



## Article

# Effectiveness of TVET in Nepal

Ramesh Adhikari<sup>\*a</sup>, Shiva Raj Adhikari<sup>b</sup>, Dilli Ram Upreti<sup>a</sup> and Keshav Prasad Adhikari<sup>c</sup>

<sup>a</sup>Mahendra Ratna Campus, Tribhuvan University

<sup>b</sup>Central Department of Economics, Tribhuvan University

<sup>c</sup>Central Department of Population Studies, Tribhuvan University

## Abstract

The technical and vocational education and training (TVET) program has been implemented in the country for a long time. Nevertheless, the actual impact it had made on the national economy is unknown. The main objective of this study is to examine the effectiveness of the TVET program in Nepal. The study employed concurrent mixed methods which used both quantitative and qualitative approaches. A retrospective post-then-pre design was used in this study. A total of 21 districts (3 districts from each province) were selected. A survey was conducted with 1,231 Diploma and Pre-Diploma (TSLC) graduates who studied in the institutions either affiliated to or constituent of the Council for Technical Education and Vocational Training (CTEVT). Similarly, 42 key informants' interviews (2 from each district) were conducted with key stakeholders, such as school principals, instructors, and employers. Overall, out of the total graduates, only 8.8% were working before joining TVET, and the remaining 91% did not work, while the percentage of graduates employed during the time of survey was 58.2%. A remarkable difference in average income was found before and after graduation (NRs 1,815 vs NRs 15,656). The income difference was highest among the people who studied engineering (NRs 16,005) followed by health (NRs 14,908). The income of males was 1.6 times higher than that of females after graduation. Current income is higher among graduates from Lumbini Province (NRs 21,427), followed by Province-1 (NRs 20,396). The study revealed that overall, TVET has a positive impact on the society's economy through increased employment opportunities among youths. TVET has been effective in generating employment for many young people, ultimately contributing to elevate the family's economic status, thereby ensuring quality life.

**Keywords:** Technical and Vocational Education and Training, CTEVT, impact, relevance

## Background

The technical and vocational education and training (TVET) is an integral part of development in a nation. It empowers youths by enhancing their skills required for the world of work. Realizing the strength

of TVET, the government of Nepal has set the goal of increasing TVET enrolment to 70% from the current around 10% and augmenting the number of people with skills training to 50% from the current 31%

<sup>\*</sup>Corresponding author. Email: rameshipsr@gmail.com

(National Planning Commission [NPC], 2019). A large number of the labor force in Nepal (about 70%) gains professional skills in the workplace informally (International Labor Organization [ILO], 2017). Likewise, among the youth, 59% migrates without any professional skills for foreign employment in different Gulf countries and Malaysia (Ministry of Labor, Employment, and Social Security [MoLESS], 2020). This grim situation could be changed by a robust TVET system which is closely tied to economic sectors/businesses and industries that could define the current and future labor market.

The studies conducted by Chakravarty et al. (2015) accessed the short-run effects of skills training and employment placement services sponsored by the Employment Fund from 2010 to 2012 in Nepal and found the heterogeneous impact of the programs on different sub-population- women, age-group, and ethnicity. The skills training positively impacted employment (about 50%) and increased monthly average earnings (about 72%). The study also revealed that the women benefited more than their counterparts. Similarly, a tracer study of the Diploma and TSLC programs under CTEVT found the monthly average earning of the graduates was Rs 15,816, which ranged from Rs 4,000 to Rs 87,000 per month. Around 75 percent of the graduates in three trades (Engineering, Health, and Agriculture) were either employed or in education during the interview period (AIPL, 2016).

The impact of TVET is realized on both levels of graduates and employers. In the first level, TVET improves the livelihood of the graduates, as they are equipped with the skills required for the world of work (SEFPE, 2008). In the second level, it fulfills

the demand of employers by supplying competent human resources. A study carried out in the Philippines revealed that about 71 percent of the graduates were active in the labor force, and those who were not in the labor force were mainly due to study-related reasons (currently continuing their study) (TESDA, 2020). The study also found there was no statistically significant difference between male and female graduates in terms of employability. The study showed that the TVET programs helped to increase the employability of the graduates, and they were satisfied with the training they received.

