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Approaching Apprenticeship in Nepal: Lessons from Dual-VET of Germany

Prakash Kumar Paudel^{*a} and Christiane Eberhardt^b

^aKathmandu University School of Education

^bFederal Institute for Vocational Education and Training (BIBB)

Abstract

Apprenticeship training is geared towards meeting the demands of the labor market which also ensures self-esteem, employability and vocational career development for the individuals. Against this background, apprenticeship is seen as a successful model for grooming the labor force and reducing youth unemployment. In this paper, we map the current state-of-the-art of apprenticeship in Nepal against the dual system of VET in Germany. The central question in our reflection is how common ownership can be established through responsibility sharing in countries, where other governance principles apply and the governance models also differ from the German model. Hence, in the first step, we focus on the origins of vocational training in both countries. We show that the development of apprenticeship has been driven by social, political and industrial needs, thereby getting deeply rooted in society. We show that despite many challenges, dual training in Germany is an important educational pathway for young people to access the labor market and a backbone of the economy there. This is different in Nepal, where despite the governance structures that have been created in the meantime, apprenticeship training is struggling for recognition among the leaders and actors in the economy. We end up adopting the "six central pillars for successful quality apprenticeships" (i.e. meaningful social dialogue, robust regulatory framework, clear roles and responsibilities, equitable funding, strong labor market and inclusiveness) developed by the ILO (2017). We reflect on them with reference to the Nepali case and in the shadow of the German experiences. In our conclusion, we propose to add "consideration of the country context" as the seventh important pillar for qualitative apprenticeship to ensure sustainable development – free of external funding and support.

Keywords: informal apprenticeship, apprenticeship in the dual VET system, Nepal, Germany

Introduction

Apprenticeship generally combines learning in a vocational school or at a training provider with the acquisition of specific vocational skills at the workplace. The International Labor Organization (ILO) defines in its

vocational training recommendation that apprenticeship is to be carried out in a *systematic learning process in a specific occupation with quality and formal arrangement* (ILO, 1962). This definition

^{*}Corresponding author. Email: prakashpaudel@kusoed.edu.np

of apprenticeship points to a legal provision that obliges all stakeholders to commit to a standardised learning process based on a curriculum or training program that is accepted and implemented in a structured and mandatory manner in both learning environments.

Until nowadays and in contrast to the above-mentioned requirement, apprenticeship is also a common phenomenon in the informal economy. In many countries around the world where the informal sector dominates, skills pass from one generation to the next by “informal apprenticeship”. This “informal apprenticeship” is characterized by its unstructured framework in which learning often takes place unsystematically and independently of official (recognised) plans or VET-standards and where the focus is on the needs of the training company or the skills of the person providing the training. In addition to a high social value for the community, "informal education" also brings constraints, such as insecure working conditions, low- or no-income prospects, little or no social protection, etc. However, promotion of informal apprenticeship is considered adding value, as it is a cost-effective way to invest compared to costly formal arrangements for enhancing employability of the youth (Steedman, 2012). But, the evidence also shows that formal apprenticeship has provided strong support in lowering the youth unemployment rate among good economic performing countries (Valiente & Scandurra, 2017).

Formal apprenticeship does not only seek to arrange learning opportunities in both schools and working places but also to develop a partnership among the social institutions

with common ownership of the system and with shared responsibilities. ILO (2017, p. 4) identifies six quality indicators; meaningful social dialogue, a robust regularity framework, clear roles and responsibilities, equitable funding arrangements, strong labor market relevance, and inclusiveness for a standard apprenticeship system. Although these indicators/quality criteria can be applied to all apprenticeship models, there is a great deal of variation between the countries. Against this background, we examine VET in Nepal and Germany, in particular how apprenticeship has developed, its current scope, outreach and governance. Our aim here is not to compare apples and oranges, but to take the German experiences with the dual training model as occasions and impulses for discussing apprenticeship in Nepal, which has only recently embarked on this path. Finally, we reflect on Nepali Technical and Vocational Education using the ILO framework (2017) in the shadow of the German experience.

The Origins of Vocational Training in Nepal and Germany

Wherever work is done, "learning in the process of work" takes place - in Germany, Nepal and elsewhere. This means that "work-based learning" takes place everywhere - but differently everywhere (Georg, 2013). The relationship between education and employment always involves historically evolved institutional structures. The corresponding institutions may have developed differently in the individual nations, but they certainly have common roots that go back to the Middle Ages. This is equally true for Nepal and Germany.

