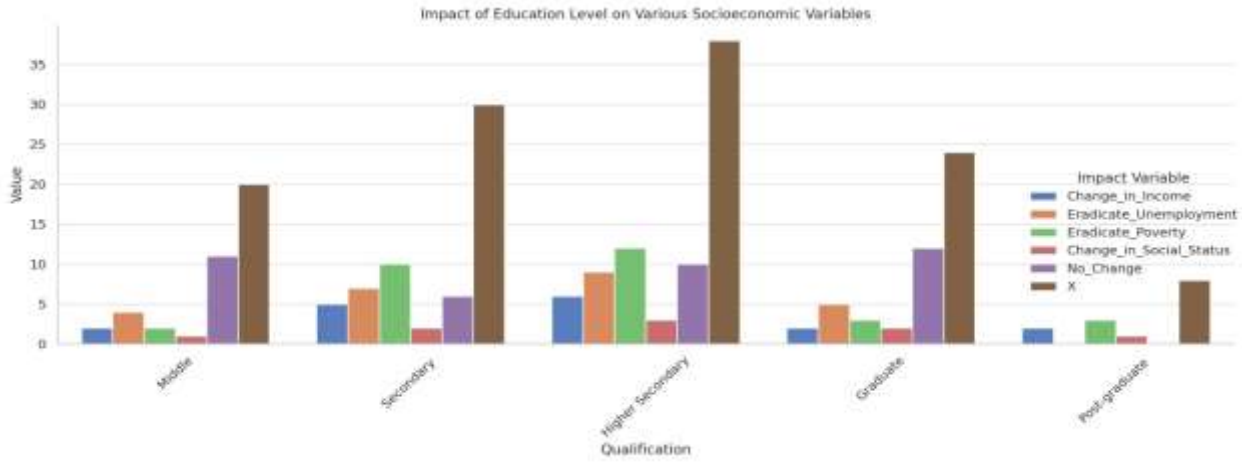
Sources: Primary Data

The following are some statistical conclusions drawn from the data of table 2:

- The average income change, on a scale of 2 to 6, is 3.4.
- Elimination of unemployment ranges from 0 to 9, with an average of 5.
- The average rate of poverty eradication is 6, with a range of 2 to 12.
- On a scale of 1 to 3, the average change in social standing is 1.8.
- On a scale of 0 to 12, 7.8 is the average number of no changes.
- Correlation analysis reveals strong positive connections between
- Changes in income and the elimination of poverty (0.996)
- Changes in income and the removal of unemployment (0.832)
- Changes in social status with the elimination of unemployment (0.881)
- The "No Change" variable has minimal to no correlation with other factors.

Impact of Traditional Education (Non-Vocational Education) on Income, Unemployment, Poverty and Social Status in Rohilkhand Regions (Non-Skilled People -X) of Rural Area

Figure - 4



The greatest favorable influence on income is seen at higher secondary and secondary education levels. The influence is lower at the graduate, middle, and post-graduate levels.

Eliminate of Unemployment:

The greatest benefit comes from higher secondary education, which is followed by secondary and graduate. Due to sample size or other variables, post-graduate has no impact.

Eradicate of Poverty:

The biggest influence on ending poverty is shown at the Higher Secondary and Secondary educational levels. The influence is significantly less at the graduate and post-graduate levels.

Social Status Shift:

The greatest shift in social standing is seen in higher secondary education. Moderate changes are seen at the secondary and graduate levels. The least change is seen in middle and post-graduate students.

Nothing has changed:

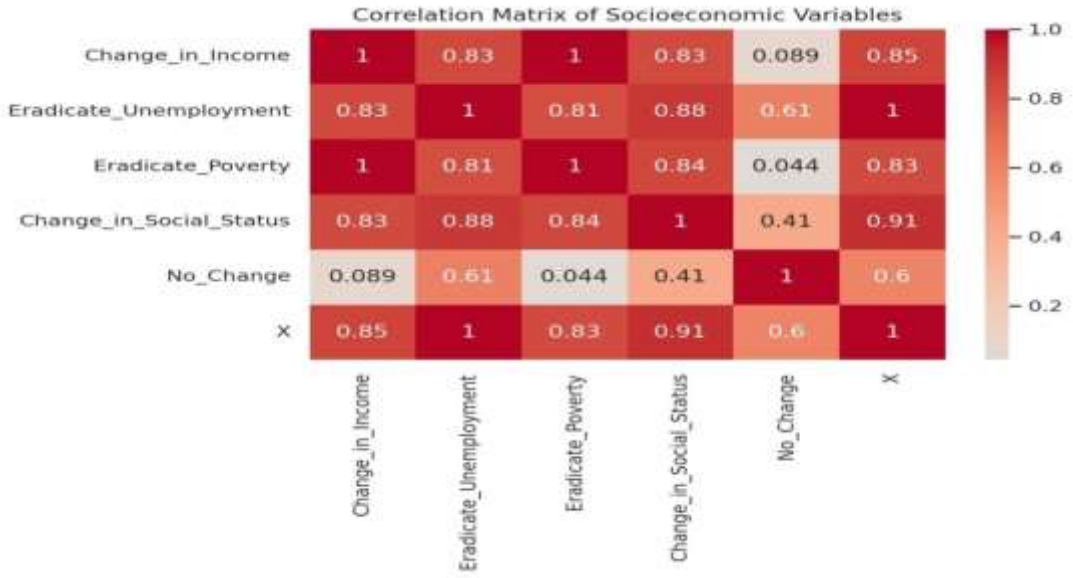
The "No Change" figure is highest at the graduate level, suggesting less influence in this group. Post-graduate displays "No Change", which could point to an alternative trend or anomaly in the data.

