



Article

Understanding Dropout Dynamics of TVET Students: A Case of Apprenticeship Model in Nepal

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Abstract

The dual-VET apprenticeship model is considered as an improved model of technical and vocational education and training (TVET) that enhances a higher possibility of ensuring a rewarding job. Such model provides dual benefits. On the one hand, it helps trainees achieve high employability and, on the other hand, the employers get skilled and loyal workforce to their industries. Despite sound theoretical base of this modality, the practice shows low retention rate in Nepal and many trainees drop out from the program in the middle. This study seeks to understand the dynamics of dropout phenomenon via apprentices' dropout experiences. It basically adopts a qualitative approach. However, it first assesses the prevalence and distribution of such dropout event of apprentices quantitatively to problematize the issue. Then, in-depth interviews with five dropouts and two FGDs with current apprentices draw qualitative information to enrich the study. This study portrays three major findings: a) The dropout phenomenon starts right from the selection process of apprentices, b) The apprentices consider this program as a program to pursue their short-term interest, and c) There is a mismatch between apprentices' expectation and field realities. In sum, the occurrence of dropout of apprentices was the result of less informed choice, lack of counseling during the program, and institutional arrangements of TVET system where the ground realities were interwoven with socio-cultural and economic background of apprentices. The dropout phenomenon is explained under the social cognitive career theory. One of the major contributions of this study will be identifying policy-practice gaps in implementing the apprenticeship model of TVET. Moreover, the findings will be helpful to understand and improve the working strategies in undergoing TVET programs and projects in the local context of Nepal.

Keywords: dropout, TVET, dual-VET apprenticeship, apprentices

Introduction

The concept of apprenticeship is connecting learning with work. Emerged from the European countries like Germany and

Switzerland, the dual-VET apprenticeship model has been instrumental to connect the world of education with employment

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(Deissinger, 2010). The close coordination between workplace and technical institutes in such modality equips people with practical skills and work-based learning experiences along with theoretical knowledge, supporting them for smooth transition to the world of work. The dual-VET modality has gradually been contextualized and adopted by different nations, such as Australia, USA, China, India and many more (Pilz & Li, 2014).

Dual-VET apprenticeship program in Nepal has been supported in Nepal by the Enhanced Skills for Sustainable and Rewarding Employment (ENSSURE) Project since 2016. Like the dual-VET system practiced in Germany, Switzerland and Austria (Deissinger, 2010), Nepal has implemented the program of 24-month duration in a dual-VET apprenticeship modality in few pre-diploma courses offered by Council for Technical Education and Vocational Training (CTEVT) (Renold et al., 2024). The period of 24-month offers apprentices the learning opportunity in both the technical schools and occupation-related industries by facilitating them to combine hands-on skills with classroom learning (Boli et al., 2020).

The dual-VET apprenticeship modality designed in the context of Nepal offers a win-win situation to all the concerned stakeholders. The apprentices as well as the industries, supporting their placement both benefited from this modality. Eichhorst et al., (2012) suggest that dual-VET system prepares apprentices to be more work-ready through real and updated work experiences, thereby minimizing skill mismatch during

career development. He further adds the graduates of this system in the developed countries are evident of being quickly and easily employed as compared to the general education. Likewise, the benefits to industries/employers can be immediate as well as lasting. Renold et al., (2024) mention that industries get low-cost labor with reduced recruitment and adjustment costs of hiring employees while supporting apprentices' placement. In the long run, they are directly shaping the quality and quantity of workforce required for their industry in future.

Despite remarkable benefits to each stakeholder involved in implementing the program, the program is struggling to take pace in Nepal. The formative assessment of the first cohort conducted by Boli et al., (2020) reflects that it has been challenging to motivate youths to enroll in the program. Not only about enrolling but also the apprentices enrolled in the program seem less motivated to complete the course. The results obtained by analyzing the dropout trend of two batches from ENSSURE Project reflect that the dropout rate of apprentices increased from 35.6% in the first batch to 50.3% in the second batch. Although the result of quantitative analysis of dropout among apprentices highlighted places of origin, types of courses and socio-economic factors to significantly affect the dropout decision, the combined effect of the significant factors contributed only 6% behind the dropout reason. This signified that the dropout among apprentices was more a phenomenon

that demands qualitative exploration of individual experiences.