Nepal

A structured and organized family-based apprenticeship system that maintained occupational skills and craftsmanship from generation to generation for centuries is traced back in the history of Nepal. The long-standing tradition of education was built on the understanding that the father taught his sons to follow in his footsteps to pursue careers and earn a living, and the mother taught her daughters to follow her in learning household chores (Shrestha, 1991). These learning practices were informal and continued within the family and the clan for generations. However, these family-based occupations were rooted in customary laws called *Sthiti*. The *Sthiti* was legal order ascribed to the particular caste in which normally, social responsibility was attributed either guided by religious text or influence of political situation (Sharma, 2004). King Jayasthiti Malla in the 14th century hierarchically arranged four varnas and 64 castes with their prescribed job description. The system persisted for a long time although Muluki Ain later discouraged the hierarchy. Hence, occupational skills continued to work with caste systems and still, it could be found as an indicator for interpreting one's social status in many Nepali societies.

The modern education system failed to integrate informal family-based apprenticeship and prioritized only school education for younger children (Bureau of Publication College of Education [BPCE], 1956). Consequently, school-based general education became mainstream in educating young people in Nepal. The standing of traditional skills neither could improve social status compared to modern education nor could make its space in the curriculum

of modern education. Formally, modern vocational education started during the 1960s in some selective multi-purpose schools for early productive education along with general education. Some modern institutions, such as the Butwal Training Institution (BTI) and the Mechanical Training Centre (MTC) started focusing on technical and vocational education. These institutions were established with different school arrangements than general education. These institutions also began a formal apprenticeships, internships and On-the-Job Training (OJT) programs in Nepal.

Later, in the 1989, the Council for Technical Education and Vocational Training (CTEVT) was established to manage the entire TVET system in Nepal. The CTEVT introduced both formal and non-formal TVET programs in its technical institutes. However, it expanded access to TVET across the country providing affiliation to the community and private education providers. Internships and OJT were the workplace learning approaches. However, after 2018, CTEVT introduced a dual VET program in a few selected schools.

Germany

Apprenticeship has been known in Europe since the 13th century. In this time, the craftsmen themselves organized into various professional associations called guilds and supervised the training of apprentices ensuring that traditions and standards of the craft were observed. The guild system was hierarchically characterized into apprentice, journeyman, and master craftsman. It was also gendered as only male apprentices were accepted into the guild system. The guilds had the autonomy to define the length

of the apprenticeship, curriculum, wage, and working conditions of the apprentice. The apprentices lived in their master's households, and their parents paid a cost for food and lodging to the master. The training rested with the individual master craftsman who took responsibility for both the theoretical and practical training of the apprentice. After a specialized examination administered by the guild, the apprentice was "discharged", thereby making him a journeyman. After years of experience, the journeyman could submit a piece of his best work to the appropriate guild for assessment and approval. If the piece of work was accepted, the journeyman would become a master craftsman. This gave a new master craftsman the right to set up his workshop and the authority to train apprentices himself (Poulsen & Eberhardt, 2016, p.7). One can say that medieval guild training was about learning and working but at the same time, it was about upbringing, social control and socialization into a particular role as a citizen. Over the centuries, the function of VET turned from that social control to "facilitating self-development".

The nowadays-dual system took further shape at the beginning of the 19th century when the large-scale industry itself worked strongly on the development of vocational education and training. The German industry rejected the Taylorist-inspired fragmentation of the training process and opted for a new type of role model, the "skilled worker", regulated by a system of generally accepted vocational certificates, the basis of which we know nowadays as professional standards. Training at two learning venues was implemented, which in those times were the training workshop and factory school, with

standardized courses and teaching materials underpinned by job descriptions, training schedules and examination requirements for every "training occupation" (regulatory instruments) (Greinert, 2005, p. 97). A model of how on-the-job training in workshops and schools should look alike was already adapted for the industry in the nineteenth century. Those principles were determined for the first time in Germany in the "Declaration on the Regulation of the Apprenticeship System" which was adopted at the 10th Congress of the German Unions in Nuremberg in 1919. It can be considered the first draft of a vocational education and training scheme. It already contained essential elements of the Vocational Training Act, which entered into force 50 years later on 1 September 1969 after lengthy debates (amended in 2005 and again in 2020). It describes the roles, functions and responsibilities of all participating stakeholders and secures common ownership of the system (Poulsen/Eberhardt 2016). With the Act on VET, the world of work and the world of education are legally connected. The Act on VET does not stand alone. It is accompanied by the Youth Employment Protection Act and the respective collective bargaining agreements of the sector to avoid exploitation. Industrialization had a strong impact on the development of modern occupations and vocations that represent until nowadays a specific structural pattern in German industrial work. The emerging strong influence of trade unions in the large-scale industry was the starting point for social partnership and collective bargaining agreements, which also involved VET heavily by a system of generally accepted vocational certificates, later on, professional standards.