In the context of Nepal, the study on TVET graduates showed that employers generally are more satisfied with the workers who were trained from CTEVT (AIPL, 2016). However, the study also showed that 80 percent of employers believe that the workers need additional training to perform better in the workplace. The graduates also reported that there was a need for improvement in the TVET education provided by the institutions in several dimensions like content knowledge, opportunities for practical skill, and curriculum or content, laboratory practice, instructional technique, industrial attachment, on-the-job experience, etc.

In view of scant TVET literature in the national context, this study is believed to build to important knowledge on the relevant stakeholders. The study also provides a direction for further planning and implementing relevant programs to uplift the status of TVET graduates. Hence, this study is vital to determine the significance of the TVET program, including its future implications. The main objective of this study is to examine the effectiveness of the TEVT program in Nepal.

## Methods

The study employed concurrent mixed methods, which used both quantitative and qualitative approaches. A retrospective post-then-pre design was used in this study. A survey was conducted with the respondents who had joined the Diploma or Pre-Diploma program of the CTEVT. It covered all seven provinces of Nepal. A total of 21 districts (3 districts from each province) were selected. The survey was conducted with 1,231 Diploma and Pre-diploma (TSLC) graduates who studied in the institutions either affiliated to or constituent of the CTEVT. Similarly, 42 interviews (2 from each district) were conducted with graduates and other key stakeholders, such as school principals, instructors, and employers. The study participants and informants were interviewed with verbal consent. The consent process ensured that the respondents were well-informed about the interviewer, the purpose

of the study, their voluntary participation, the confidentiality of information, anonymity of the informants, time duration, and risk and benefits of their participation in the study. Statistical Package for Social Science (SPSS) was used for the data analysis.

## Results

### *Background Characteristics*

Nearly three-fifths (57%) of respondents were male, where around three-fourths (73%) were aged less than 25 years, and more than half were Brahmin/Chhetri (57%). Similarly, three-fourths (75%) were unmarried/never married. Regarding the level of education, 60% had completed a diploma, followed by a pre-diploma (36%), and only 5% had completed a Bachelor's or above at the time of the interview. Likewise, more than two-fifths (45%) studied in a private institute, followed by a constituent institute (25%).

**Table 1**

### *Background Characteristics of Respondents*

	Overall		Study Stream of Respondents							
	N	%	Engineering		Agriculture		Hotel Management		Health	
			N	%	N	%	N	%	N	%
Sex										
Male	703	57.1	322	81.1	195	54.6	26	72.2	160	36.3
Female	528	42.9	75	18.9	162	45.4	10	27.8	281	63.7
Age group										
Less than 25 years	896	72.8	291	73.3	276	77.3	23	63.9	306	69.4
25-34 years	309	25.1	104	26.2	70	19.6	11	30.6	124	28.1
35-44 years	25	2.0	2	.5	10	2.8	2	5.6	11	2.5
45 and above	1	0.1			1	0.3				
Caste/Ethnicity										
Dalit	68	5.5	22	5.5	24	6.7	1	2.8	21	4.8

	Overall		Study Stream of Respondents							
	N	%	Engineering		Agriculture		Hotel Management		Health	
			N	%	N	%	N	%	N	%
Muslim	9	.7	5	1.3	4	1.1				
Madheshi	177	14.4	54	13.6	40	11.2	2	5.6	81	18.4
Janajati	262	21.3	73	18.4	62	17.4	15	41.7	112	25.4
Brahmin/Chhetri	695	56.5	233	58.7	222	62.2	18	50.0	222	50.3
Others	20	1.6	10	2.5	5	1.4			5	1.1
Marital status										
Never married/Unmarried	917	74.5	326	82.1	255	71.4	32	88.9	304	68.9
Currently married	312	25.3	71	17.9	102	28.6	4	11.1	135	30.6
Separated/divorced	2	0.2							2	.5
Level of education										
Pre-diploma	441	35.8	147	37.0	176	49.3	18	50.0	100	22.7
10+2/diploma	735	59.7	224	56.4	172	48.2	17	47.2	322	73.0
Bachelor and above	55	4.5	26	6.5	9	2.5	1	2.8	19	4.3
Type of institute										
Constituent institute	301	24.5	130	32.7	80	22.4	18	50.0	73	16.6
Partnership institute	110	8.9	41	10.3	3	.8	2	5.6	64	14.5
Private institute	558	45.3	167	42.1	90	25.2	15	41.7	286	64.9
Community school/institute	262	21.3	59	14.9	184	51.5	1	2.8	18	4.1
Province										
Province-1	80	6.5	35	8.8	19	5.3			26	5.9
Madhesh Province	160	13.0	57	14.4	38	10.6			65	14.7
Bagmati Province	354	28.8	118	29.7	63	17.6	17	47.2	156	35.4
Gandaki Province	106	8.6	25	6.3	28	7.8	19	52.8	34	7.7
Lumbini Province	215	17.5	80	20.2	45	12.6			90	20.4
Karnali Province	156	12.7	51	12.8	80	22.4			25	5.7
Sudurpaschim Province	160	13.0	31	7.8	84	23.5			45	10.2
Total	1231	100.0	397	100.0	357	100.0	36	100.0	441	100.0