Purpose and Research Question

The purpose of this study was to understand the dynamics of the dropout phenomenon by listening to apprentices' dropout experiences in dual-VET apprenticeship program in Nepal. To pursue the purpose, the following research questions were undertaken by the study: a) How do apprentices describe their experiences of discontinuity from the dual-VET apprenticeship courses?, and b) What are the dynamics that play a role in their dropout decisions?

Methodology

With the aim of understanding the dropout occurrence of TVET apprentices in Nepal, some dropout cases were identified following the quantitative assessment of dropout apprentices. Currently, the course is also being run independently by CTEVT itself, however, the apprentices considered under this study were from the first phase of program launch when it was solely implemented by CTEVT under the project's support. Since the quantitative analysis was carried out only with the dropout data provided by ENSSURE Project, the study is considered more qualitative. It only uses quantitative rigor to problematize the issue of dropout in the study. I, thus, proposed this research from interpretive paradigm. Aligning with the idea of Taylor and Medina (2011), I believe the experience of dropout is subjective and has multiple reality to

different individuals. The apprentices varying in socio-cultural and demographic aspects have their own unique perception towards the apprenticeship program that guide their decision of dropout. This can't be generalized to all the apprentices who quit the program before completion.

A quantitative analysis using descriptive statistics was done with dropout data from among a total of 1,441 apprentices who were admitted in different trades of apprenticeship program supported by the ENSSURE Project in the FY 2076/77 B.S. and 2077/78 B.S. Among these apprentices, two-fifths were found dropouts of the program. This objective analysis seeks to see the dropout events of an individual where social, economic and geographic characteristics of the trainees were further analyzed to know how these factors were influencing the dropout decisions of apprenticeship. Using some statistical tools, such as correlation, chi square test and logistic regression, the relation and contribution of these background characteristics to drop out event was analyzed. The statistical tools 'correlation' and 'chi-square' test were found as appropriate ones to see whether the relationship/differences in educational background was statistically significant (Fox et al., 2014). The quantitative analysis identified a very few characteristics as statistically significant and gave low Nagelkerke R^2 value of those factors. This implied that the quantitative analysis could not sufficiently describe the dropout event, demanding the need of a qualitative approach. So, this study used in-depth interviews and

FGD with participants as two major data collection tools to understand the dropout occurrence qualitatively.

So, five cases were taken to understand the dropout decisions of apprentices. First, few apprentices were selected randomly from different trades for interview. The process of selecting new participants was over after reaching the 11 participants and realizing the data saturation (Dahal et al., 2024). Identifying the similar reason between many cases, finally 5 cases were considered enough for study. Dropouts were consulted for the in-depth interview. In addition to the in-depth interview with dropouts, two FGDs (one with male apprentices of automobile engineering and one with female in IT trade) were conducted with current apprentices to explore their experience of studying in school as well as working in companies. The FGD was conducted to understand the problem faced by apprentices working in the second phase of the program. Following Litchman (2013), the quantitative data was analyzed using the SPSS software while the three C approach (coding, categorizing and concept) was applied in analyzing the qualitative data.

Listening to the experience of an individual, it gave the impression that their subjective understanding was unique and largely non-generalizable (Cohen et al., 2018). Even within the similar background and context, the dropout decision of individual apprentices was guided by different reasons. Meaning of the same context was embedded differently with different subjective meanings among them. So, it was difficult to understand the

complexity of views and to categorize those views in specific groups (Creswell, 2007). Thus, the qualitative data collected through cases were used for understanding the dropout phenomenon to attain the insider's view (Tuly, 2010) of current apprentices under this study. The result and conclusion made in the study was, therefore, the double interpretation of understanding dropout phenomenon (Taylor & Medina, 2011). The finding was the researcher's reflective understanding on participant's meaning on their dropout decision.

The decision of dropouts was more a subjective phenomenon. Such a subjective reality influencing the dropout decision was the result of peoples' action, reaction and interaction in their personal and socio-economic context (Saldana, 2015). This qualitative understanding intended to understand, explain and demystify the social reality based on people's reasoning of dropout decision in certain specific context. Philosophically, my role in the second phase was more an interpretive role to understand the situation responsible for dropouts rather than finding the universal laws for the dropout event (Willis, 2007). In order to ensure the trustworthiness in the research, this study adopted member checking and triangulations between FGD and in-depth interview as two major approaches.