For both Nepal and Germany, it is evident that the national characteristics of the education and vocational training systems are always embedded in a country-specific historical, cultural and institutional context. The same applies to the constellations of the labor market and employment. Every society is characterised by a specific form of educational organisation, labor market structures and company work organisation. There are stable interactions between these dimensions. These interactions also explain why social institutions have a high degree of inertia and are largely resistant to change.

Outreach, Scope and Governance of Apprenticeship Training

Although the term governance has a lot of different meanings (Stoker 1998:17), there is broad agreement that governance refers to the development of forms of government in which the boundaries between and within the public and private sectors are blurred. When we approach issues of governance in VET, we look for mechanisms that include regulation, social action coordination and steering. Accordingly, our notion of governance derives from a definition of governance as “[...] the totality of all coexisting forms of collective regulation of social issues: from institutionalised self-regulation by civil society, through the state and private actors, to sovereign action by state actors” (Mayntz, 2003, p. 72). In this understanding of governance, the boundaries between and within the public and private sectors become blurred. The logic and mechanisms of action are not prescribed and sanctioned by any state authority. Instead, the governance structure is the result of the interaction of a multitude of mutually accepting and cooperating actors.

Governance in VET is implemented within three logics of action: state-led, market-based or corporatist. Systems that rely on a central role of the state typically have a very high proportion of school-based VET under public responsibility – the governance is thus state-led (Greinert, 2005). The governance of systems where the vocational qualification is essentially organised in-company or on-the-job after some years of schooling takes place beyond the sphere of public influence under market conditions. And there are systems that are to be assigned to the type of negotiation. For the policy field of VET, the context of corporatism is particularly important. Which governance system is applied depends largely on the historical development and tradition of VET systems.

We describe corporatist governance using the example of the German dual VET system below. Nepal represents a country in transition: it is largely subject to state control and at the same time, has created structures in which non-state actors are to be involved in the design of vocational education and training.

The Nepali Path to Vocational Training

According to the Industrial Trainee Training Act, 2039, (1982), vocational education in contemporary Nepal emerged with the aim of training school dropouts and preparing them as lower- and middle-level workers. However, the 2018 Guidelines for Apprenticeship Training (CTEVT, 2018) describe apprenticeship training as a form of learning where learners are placed in a real work environment after acquiring theoretical knowledge in school.

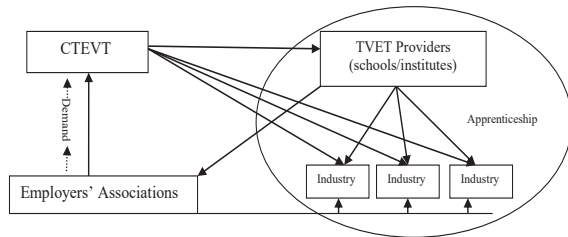
All educational institutions in Nepal are managed by the Ministry of Education, Science and Technology (MoEST). The ministry also promotes technical and vocational education in some community schools. TVET, mainly, is under the supervision of CTEVT. It is also a larger umbrella organisation for TVET, comprising over 1,100 technical schools, including constituent, partnership models and affiliated schools (CTEVT, 2019). Ministries other than MOEST are also involved in curriculum development and program implementation. Nevertheless, apprenticeship programs are implemented only in the formal program under CTEVT in Nepal. As the apex organisation for vocational education and training, CTEVT conducts both formal programs (diploma and pre-diploma programs) and non-formal short-term training programs across the country. Forty-eight curricula have been developed for the diploma level and 31 for the pre-diploma level. In addition, more than 300 standards for vocational qualifications have been developed. Of these, seven curricula (lasting 24 months) were developed for dual VET apprenticeship. These are mechanical engineering, electrical engineering, automotive engineering, civil engineering, hotel management, information technology and early childhood development, which are implemented in about 30 technical schools with an intake capacity of about 1,000 students. This is a small number compared to other courses which have a total intake capacity of over 80,000 students (CTEVT, 2020). This also shows that students are not enrolled according to the capacity of the schools, and the apprenticeship program is no exception.