## Relevance

Relevance assesses the extent to which a program is consistent with community needs and government priorities. Technical education and vocational training are quite relevant, as they were designed based on community needs and market demand. There

was high demand for technical education and training related to agriculture, health, hotel management, engineering, etc. after a thorough market study. It has addressed the needs, issues, and priorities of trainees. CTEVT offers education and training at the

minimum possible fees and provides some scholarships to the economically backward people, making technical education affordable and accessible for poor and middle-income individuals. This makes the program more relevant because it addresses the necessity of most underprivileged people. All stakeholders agreed that TVET had been based on the community's actual needs. It has been more relevant and helpful in rural areas, where people cannot afford expensive education and need employment opportunities at a very young age to support their households for livelihood. Similarly, TEVT has been fruitful in generating employment at an early age. However, due to inadequate scholarship seats, ultra-poor people' access to TVET is limited. TVET training related to agriculture and veterinary is more relevant in our country, where agriculture is still a major source of income and livelihood for many people. Many stakeholders predict that the demand for technical human resources will increase shortly.

Although most of the programs are relevant in the community, certain areas/subjects should be added up (such as geometrics and hydropower engineering in the engineering field) to address the needs of contemporary society. Similarly, the curriculum can be developed to address the need of community in two models. Only practical courses can be offered to those students who want to end their studies after training and work. The second model similar to the course of formal education can be offered for those students who want this course as a bridge course for further education. Hence, it can be concluded

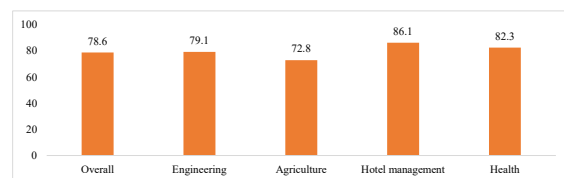
that courses are not enough to meet the need/demands of the present-day market.

### *Relevance of Programs Based on Graduates' Applicability*

The relevance of the Diploma and Pre-diploma level programs was explored in the study by asking whether the present/last job was related to the area of specialization, which most of them (79%) said that it was relevant. A higher proportion of respondents from hotel management (86%) and health stream (82%) mentioned that the program was more relevant than in case of engineering (79%) and agriculture (73%). Those who mentioned training as relevant were further asked about the degree of applicability; overall, a third stated it was highly applicable; 44% mentioned it was highly applicable, and 22% mentioned it was average. Similarly, those who stated it was not applicable were further asked about the reasons in which nearly a fifth (18%) responded that it was due to a lack of job opportunities to their application.

**Figure 1**

*Relevance of the Program (%)*



### *Efficiency*

According to key stakeholders, technical education and vocational training produce maximum output with minimum cost. These

courses are imparted at nominal cost, yet produce more benefits through employment and self-employment of graduates.

**Cost:** The programs run efficiently in most institutions. Student fees are the primary source of income for privately-run institutions. However, the constituents and schools running programs in partnership receive regular government funds. Cost-effective measures, such as "*learn, earn and pay*" have been implemented in various agriculture-related institutions. However, it still needs to be more effective.

*Our students produce seasonal vegetables and flowers and sell them to market to support their education. Stakeholder, Bhagawati Sec. School, Bagmati Province.*

However, the program has been less cost-effective in certain institutions (health-related) which do not have their own hospitals for practical.