Causes of Dropout: Findings of Basic Statistical Analysis

The status of 1,441 TVET trainees admitted in the FY 2076/77 B.S. and 2077/78 B.S. under

the apprenticeship program supported by the ENSSURE Project showed a high intensity of dropout where two-fifths of the trainees (575 out of 1,441) had left the program in the middle. Among those 575 dropouts, almost 90 percent were found dropping during their internship at companies. Among those dropouts identified, 243 apprentices were out of contact, probably had already been abroad for work; and among those surveyed apprentices, majority of them (56%) reported as their personal or family problems, such as death/illness of family member, weak financial status, needed to engage in household chores as the reasons for quitting the study without completing the course. The second (8.7%) and third (8.1%) major reasons were due to getting new job or starting their own business and losing their interest on the admitted training program. The other reasons for dropping out were preparing/going for foreign employment (6.6%) and starting other studies (6%). Some of the dropouts were found joining Grade 12, or Bachelor's degree in general education, leaving those TVET courses. Likewise, in case of female, the marriage after admission was one vital reason for their dropout, as it led to shift their residence with new roles assigned in the husband's family. Out of 115 dropout females, 10% had left their training program because of their marriage.

The dropout rate was statistically significant in terms of their place of residence, types of training, and sociocultural, demographic and economic conditions. In terms of the trainees' place of origin, the dropout was highest

(48.6%) among trainees from the Gandaki Province and lowest in the Madhesh Province (36%). Likewise, the dropout rate among hill/mountain trainees was lower (36%) than the dropout rate (43.5%) from Tarai/Madhesh trainees. Regarding trade, it was highest (51%) among the apprentices admitted in mechanical engineering and lowest (28.8%) among electrical engineering. Marital status was another statistically significant factor where the dropout rate among married apprentices was 52.7% and it was only 40.1% among unmarried/never married apprentices. Beyond the common understanding, the analyses revealed that the background, such as, gender, age, rural/urban origin, poor or non-poor family status were not statistically significant in explaining the dropout of the apprenticeship training program.

In addition, the low Nagelkerke R^2 value (detail statistical analysis in Appendix B) revealed from the binary logistic regression model implied that the combined effect of all these significant factors identified by the study was only around 6%. It means only six percent of dropout events could be explained by those significant factors. These results indicated two main ideas. First, either there are some other major factors that explain more on the occurrence of dropout which are yet to be captured. More than this, the very low contribution of those factors signifies that the dropout is a subjective phenomenon rather than a cause and effect event. Thus, the dropout occurrence needs to be understood qualitatively. Now, the following section presents the understanding of dropout

incident by listening to the experiences of dropouts qualitatively.

Listening to the Participants: Experiences Leading to Dropout Decisions

This section presents the major reasoning conceived from the dropouts' experience that they expressed for their dropout decision. The reasons ranged from inadequate orientation before entering the program to their socio-economic context including the managerial aspect of the apprenticeship program itself.

Engage in TVET Program: A Means of Wait and See for Other Opportunities

Apprentices were found generally admitted both in TVET programs and in the general education stream. This was reflected through 3 out of 5 cases of dropout apprentices and in both FGDs. Apprentices were found joining the TVET program at the waiting time for their result in general education. If the result comes during the program and they get opportunity, they prefer to join the higher level in general education and quit the TVET program. Likewise, the FGD conducted with the current apprentices revealed that they have examples of many apprentices who are now waiting for result of their applications for foreign employment. If they get selected for foreign jobs, the result will evidently be dropout in the TVET program. Apprentices were found not having even patience of a few months to get the certificate of TVET program which would enhance their skills and job level even abroad. This could be sensed during the study why only about

50% of dropouts were reachable. Most of those remaining might have already been to overseas jobs.

It is better to take such training rather than staying idle, but this can't be a major pathway for career development. Instead, it can be taken as a medium for capacity development and additional point to support our major education.

- IT apprentice, Kathmandu

This means apprenticeship for them was not the means to enhance their skills and value in labor market but only the program to get engaged with during their break or result awaiting period.