Dual VET apprenticeship was introduced in 2018 with the aim of preparing the youths to meet the demand of the labor market (CTEVT, 2018). The Guideline for apprenticeship program 2018, the policy made to explain article 6.11, of CTEVT Act 1989 a provision for apprenticeship training. Apprenticeship programs have a duration of 24 months. Upon completion of the program, students receive a certificate equivalent to the Secondary Education Examination (SEE) from CTVET. There are formal entry requirements for apprenticeship and students must complete full-time compulsory education. In the beginning, the apprentices attend school for the first three months. In the fourth to twenty-third month, apprentices attend in-company training. During this period, they spend five days per week at the company and one day at school. The last month (24th month) is spent at school and the final examination is taken at school.

The CTEVT is the main body for implementing and regulating apprenticeship training programs. It receives a demand from national employers, but according to the directive, demand from the foreign labor market is also a source for apprenticeship training. Once the demand for a program is identified (both through research and enquiries), CTEVT initiates the development of a curriculum for the specific program. The process of designing the program involves employers from the federations on an ongoing basis. Once the curriculum is approved by the board formed under the CTEVT Act 1989, the schools are responsible for its implementation. Although the respective school is responsible for implementing the training and coordinating with employers, the CTEVT conducts the entrance examination for enrolment and the final examination for

certification. The CTEVT regularly monitors the programs carried out and the schools and employers are also expected to support this process. The modalities of apprenticeship training are shown in Figure 1.

Figure 1
Modality of Apprenticeship in Nepal



Source: Guidelines for apprenticeship program (CTEVT, 2018)

Schools entrusted with the implementation of the apprenticeship program formally sign a tripartite contract (employer, school and apprentices or their parents) with employers. Prior to this, it has been verified that the employers meet a standard for workplace learning and are therefore able to train. Trainers/instructors are nominated by both parties, school and industry, to guide and support the apprentices with their learning employers select an instructor (senior craft man) to facilitate and a roving instructor from among the senior employees to coordinate and monitor the program in the industry. The trainers in the industries and companies keep a record of the apprentices' performance and finally send the evaluation record to the respective schools. In the last month of the training program, the apprentices learn in the schools and take the final examination, which is conducted by CTEVT. During the in-company training, the apprentices receive at least 25% of the basic salary as pocket money, which is managed by the employer.

Apprenticeship within Dual-VET System in Germany

The dual system (in this paper the term is synonymously used with the term “apprenticeship”) is at the core of vocational education and training in Germany. Two legal documents - the Vocational Training Act and the Crafts and Trades Regulation Code (Handwerksordnung, HwO) - govern initial vocational education and training under the dual system in Germany. Under the terms of the Vocational Training Act (Berufsbildungsgesetz BBiG), the concept of “vocational education and training” comprises the areas of vocational training preparation, initial vocational training, advanced/further vocational training, and vocational retraining.

Vocational Training within the dual system in terms of apprenticeship is currently provided in 323 vocational profiles (occupations), described as so-called “recognised training occupations”, and laid down in vocational training directives (training programs). Training takes place predominantly three to four days a week in the company and is accompanied by one to two days a week at a part-time vocational school. The curriculum of the vocational school contains about 2/3 job-related and 1/3 general education content. For both learning venues (company and VET school) there are independent - but coordinated - regulations for both places of learning. They are implemented by company-based and school-based training curricula that are interlinked.

Most dual training programs last three to a maximum of three and a half years. There are no formal entry requirements - only the fulfilment of compulsory full-

time compulsory education. Access to VET is (formally and by law) not depending on the young applicant's school-leaving certificate. Companies decide independently whom they train and employ while it is the responsibility of young people to apply for an apprenticeship-training place with a company. In final examinations, apprentices must show that they have acquired "the necessary skills, the necessary practical and theoretical knowledge" (from their companies) and that they have mastered "the course material, as taught in vocational schools, that is central to the vocational training in question" (BMBF, 2003).

The companies sign contracts with apprentices under private law and undertake the costs of the training. They pay apprentices allowance in accordance with the collective bargaining agreement in the sector concerned. Training takes place in the workplace in line with the binding provisions of vocational training directives, which ensures a national standard. The training is monitored and supervised by competent bodies, mainly the chambers (of industry and commerce, crafts, agriculture, doctors, and lawyers) and by competent public service bodies or by the purview of the churches.