*If we had our own hospital, the program would be more cost-effective, as we could operate the program with fewer staffs and students could be employed for maximum time as per their demand for practical. Manaslu Technical College, Province 1*

**Resources:** Key stakeholders mentioned that TVET programs have produced maximum output with minimal resources (including human resources). Most TVET institutions had adequate resources to carry out the program smoothly. The trainers are skilled, capable, and motivated. CTEVT has been providing ToT to trainers/educators time and again. However, some institutions of Lumbini Province and Province-1 needed more human resources, including specialized

teachers/trainers and other resources. Hiring and remunerating expert trainers for a short period have also been challenging sometimes. Similarly, infrastructure (lab space, equipment, etc.) needed improvement in some institutions of Bagmati Province, Province-1. Local resources were being used in the training process as far as possible, contributing to cost-effectiveness.

However, barriers to new admission for Pre-diploma have affected the efficiency of institutions due to resource wastage. Likewise, due to minimal fee criteria, it has been difficult for some institutions to sustain and maintain full-time trainers/teachers. Similarly, certain institutions face a high turnover of part-time instructors/trainers, directly hindering efficiency. In this context, a stakeholder from an agriculture-related institution of Province-1 stated:

*Mostly, we hire instructors on a contract basis who can leave the job if they find other opportunities. So, we can say that there are no sufficient instructors to run the program.*

**Time:** According to key informants, TVET courses consisted of more content to be covered in a limited time. This has mostly resulted in rush and pressure during the study period. In addition, various political influences and crises (natural calamities, pandemics) can further prolong the entire study period.

### ***Effectiveness***

#### *Effectiveness from Stakeholder's Viewpoint*

Technical education and vocational training impart technical knowledge and produce skilled human resources in various

sectors like agriculture, engineering, hotel management, etc. It has been found effective in generating employment for many young people and ultimately elevating the family's economic status and ensuring quality life. Many people, including rural and poor ones, have been able to engage in income-generating activities through the skills they acquired with training. TEVT programs are directly linked with improving creative and practical skills required in daily life and obtaining the appropriate jobs. In other words, the programs provide relevant skills to fit the labor market. The skilled human resources are on rise in the labor market with increased number of new graduates.

Moreover, other businesses and industries are advantaged, as TEVT-skilled graduates work there and contribute to increased production/output. This ultimately contributes to enhancing the financial stability of society. While describing the effectiveness of TVET programs, stakeholders of different areas mentioned:

*TEVT programs help to provide an immediate job after completing the vocational training. It also motivates students to become independent at young age. DTS stakeholder, Gandaki Province*

*Talking about this area, we can say 'One house, one technician'. The economic status of the nearby community has been boosted. Most of them are self-employed. Universal Technical School, Province 1*

Many districts have become self-reliant on certain products due to increased production. TVET has become a significant tool for self-employment among youths. However, limited opportunities in some courses, such as

Pre-diploma/Diploma in hotel management, were discouraging for students.

*The Pre-diploma / Diploma graduates of this institution can't intern in the foreign hotel industry, which demotivates the students who pursue this course. They choose BHM rather than diploma in hotel management. Program Coordinator, National Employment and Training Center*

Likewise, another discouraging factor that adversely affects the effectiveness of the TVET programs is the higher workload coupled up with unsatisfactory remuneration in certain professions, such as nursing.

Apart from trainees, other people in the communities are equally benefitted from more skilled human resources, as they can obtain easy access to better facilities and services like health, agricultural products, etc.

On the contrary, demand-side stakeholders were quite unsatisfied with the quality of education and training acquired by the graduates as they complained that many graduates needed more basic skills to perform their work including the use of necessary equipment. In this context, a construction-side stakeholder stated:

*Some newly passed graduates do not even have the basic knowledge. They do not know the cement sand ratio; cannot do layout; and cannot read level machines. These are the simple things that we expect them to know.*

Hence, to enhance the program's effectiveness, the course and curriculum

should be pertinent to the market demand, consider the changes in the environment; and the program should be enhanced to equip the trainees with the necessary skills.

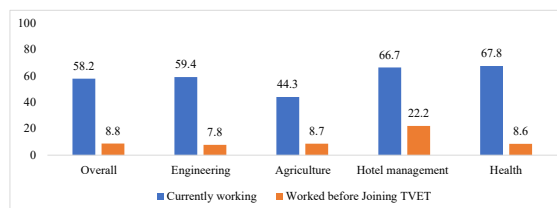
*Effectiveness of Graduates' Findings*

Graduates' experience and exposure-related factors, such as employment history, changes in income, promotion, job satisfaction, etc., can help to determine the effectiveness of the program.