Mismatch between Student's Anticipation and Field Reality

One of the reasons behind dropout was that apprentices lost their interest in the middle of the program due to the mismatched realities. The experience of apprentices varied from their expectations also contributed to triggering them in taking dropout decision. Although major problems were caused due to covid-19 pandemic, this was similarly explained by the current apprentices consulted during FGD. They mentioned two reasons behind this: First, most of the apprentices are convinced by their friends, brother/sisters, or someone close to them to join the program. They don't get proper know-how of course content, training modality, requirements to get qualified after this program or any of the important information related to it. This improper guidance and lack of sufficient

information prior to enrollment create a negative perception about the program among apprentices, resulting in obstacles they face something very different from their expectations. They ultimately leave the course looking for other comfortable options.

Without getting proper information, my father compelled me to join the mechanical course, believing it to be linked with the automobile sector. But later, I realized it was different from my expectation which ultimately discouraged me from putting effort into what I was learning.

- Mechanical apprentice, Kathmandu

Second, for joining the course with the mentality of utilizing free time for free of cost, apprentices aren't ready to work hard during the course. They generally consider it a short-term training and are not ready to accept that it requires full-time engagement and strong dedication to complete and get certified through it. The three cases that pursued apprenticeship as alternate option to general stream mentioned facing some or the other reasons like financial constraints, issues in industry, or problems from family after certain period. However, this was more due to mismatched realities than the technical issues.

Working Environment of Industry

Although the batches taken for study were affected by covid-19 pandemic, there were other additional issues working in industry that led them to drop out. Both the dropouts and current apprentices

highlighted it. Restricting the apprentices to work in frontline or giving primary work opportunities, improper guidance from in-company trainers, assigning the same task repeatedly every day, skipping the incentivization in the industry were some practices that made apprentices uncomfortable or discouraging to continue the training. The mechanical apprentice expressed that they feel lost when they become unable to match the theory they learnt in school with practice at industry. The employees would take full advantage of those apprentices, as they do from their staff. Furthermore, while working in the industry, apprentices get a very minimum amount of money as incentive where they perform like a fulltime employee. The female IT apprentice, mechanical apprentice and automobile apprentice all faced the same situation. They consider this situation as an injustice to them and oppressed by the employer. The ignorance and ineffective guidance from supervisors further demotivated them.

Ignorance from supervisor, less incentive than agreement, mismatch between theory and practice all added to each bit of discouragement to me.

- Automobile apprentice, Kavre.

At this proper point, they forget that this is the agreed obligation where they are working as an apprentice and not as an employee. In many cases, the apprentices would be looking for other better options and take the decision of dropping out as soon as they find some other opportunities.

Similar experience was shared by the male apprentices considered during FGD who were the ongoing apprentices of automobile course.

Socio-economic Condition of Apprentices

The economic aspect of the apprentices also contributes to dropping out in two ways. First, the apprentices who belonged to economically backward families could not afford the accommodation costs incurred during the training period. The allowances provided by the training, or the incentives given by industries were not sufficient for apprentices to cover up their logistic arrangements. The second situation was that due to the economic crisis in the family, apprentices themselves had to cover up all the financial responsibilities of their family. Three out of five participants left the training due to financial constraints.

In the situation where I was struggling to manage money for tiffin, because industry hadn't given me a single penny, I was focused on passing the teacher's license exam for stable and attractive income to support my family. So, it didn't take me long enough to leave the course once I passed the exam.

- IT apprentice, Madhesh

Belonging to a poor family, it was impossible to use a bike for travelling to attend classes, so I ended up staying at rent. But I was struggling to pay the rent as well... Today I am bound to fulfill the financial needs of my family

after my father's death. But I soon wish to complete my unfulfilled dream by supporting my younger brother to pursue the course and get certified.

- Electrical apprentice, Koshi

The gender-based differences faced by the female apprentices in family or industry demotivated them to continue the courses. It clearly reflects the lack of women-friendly environment in the so-called male suitable trades during industry-based learning. Although the apprentices might be treated equally and nicely during institute-based learning, they struggle during industry-based learning. The arduous task of this sector makes it difficult for women to complete the task on time at the beginning. Although they become efficient over time, people judge their working capacity at the very beginning and discourage them from continuing.