The dual system, despite many problems, remains the largest education provider at the upper secondary level in Germany. About one-third of all employees have passed dual training. They acquired vocational competence mainly in companies and in part-time vocational schools during their educational pathway. At the end of 2019, approximately 1.33 million persons (mostly young people) nationwide had the status of apprentice in the company. Slightly more

than half of an age cohort (54.4 per cent) started with apprenticeship training in one of the 323 occupations in 2019 (Federal Institute for Vocational Education and Training [FIVET], 2021).

The final examination of apprentices is administered by the authorities, the competent bodies, responsible for vocational training. The competent bodies include regional and sectoral organisations of industry and commerce, such as; chambers of industry and commerce, or handicrafts, or liberal professions that perform governmental functions in the domain of vocational training. However, the competent bodies can also be public authorities. The board of examiners are formed of representatives of industry, labor, and teachers from vocational schools. The final examination includes both a practical and a written component. Successful candidates are awarded an examination certificate. Concurrently, the vocational school issues a leaving certificate if the trainee has performed at least adequately in all subjects. The successful candidates also become eligible to attain the Fachhochschulreife, technical college entrance (KMK, 2019).

An apprentice successfully completing the training is immediately entitled to do skilled work. The formal qualifications on successful completion of initial training undergone in the dual system correspond mainly to ISCED level 3 (EQF level 3 and 4) and provide recognition as a skilled worker in the industry (Facharbeiter / Facharbeiterin der Industrie), an employee in business and administration (Fachangestellter / Fachangestellte in Wirtschaft und Verwaltung), and Journeyman/Craftsman (Geselle / Gesselin im Handwerk).

Even though the number of companies offering training in Germany over the recent years was decreasing, learning within the dual system is still the major VET strand in Germany. In 2019, 427,000 companies (20%) participated in the system by offering apprenticeship places and concluding corresponding contracts with applicants. Increasingly, however, matching problems are arising in the labor market. In 2019, total of 57,700 apprenticeship places in companies remained unfilled because no suitable applicants could be found. In contrast, 78,600 young people remained "unsupplied" on the applicant side and could not find an apprenticeship place in a company (Federal Institute for Vocational Training, 2021).

Companies invest heavily in training their next generation of skilled workers. According to the results of a representative BIBB survey on the costs and benefits the investment pays off, however, particularly, when the apprentice is taken on, as recruitment costs are saved, dependency on the external labor market is reduced. Similarly, it smites possible downtime costs because the personnel bottlenecks are avoided. Apprentices not only generate costs but also contribute to the production of goods and services through their work (Federal Institute for Vocational Education and Training, 2009).

Governance of VET

In Germany, the fundamentals for the successful interweaving of educational and labor market-related issues and interests are anchored in three key principles of apprenticeship in dual VET: "dualities, "consensus" and "occupation" (see Greinert 2005, Kutscha 2002). In their interaction,

these principles ensure the common ownership of all actors and stakeholders with shared responsibilities for the governance of the VET system and the provision of apprenticeship training.

The core feature of the dual system in Germany is rooted in the active involvement of various actors. The guiding and coordinating Federal Ministry of Education and Research (BMBF) is at the federal level. Other federal ministries issue ordinances and coordinate with the BMBF (their provisions are subject to the approval of the BMBF). Representatives of employers, the unions, the Länder, and the Federal Government work together on the board of the Federal Institute for Vocational Training (BIBB) on an equal basis.

Ministries of cultural affairs at the Länder level are responsible for general and vocational schools. The Länder governments form vocational training committees made up of representatives of employers, employees and the relevant Länder governments. These Länder committees advise Länder governments on vocational training-related issues. They are responsible especially for promoting cooperation between in-school and company-based vocational training.

The Länder established the Standing Conference of the Ministers of Education and Cultural Affairs (KMK, Ständige Konferenz der Kultusminister der Länder) to establish cooperation in education and training. The KMK bridges the Länders and the Federal Governments. The Federal Government regulates training in companies while the Länders are in charge of vocational training in schools.

The autonomous organizations, especially, the chambers of industry and commerce and crafts chambers important roles at the regional level. These organizations supervise and monitor in- companies training, review the suitability of companies, and assess the aptitude of instructors within their districts. They are also responsible for registering apprenticeship contracts and establishing examination boards for intermediate and final examinations. Under the Vocational Training Act and the Crafts Code, they are independent to issue individual regulations in their regions. The Länder ministers of economics; however, are also responsible for supervising regional competent bodies for company-based vocational training.