**Employment History/Situation**

The proportion of employed people has increased notably after obtaining the TVET program. Overall, out of the total graduates, only 8.8% were working before joining TVET, and the remaining 91% did not work. Similarly, the percentage of graduates who were employed during the time was 58.2%. Nearly three-fifths (58%) of respondents were currently working, which included a higher proportion of respondents from the health stream (68%), followed by hotel management (67%).

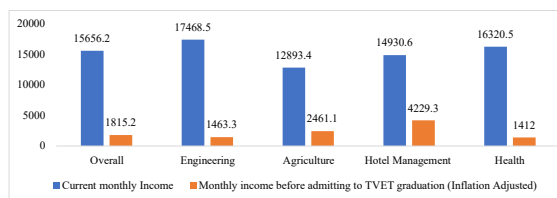
**Figure 2**  
*Employment History*



*Income before and after TVET Graduation*

Inflation-adjusted the amount of income before joining the training. Inflation from 2015/16 to 2020/21 was 24.8%. Remarkable difference in average income before and after graduation is evident in the chart.

**Figure 3**  
*Income before and after TVET Graduation*



Overall, there was an average income difference of NRs. 13,841. The income difference was highest among people who studied engineering (16,005), followed by health (14908).

**Table 2**  
*Income before and after TVET Graduation*

	Overall	Engineering	Agriculture	Hotel Management	Health
Current monthly income	15656.2	17468.5	12893.4	14930.6	16320.5
Monthly income before admission to TVET graduation (Inflation Adjusted)	1815.2	1463.3	2461.1	4229.3	1412
The difference in income after TVET Graduation	13841	16005.2	10432.3	10701.3	14908.5

The mean income is significantly higher after graduation (p<0.001).



**Table 3***T-test one-tailed test (current income > before inflated income)*

Variable	Obs	Mean	Std. err.
Current income	1,231	15656.18	603.5455
Before income	1,231	1815.249	199.93
Difference	1,231	13840.93	599.0964
Mean(diff) = mean (current income, before income)		t = 23.1030	
H0: mean(diff) = 0			
Degrees of freedom = 1230			
Ha: mean(diff) != 0		Ha: mean(diff) > 0	
Pr (T > t) = 0.0000		Pr(T > t) = 0.0000	

*Mean Income (current and previous) by Background Characteristics of Respondents*

The mean income and income differences variation was observed according to socio-demographic characteristics.

Male graduates earned NRs. 18,742 while female graduates earned NRs. 11,547 per month after graduation. The income of males was 1.6 times higher than that of females after graduation. The difference in

mean income after TVET graduations was higher among males (16,373) than females (10,470). The income of males was 2.2 times higher than that of females before starting the TVET. However, the income of males was 1.6 times higher than the income of females after TVET graduation. Thus, TVET has the capacity not only to increase income but also to reduce inequality between males and females.

**Table 4***Mean Estimation of Income by Sex of the Graduates*

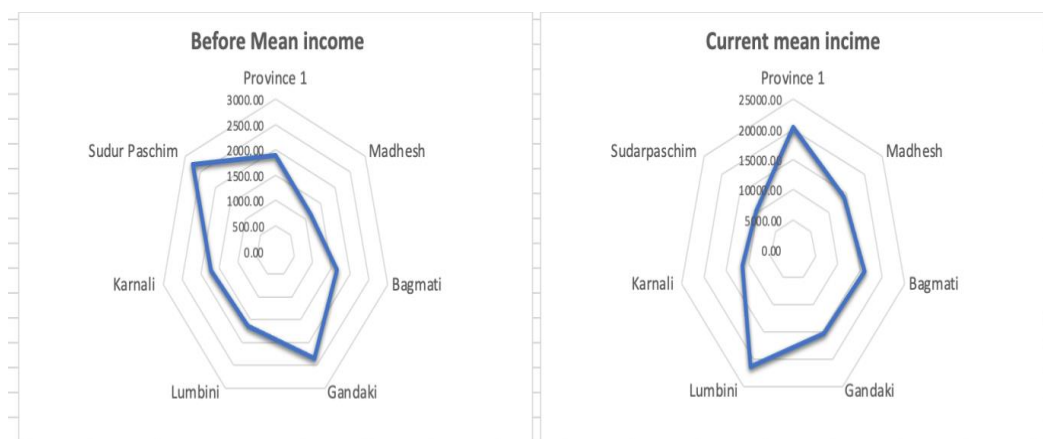
	Number of observation = 1,231			
	Mean	Std. err.	[95% conf. interval]	
<b>Before Graduation</b>				
Male	2369.801	313.4011	1754.941	2984.661
Female	1076.896	203.7053	677.248	1476.545
Times	2.20			
The income of males was 2.2 times higher than the income of females before graduation				
<b>Current Income</b>				
Male	18742.34	887.8182	17000.53	20484.14
Female	11547.14	726.701	10121.43	12972.85
Times	1.64			
The income of males was 1.6 times higher than the income of females before starting the income.				