Right from the institute-based learning, I was performing quite well in my batch. With the placement at a well-equipped industry, I had got an opportunity of good practical learning. However, the eyes our society have towards female technician seriously lowered my confidence ... no clients would trust me and ask to repair their cars at the workshop making me think that I am a girl and it is not the regime I'm expected to be involved.

- Automobile apprentice, Kavre

The observation of Grundall and Mack (2023) was like the experience that female is meant for table works and simple jobs rather than the heavy technical or blue-collar jobs.

Meanwhile the concern of family support lags being guided by societal perception, it becomes difficult to engage in this sector.

My family had been nagging me about riding bicycle to work and staying up late to work after my industry placement at an IT company. They gradually began to show dissatisfaction to this working environment.

- IT apprentice, Madhesh

This was also reflected in the study conducted by Mwinkume et. al. (2024) in Ghana where males were three times more likely to choose TVET than female. The experiences of dropout female apprentices and the experience of current female apprentices feels similar. A group of IT female apprentices in FGD mentioned their struggle in finding industries which accept them happily for internship in their workplaces.

Understanding Dropout Phenomenon in TVET

Listening to the experiences and stories of dropout from apprentices led to the realization of four major dynamics behind this phenomenon. Now, discussing cases with the existing literatures and social cognitive career theory gave an interesting understanding to this study. Four prime observations derived from this discussion are explained in the following headings:

Perception on TVET: Second Class Education, Blue-collar Job

Ideally, TVET courses like dual-VET

apprenticeship program is considered instrumental in linking its graduate better to the world of work (Eichhorst et al., 2012). However, people in Nepal perceive it as a second-class education meant for disadvantaged groups in society which is reflected well in our stories as well. This practice of giving little value to TVET is common to other developing countries as well. TVET is less favored than general education and is often pursued by academically and financially weak students who are unable to afford academic degrees (Nawi et al., 2024). In Nepal also, still students who are academically sound and economically strong select the science and engineering after school education while education (targeted subject for teaching profession) becomes third or fourth option and technical subjects (which is directed to production work in factories) is the last option for students. Zia et al. (2019) found that 60% of the respondents showing apathy to pursue career in the TVET sector in Malaysia. As concluded by Maskey (2019), TVET is recommended as a career choice to academically unsuccessful people in Nepal because of the greater societal preference to general education and so-called white-collar jobs.

The societal perception towards TVET is one prime issue for apprentice dropout. It has first been challenging to have sufficient enrollment in the apprenticeship program (Boli et al., 2018). Subsequently the enrolled apprentices are much guided by these societal values and perception hence deciding to

drop out from the course. Despite providing the apprenticeship program for free of cost, dropout rate is in increasing trend (as shown by quantitative results). Thus, to reduce the dropout rate, it needs improved understanding of society in TVET which further demands a collaboration among educators, government and society (Nawi et al., 2024). The negative perception about TVET affects student's motivation (Baoteng et al., 2024). Since the cultural value, economic benefits and social settings shape the perception of vocational education, there is an urgent need to address these issues and create a favorable environment.

Economically Disadvantaged Groups Enrolled in TVET

As mentioned above, the practice of giving little value to TVET (Maskey, 2019) is a global phenomenon in the developing world (Nawi et al., 2024). Society conceives that the elite population engages in white-collar jobs where the weaker sections engage in blue-collar jobs. Thus, TVET has become the area of academically and financially weak and socially disadvantaged groups of people. As a result, such programs intentionally target those weaker section. This is the origin point of dropout phenomenon which amplifies the process in different stages.

The apprenticeship program for being new to Nepal is offering scholarship to provide equitable access to the poor, and the marginalized groups as well. This, in turn, results in the targeted population joining the course only due to the scholarship

offered without even having complete information about it. Later they face multiple inconveniences. Residing in a rented place far from their hometown, it then becomes challenging for apprentices to afford their living cost, which is not covered by the scholarship offered. In addition, such youths are also expected to earn and support their families financially. This makes them count every possible opportunity cost. Additionally, incentives provided by industries are quite low or sometimes null which do not serve the purpose of their income. So, once they get a better chance to work and earn somewhere they cannot wait 24 months to complete the course and drop out immediately. In this regard, apprentices do not look for relevancy, location, feasibility or anything about the work they get.