"X" stands for the number or metric associated with "Non Skilled People."

Here is a revised interpretation of the data and chart based on this understanding: The amount of non-skilled individuals in each education qualification group is displayed in the "X" column. The largest percentage of non-skilled individuals is found in higher secondary education, followed by secondary and graduate. There are fewer non-skilled individuals in the middle and post-graduate groups. This puts the other variables in context as they relate to the impacts that are measured among these non-skilled groups.

There are strong positive connections (above 0.8) between the number of non-skilled people - X, change in income, eradicate unemployment, eradicate poverty, and change in social status. The relationships between No Change and other variables are either weak or moderate. Change in Social Status (0.91) and Eliminate Unemployment (1.00) have a strong correlation with the amount of non-skilled people (X).

Figure - 5



Sources: Primary Data of Rohilkhand Regions

With correlations between 0.8 and 1.0, the variables "Change in Income," "Eradicate Unemployment," "Eradicate Poverty," and "Change in Social Status" exhibit a high positive association with one another. This implies that advancements in one of these fields are frequently linked to advancements in the others. For instance, according to socioeconomic theory, social status tends to rise while unemployment and poverty tend to decline as money rises.

The function of unskilled individuals (X): There is a strong correlation between "Eradicate Unemployment" (1.00) and "Change in Social Status" (0.91) and the number of unskilled individuals (X). This suggests that the proportion of the non-skilled population in each educational category has a direct bearing on unemployment and social standing. This may indicate that education programs aimed at the unskilled have a major impact on raising social standing and lowering unemployment.

No Change Factor: Weak to moderate correlations between the "No Change" variable and other variables indicate that it acts somewhat independently. This could be a subgroup of people or circumstances in which education hasn't yet resulted in quantifiable socioeconomic advancements.

Impact on Education: Higher secondary and secondary education levels exhibit the most notable positive effects across the majority of factors, according to the previous bar chart and data. The impact is lower at the graduate and post-graduate levels, maybe as a result of smaller sample sizes or distinct dynamics within these groups.

Result and Discussion:

The findings of this study reveal several important insights regarding the impact of vocational and traditional education on the socio-economic conditions of individuals in rural areas. Firstly, individuals who received vocational education, particularly those with GTI and ITI qualifications, reported noticeable increases in their income levels. This suggests that vocational training plays a significant role in boosting earning potential. Additionally, the unemployment rate decreased for individuals across all vocational education categories, with the most significant reductions observed among those with GTI

and UPSDP qualifications. This highlights the effectiveness of these programs in improving employment outcomes.

Furthermore, respondents who completed vocational education programs such as GTI and DDUSDP also reported a reduction in poverty, demonstrating the positive impact of vocational training on lifting individuals out of poverty. Social mobility was particularly evident among those who completed GTI and DDUSDP programs, as they experienced improvements in their social status. However, the impact on social mobility was less pronounced for individuals who completed ITI, UPSDP, and NSDP education.

In contrast, the impact of traditional education on income was more modest, with only a small number of respondents from Higher Secondary and Secondary education reporting improvements in income. The reduction in unemployment was also less significant compared to those with vocational education. Although some individuals with traditional education reported a reduction in poverty, the changes were not as substantial as those seen in vocational education graduates. Social status changes among traditional education holders were also less pronounced.

Challenges in Skill Development Programs: Despite the positive impact of vocational education, there are several challenges:

- **Implementation Issues**: There are gaps in the execution and effectiveness of skill development programs. Many initiatives face problems with inadequate infrastructure, insufficient funding, and lack of skilled trainers.
- **Collaboration Issues**: Effective collaboration between government agencies, non-governmental organizations, and local communities is often lacking, hindering the success of these programs.
- **Awareness and Participation**: Many rural communities are not fully aware of the benefits of vocational education, and participation rates remain low.

The GTI classification group shows the highest median values for positive effect indicators like income, unemployment, poverty reduction, and social status change. The DDUSDP group has medium-to-high values, particularly in poverty eradication and without change. Strong positive correlations are found between changes in income, unemployment, and poverty, and eradication of poverty is strongly correlated with social status. Vocational education in rural areas has multifaceted advantages.

The study reveals strong positive connections between the number of non-skilled people, change in income, eradicate unemployment, eradicate poverty, and change in social status. The variables "Change in Income," "Eradicate Unemployment," "Eradicate Poverty," and "Change in Social Status" have a high positive association with one another, suggesting that advancements in one field are often linked to advancements in the others. The proportion of the non-skilled population in each educational category has a direct bearing on unemployment and social standing, suggesting that education programs aimed at the unskilled have a significant impact.

Conclusion:

The study concludes that vocational education has a significant positive impact on the income, unemployment, poverty, and social status of individuals in rural areas. However, traditional education, while beneficial in some respects, does not have as strong an effect on these socio-economic factors. To maximize the impact of skill development programs, it is essential to address the implementation challenges, enhance community participation, and improve collaboration between various stakeholders.

Given the youthful demographic of India, expanding and improving vocational education can play a key role in addressing unemployment and poverty in rural areas.

8. Recommendations:

- Strengthen the infrastructure and support systems for skill development programs.
- Increase awareness about the benefits of vocational education in rural areas.
- Improve collaboration between government agencies, NGOs, and local communities to ensure the success of skill development initiatives.
- Regularly assess and monitor the outcomes of vocational education programs to ensure they meet the needs of the rural population.

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