The income differences can be seen by province. The diagram shows that income has increased and it has changed regional

patterns. Current income is higher among the graduates who were from Lumbini Province (21427), followed by Province-1 (20396).

**Figure 4**

*Comparison of Income by Province*



**Table 5**

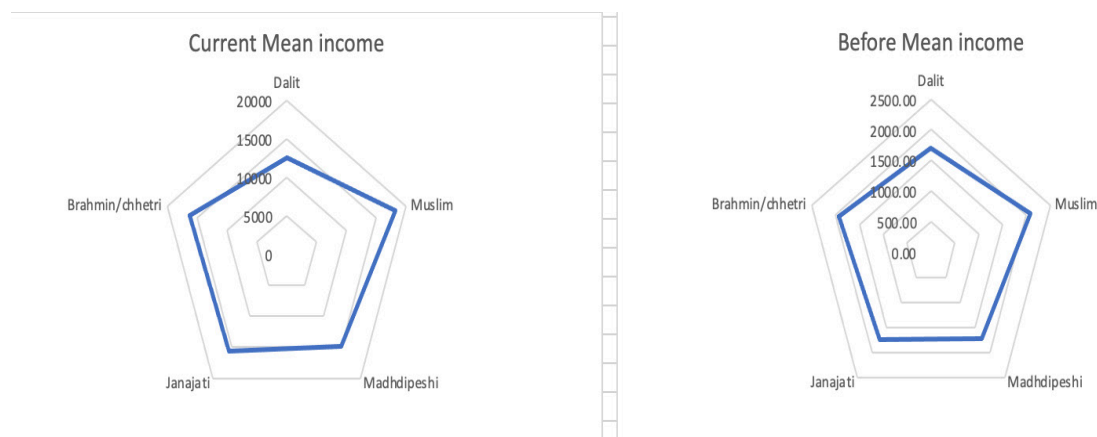
*Comparing Previous and Current Income by Provinces*

<b>Before Income</b>	<b>Before Mean income</b>	<b>Std. err.</b>	<b>[95% conf. interval]</b>	
Province 1	1882.92	928.0921	62.10125	3703.739
Madhesh	1170.00	466.813	254.1622	2085.838
Bagmati	1649.94	380.0939	904.2365	2395.645
Gandaki	2354.72	837.0285	712.5553	3996.879
Lumbini	1645.62	355.121	948.9086	2342.329
Karnali	1721.60	521.4558	698.5588	2744.641
Sudurpaschim	2754.26	659.0734	1461.226	4047.29
<b>Current income</b>	<b>Current mean income</b>	<b>Std. err.</b>	<b>[95% conf. interval]</b>	
Province 1	20396.85	2823.331	14857.77	25935.93
Madhesh	14155.75	1054.255	12087.41	16224.09
Bagmati	16093.50	1326.259	13491.52	18695.48
Gandaki	15400.94	1467.519	12521.83	18280.06
Lumbini	21427.87	1824.573	17848.26	25007.49
Karnali	11412.88	1119.855	9215.848	13609.92
Sudurpaschim	10369.26	1066.782	8276.35	12462.18

Income has increased in all castes/ethnicity, but no change in patterns.