Program Approach: Free Riding, Supply Driven

The need of uplifting has been realized at the policy level in Nepal. The constitution of Nepal demands TVET to develop competent and professional human resources through a “technical, vocational, empirical, scientific, employment and people-oriented” education (Government of Nepal [GoN], 2015). A separate plan “TVET Sector Strategic Plan 2023-32” has been implemented to uplift the TVET sector in Nepal. Number of development partners and projects have taken initiative to increase attraction to TVET. In this regard, ENSSURE Project – a dual-VET apprenticeship model (Boli et al., 2019) - provides a full scholarship to the enrolled apprentices. However, the actual

enrollment is lower than the capacity, facing high dropouts. The youths migrating for foreign employment is in increasing trend (Central Bureau of Statistics [CBS], 2021), resulting in a situation of hiring expensive foreign labor to run the industries in the country (Renold et al., 2024). This is basically due to two major causes: free schooling modality and supply driven system.

Equally pressing is the inadequacy in design of apprenticeship program model itself. For making it a free course, youths jump into the program without any proper exploration of the project. Due to the challenge of receiving applications lesser than the total seats, the schools are forced to consider the applicants randomly. The important aspects like their interest, attitude, hunger to pursue the course, relevancy of the course to them are completely avoided while selecting the apprentices. Indeed, selection becomes more like a collection process. The fact explained by Grundall and Mack (2023) that career guidance plays a significant role in guiding informed career decisions in youths bears much relevance in this context. When applicants become apprentices without proper information, counselling or knowledge about the course, they become highly prone to dropout.

Likewise, the production of TVET graduates in all is becoming supply driven. Where there is a need for industry's engagement in the training cycle right from curriculum designing to its revision stage (Bajracharya & Poudel, 2021), the apprentices are being

connected and handed over to employers only after school-based classes for industrial learning. Thus, naturally, employers may not necessarily be interested in contributing to the courses from their end. Those apprentices might only be considered as low-cost labor in their industry. As a result, there is neither assurance of an appropriate learning environment or guidance to apprentices, nor do they get respect and agreed incentives at work. Since taking labor market need into consideration supports better career development in youths (Tuan, 2024), a strong collaboration with industry right from the beginning is essential for successful result of apprenticeship model.

Dropout as a Result of Encountering Multiple Inconveniences

Keeping all the grievances expressed by the dropouts at one place, I reflected that the dropout phenomenon of apprentices was a result of the inconveniences they experienced at different phases of their engagement. The inconveniences start from the stage of choosing this program. There is a practice of choosing this apprenticeship program by the students who are having poor school results and not able to join other general programs. In addition, this program is free of direct cost. So, students and parents do not like to miss this opportunity where there is a possibility of gaining at least some skills without paying school fees. Naturally, this program attracts those students who are economically poor and have academically poor results (Boli et al., 2019). It is the targeted group as well. Although school fees are waived,

students struggle to cover up their living and travelling expenses. As they do not get time to engage in earning apprenticeship, they experience financial inconvenience even during the first three months when they fully engage in school. Even when they start apprenticeships in industry, they get very low amount of money which is insufficient to meet their personal needs. In many cases, they are also expected to meet the financial needs of their family. This situation triggers the calculation of opportunity cost they are compromising for study.

When the apprentices start working in the industry, many apprentices might find that the nature of their job is neither that of their interest nor the best fit for them. This was due to the lack of proper counselling at the time of admission. It is normal that individuals cannot continue their careers in the sector that lacks their interest, aspiration or self-efficacy (Baoteng et al., 2024; Hong et al., 2023). Furthermore, it becomes discouraging with the unfavorable environment, such as less support from supervisors, paying minimum incentives or not paying anything at all. At such situations, many apprentices fail to visualize and hold onto the essence of program in having long term benefits of sustainable skills and rewarding employment, hence deciding to drop out of the course.

Aligning with Hunt (2008), I also reflected that the dropout phenomenon of students in dual-VET apprenticeship program is a result of multiple inconveniences that they experience at different stages. The stories

of dropouts signified that it was the sum of multiple discomforts experienced by the apprentices at different stages of their engagement from school to workplace. These multiple inconveniences create adverse circumstances, tension and stress leading to confusion and dilemma about continuation or dropping out from the program. At such a situation, once they get one triggering point, they decide to drop out from the program which had never been their first choice. Thus, pursuing apprenticeship courses seems like travelers looking for shade to rest or protect themselves from sun/rain while reaching their pre-decided destination.

Understanding Dropout Phenomenon from Theoretical Lenses

The Social Cognitive Career Theory (SCCT) developed by Lent, Brown and Hacket based on Albert Bandura's Social cognitive theory guides the dropout phenomenon among apprentices in Nepal. This theory helps in explaining the phenomenon from the level of agency where Bandura (1986) suggests that the cognitive process of an individual shape one's behavior. In this regard, there are three major components of SCCT that guide the cognitive process and behavior of taking career decisions: self-efficacy, outcome expectations and goal setting mechanism (Lent et al., 1994).

Reflecting upon the cases of dropout taken in the study, it is understood that apprentices having negative or low self-efficacy towards TVET chose to drop out of the course. Their mismatched interest and passion, and low

confidence in case of female apprentices discouraged them to continue the course. Likewise, when the outcome expectation and personal goals of individual is mismatched with that of the apprenticeship program, apprentices decided to drop out (Liu et al., 2020). Some apprentices were planning to go abroad, and some were expected to work to fulfill immediate financial needs of the family while the course in return equipped apprentices with employable skills to gain employment and income in the long run. The expectation of the period and range of return did not match between the apprentices and offered courses; this ultimately made them leave the course in between. Likewise, the goal of some apprentices was to achieve positions related to general stream but had enrolled in the course for utilizing their free time. This mismatch also contributed to drop out decision.

In addition to the three significant components, SCCT mentions some contextual influences that stimulate the cognition and guide the individual's behavior (Lent et al., 1994). In this context, the contextual influences that guided the dropout decisions were societal value, prioritizing general education's degree over TVET, lack of orientation and career guidance among apprentices, pressure from parents/elders to enroll in course to utilize free time, discouraging societal belief of female being into TVET and so on. These contexts in one way or the other enhanced the behavior of apprentices to consider dropout as a suitable option.

Conclusion

This study concludes the TVET in Nepal is still considered as second class education which is provided to the weaker group of the society which cannot do well in formal education. In addition, there exists lack of proper selection process and approaches, such as inadequate orientation, targeting to the weaker section of the society and supply driven approach. As a result, the apprentices consider this program as a scheme to pursue their short-term interest. They continue in the apprenticeship program unless they become successful to enter the field of interest, such as foreign employment. In the similar ways, the companies (workplace) are neither properly instructed nor supervised. With this, the apprentices experience mismatch between their expectation and field realities.

Despite increasing awareness, advocacy, initiatives and investment in the Nepalese TVET sector, the net enrollment rate is declining seriously. The provisions of promoting TVET is reflected in Nepal's constitutions (in article 51, h(1)), TVET Sector Strategic Plan (2023-2032) and continuous support from development partners. However, the budgeting does not align with the intensity of planning. The national share of budget in TVET seems to decline from 5.25% in 2020 of educational budget to 4.25% in 2024 (Ministry of Finance [MOF], 2020, 2024). Likewise,

the enrollment rate in TVET, except some health-related programs, has been declining in recent years (CTEVT, 2081). Nepalese youths have still not been able to realize the role TVET can play in linking them to employment.

Attracting youths to TVET programs like dual-VET apprenticeship not only reduces the skill mismatch but also acts as a bridge to support a smooth transition from education to labor market hence checking brain drain from Nepal. On the one hand, the latest census of Nepal shows around 210,000 youths have already migrated abroad for employment and other purpose (CBS, 2021). On the other hand, employers are forced to hire expensive labor from abroad due to lack of skilled Nepali workers to run the industries (Renold, et al., 2024). Thus, this study suggests practices for enabling environment to retain youths in Nepal and get them in decent jobs by encouraging them to pursue career in TVET sector. For this, first the societal image of TVET must be improved and the proper system of career guidance and information has to be in place to help youths make informed career decisions. This study would be helpful for policy makers and planners of TVET in the country to reduce the dropouts in the field and to utilize the scarce resources of the country. At practitioners' level, such as technical schools, it would provide help in developing supportive strategies to practice proper orientation-led trade selection among apprentices and address the issues faced during implementation of the apprenticeship courses.