**Figure 5**

*Comparison of Income by Ethnicity*



**Table 6**

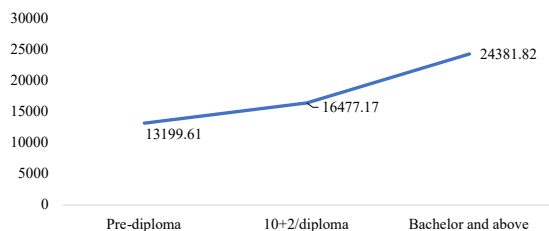
*Comparing Previous and Current Income by Caste*

Number of observation = 1,231				
	<b>Previous Mean income</b>	<b>Std. err.</b>	<b>[95% conf. interval]</b>	
Dalit	1706.82	852.8822	33.55869	3380.088
Muslim	2080.00	2080	-2000.74	6160.741
Madheshi	1734.51	697.6927	365.709	3103.308
Janajati	1738.63	348.3092	1055.28	2421.972
Brahmin/Chhetri	1924.11	262.9866	1408.162	2440.066
	<b>Current Mean income</b>	<b>Std. err.</b>	<b>[95% conf. interval]</b>	
Dalit	12501.47	1680.396	9204.712	15798.23
Muslim	18178.89	5856.246	6689.553	29668.23
Madheshi	14814.69	1651.316	11574.98	18054.4
Janajati	15658.09	972.3187	13750.5	17565.68
Brahmin/Chhetri	16309.96	889.1938	14565.46	18054.47

The mean income varied with the education level. Mean monthly income was NRs. 13,199 among the Pre-Diploma graduates, NRs. 16,477 among 10+2/Diploma graduates, and

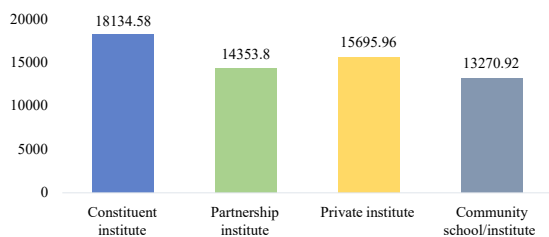
24381 among Bachelor and above graduates. The current mean income also indicates the quality of education perceived by the market or society.

**Figure 6**  
*Current Mean Income by Education*



Mean income also varied with the type of institution. Mean income is higher among those who have graduated from constituent institutes than other institutes.

**Figure 7**  
*Current Mean Income by Institutions*



**Discussion**

The impact assessment of TEVT programs is a nationally representative study carried out in 21 districts, covering all the provinces. The study revealed that overall, TVET positively impacts society's economy through increased employment opportunities among youths. TEVT programs have made technical education and training opportunities accessible to many people. The programs were designed based on community needs and market demand. It has addressed the needs, issues, and priorities of trainees. It has been more relevant in rural areas where people cannot afford expensive education and need employment opportunities at a very

young age to support their households for livelihood. Nearly four-fifths of graduates stated that their present/last job was related to their area of specialization, and more than three-fourths among them also mentioned that it was very highly/highly applicable, further elaborating its relevancy. However, curriculum revision is required in many areas to make it more relevant to contemporary society. It has been producing maximum output with minimal cost. Cost-effective measures such as "*learn, earn and pay*" have been implemented in various agriculture-related institutions. However, this program still needs to be more effective.

There are several other reviews and studies on TVET programs, its achievements and gaps in Nepal. The annual review of TVET program 2020 shows although there is a demand forecast at the institutional level through TNA and other research projects, there are no actual data accessible at the national level to develop programs. In spite of having several conversations with business and industry regarding the need for qualified human resources, no formal actions, such as signing MoUs, have been taken as of date. There is no national demand prediction, but by creating the means to know about demand, the need for skilled labor in business and industry is being gathered while preparing TVET curriculum.

Similarly, the current TVET policy does not call for any coordinated financial efforts. The money allotted to TVET programs is insufficient; yet, projects (NSTB, CTEVT, TITI) had budgets but they were not used because of COVID-19. Guidelines are produced for revenue creation at 45 institutions. There are units to raise money for

schools. Some sources of sustainable finance include students' test fees and donor funding for short-term vocational training programs; however, these initiatives are modest in scope. A significant amount of cash has been set aside for the TVET sub-sector, but CTEVT, which is a required agency, receives less money for the expansion of TVET as a whole because there is no one-door funding system (Sharma et al., 2021).

Moreover, the study named 'issues and relevancy of TVET programs' (Neupane, 2020) stated that Nepal's TVET sector made impressive strides by expanding its TVET institutes and programs. Since that time, TVET institutions have grown at an average yearly rate of 43.34%. Additionally, 83.4% of the local level currently have institutional access to TVET. Although increasing the number of TVET programs and institutes is vital to expand access, it is insufficient on its own. To achieve the desired results, equitable access to TVET programs is essential. Hence, attention should be paid to ensure that the growth is fair in every region of the nation.

### Conclusion and Recommendations

TVET has been effective in generating employment for many young people, ultimately contributing to uplift the family's economic status and ensure quality life. The proportion of employed people has increased remarkably after obtaining TVET training, and nearly two-fifths were promoted due to the training. However, there are inadequate linkages between BIAs and educational/training institutes, limiting the opportunities for graduates. Likewise, some demand-side stakeholders also showed immense dissatisfaction towards the graduates and recommended more practical

approaches like internships. Nevertheless, the good aspect is that most graduates were willing to attend further training, and many had a positive perception of TVET. It is encouraging to note that an overwhelming majority of respondents strongly agreed that unlike conventional education, TVET has the prospect of stimulating technological progress for national development. Hence, TVET has a significant positive impact on the life of young people and, ultimately, on society. Moreover, it would be better to conduct a comprehensive study to identify the current skill gaps in the Nepalese workforce and the industries that require skilled professionals.

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### References

- Accountability Initiative Private Limited (AIPL)(2016). *Tracer Study of the Graduates of Diploma and TSLC Programs under CTEVT*
- Asian Development Bank (ADB) (2000). *Technical and Vocational Education Projects in Malaysia, Pakistan, Papua New Guinea, and Sri Lanka*
- Chakravarty, S., Lundberg, M., Nikolov, P., Zenker, J. (2015). *The Role of Training Programs for Youth Employment in Nepal: Impact Evaluation Report on the Employment Fund*. World Bank.

Ibrahim, M.Z., Rahman, M. N., & Ruhizan, M. Y. (2012). Assessing students perceptions of service quality in technical educational and vocational training (TEVT) institution in Malaysia. *Procedia-Social and Behavioral Sciences* 56, 272-283.

International Labor Organization (ILO). (2017). *Skills for wage employment in Nepal: Enhancing relevance and quality*. Retrieved from [https://www.ilo.org/wcmsp5/groups/public/-asia/-ro-bangkok/-ilo-kathmandu/documents/publication/wcms\\_582615.pdf](https://www.ilo.org/wcmsp5/groups/public/-asia/-ro-bangkok/-ilo-kathmandu/documents/publication/wcms_582615.pdf)

Mason, R.B., S bongiseni, N.M., & Magalingam, A.P. (2018). Service quality at technical and vocational education and training colleges: Perception according to demographic factors. *Journal of Technical Education and Training*, 10 (1), 15-29. <https://10.30880/jtet.2018.10.01.002>.

Ministry of Labor, Employment, and Social Security (MoLESS). (2020). *Labor migration for employment in Nepal: Status, trends, and policies*. Retrieved from <https://moless.gov.np/wp-content/uploads/2020/07/Labor-Migration-for-Employment-in-Nepal-Status-Trends-and-Policies-2020.pdf>

National Planning Commission (NPC). (2019). *National Skill Development Strategy: Government of Nepal, Ministry of Labour, Employment and Social Security*. Retrieved from <https://www.npc.gov.np/wp-content/uploads/2019/10/National-Skill-Development-Strategy.pdf>

Neupane, M. (2020). TVET programs in Nepal: Issue of access and relevancy. *Journal of Training and Development*, 5, 16-28. <https://doi.org/10.3126/jtd.v5i0.33888>

Secretaria de Estado da Formação Profissional e Emprego (SEFPE) (2008). *Technical Vocational Education & Training: Impact Assessment Report*.

Sharma, T.N., Nakarmi, C.B., & Koirala, B. (2021). *Annual Review (2020) of the Technical Vocational Education and Training (TVET) in Nepal*. Dakchyata Project.

Technical Education and Skills Development Authority (TESDA) (2010). *Impact Evaluation Study of TVET Programs*.

Technical Education and Skills Development Authority (TESDA) (2020). *Study on the Employment of TVET. Technical report*.