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Appendix A**Statistical Analysis of the Relation between Dropout and Respondent's Background**

Variables	Dropout Intensity	Significant (Chi square value)
Type of school	CTEVT school = 41.2% Private school = 37.2%	Not significant (0.313)
Types of trade	Automobile engineering = 41.1% Electrical engineering = 28.8 % Hotel management = 46.3% Information technology = 41.4% Mechanical engineering = 51.9%	Significant (0.000)
Marital status	Married = 42.7% Unmarried = 40.1%	Significant (0.032)
Ethnicity	BCTD = 42.5% Dalit = 47.9% Janajati = 36.5% Tarai Middle class = 40.6%	Significant (0.039)
Residence	Hill/mountain = 36.0% Tarai/Madhesh = 43.5%	Significant (0.003)
Province-wise	Province 1 = 39.5% Province 2 = 36.7% Province 3 = 45.9% Province 4 = 48.6% Province 5 = 41.6% Province 6 = 48.1% Province 7 = 40.8%	Significant (0.006)
Rural Urban	Rural = 40.2% Urban = 40.4%	Not significant (.496)
Economic status	Poor = 40.8% Non-poor = 40.5	Not significant (.889)
Family size	Small (6 or less) = 40.1% Large (more than 6) = 42.5%	Not significant (.423)
Age of the trainees	Below 20 years = 59.1% 20-25 years = 59.3% Above 25 years = 48.0%	Not significant (.476)
Gender	Male = 40.9% Female = 40.2%	Not significant (.835)

Appendix B

Result of Logistic Regression

Dependent variable: Status of apprentices (dropout, completed)

Independent variable:

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-.386	.055	50.131	1	.000	.680
Variables not in the Equation							
				Score	df	Sig.	
Step 0	Variables	Type of occupation		35.751	4	.000	
	Type of occupation (1)	.044		1	.833		
	Type of occupation (2)	27.898		1	.000		
	Type of occupation (3)	5.229		1	.022		
	Type of occupation (4)	.000		1	.990		
	Marital status (1)	4.300		1	.038		
	Ethnicity of trainees	8.384		3	.039		
	Ethnicity of trainees (1)	1.488		1	.223		
	Ethnicity of trainees (2)	4.189		1	.041		
	Ethnicity of trainees (3)	6.516		1	.011		
	Geo-Region (1)	9.494		1	.002		
	Province of trainees	18.340		6	.005		
	Province of trainees (1)	.273		1	.602		
	Province of trainees (2)	1.600		1	.206		
	Province of trainees (3)	4.609		1	.032		
	Province of trainees (4)	1.792		1	.181		
	Province of trainees (5)	.159		1	.690		
	Province of trainees (6)	2.790		1	.095		
Overall Statistics				60.163	15	.000	

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	1819.754a	.043	.058

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Variables in the Equation		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1a	Type of trade			25.454	4	.000	
	Type of trade (1)	-.564	.212	7.099	1	.008	.569
	Type of trade (2)	-1.050	.221	22.555	1	.000	.350
	Type of trade (3)	-.393	.211	3.454	1	.063	.675
	Type of trade (4)	-.544	.205	7.071	1	.008	.580
	Marital status (1)	.548	.249	4.830	1	.028	1.730
	Ethnicity of trainees			7.934	3	.047	
	Ethnicity of trainees (1)	-.206	.282	.534	1	.465	.814
	Ethnicity of trainees (2)	.018	.309	.003	1	.955	1.018
	Ethnicity of trainees (3)	-.439	.256	2.937	1	.087	.645
	Geo-Region (1)	-.135	.154	.760	1	.383	.874
	Province of trainees			7.583	6	.270	
	Province of trainees (1)	.302	.220	1.890	1	.169	1.353
	Province of trainees (2)	-.009	.278	.001	1	.974	.991
	Province of trainees (3)	.410	.218	3.535	1	.060	1.507
	Province of trainees (4)	.386	.297	1.696	1	.193	1.472
	Province of trainees (5)	.028	.214	.017	1	.897	1.028
	Province of trainees (6)	.302	.258	1.365	1	.243	1.352
	Constant	.262	.363	.520	1	.471	1.300

a. Variable(s) entered on step 1: Type of occupation, Martial status, Ethnicity of trainees, Geo-region, Province of trainees.