Several legislative regulations, such as the Vocational Training Act and the Law on the Constitution of Enterprises, have provisions for the participation of trade unions in vocational training. At Länder level, the unions have equal representation on the Länder Committees for vocational training together with the representatives of the chambers and the public purse. Furthermore, at the federal level, they also have equal representation on the Main Board of the Federal Institute for Vocational Training.

In the dual vet system, shared responsibilities among the actors lead to the following statutory framework conditions and clarifying what is meant by the term dualities:

Table 1

Dualities in the German dual VET system

Duality1: Basic laws	In-company training is governed by the Vocational training Act whereas respective Lands are in charge of part-time vocational schooling.
Duality2: Learning Venues	Vocational Training takes place in a company/firm under private law and part-time vocational schools run under public law
Duality3: legislative competence	Vocational Training is regulated by the Federal government (in-company training) and the Government of the respective Land (part-time vocational schools)
Duality4: judicial regulation	The enterprise and the trainee make a contract based on private law for in-company vocational training while part-time vocational schooling is based on compulsory attendance (Berufsschulpflicht)
Duality5: Content	In-company vocational training content is stipulated in the training regulations while it is laid down in the curriculum framework (Rahmenlehrplan) in part-time vocational school
Duality6: Supervision	Company-based vocational training is supervised by competent bodies and part-time vocational schools are by education authorities.
Duality7: Financing	The companies pay for company-based vocational training, and the governments of the respective Länder pay for the part-time vocational schools

Source: Authors' illustration based on Vocational Training Act and other public laws

There are some more dualities such as the status of the learner (“apprentice” in the company/student in school), the professional (trainers in companies/teachers in schools), the learning (the work process in the company / theory-based in school), the examination procedures (final examination at the competent body/school certificate) and the organisation of training (2/3 of the training in the company / 1/3 in school).

This shows that the designation “dual” does not however refer just to the learning at two learning venues but also (and most importantly) to the questions of governance and the associated responsibilities to the different stakeholders. “Dualities” in this respect show the well-balanced interaction between the federation and the Länder, employer organisations, trade unions (social partners) and intermediary organisations and thus between all organisations and institutions involved in VET. “Dualities” are also apparent in respect of the legislative foundations, financing issues, the design of the content, and the oversight of initial vocational education and training.

Discussion

In the preceding sections, we have tried to mirror the Nepali way to apprenticeship with the German understanding of training in the dual VET system. We have shown that the term "apprenticeship" stands for a company-based form of training in which the needs of the labor market are already considered in the training programs (curricula). According to this understanding, "apprenticeship" means that the training is practice-oriented and provided preferably at company and school.

The evidence shows that there was an apprenticeship system in both geographical regions although they were unique in their features. Germany came through a long history of the Guild system and ventured into the modern dual VET with the emergence of the industrial revolution. In such a context, industrial expansion created a huge demand for skilled human resources and dual VET emerged as a solution to fulfil the gap. The modern VET bases on the principle of dualities of the traditional guild system. Similarly, there was a system of family-based apprenticeship in Nepal for many generations to fulfil the labor demand in the labor market. The modern TVET system instead did not assimilate the family-based apprenticeship. Unlike Germany, TVET in Nepal began following establishment of democratic system. Hence, it grew with political change which opened an avenue for national development and many skilled people were required to carry out development activities in various sectors. However, the preparation of such skilled human remains largely supply driven.

Through our recourse to the Nepali and German historical development of vocational training, we have also shown that the way in which qualifications are catered on and awarded in our countries which has been handed down over many decades. Education and vocational training express our access to society, culture and economy – against this vocational education and training (systems) and qualifications as their products are cultural projections (Georg 2005, p. 183). However, systems, and especially vocational training systems, that work successfully in one country can remain foreign bodies in another if they cannot be embedded in the

national, cultural and economic framework. Our comparison of Germany and Nepal showed that the orientation of Nepali TVET to the German dual system is only useful to a limited extent. However, this does not mean that Germany's example cannot be a reference - especially with regard to key issues that are currently on the political agenda in Nepal as well.

On the basis of the above-presented mapping of scope, outreach, and current governance system of apprenticeship, we further approach apprenticeship in Nepal with the ILO (2017) framework of six key dimensions i.e. meaningful social dialogue, a robust regularity framework, clear roles and responsibilities, equitable funding arrangements, strong labor market relevance, and inclusiveness for a standard apprenticeship system. Doing so, we also shed light on German experiences of the dual VET system.

Meaningful Social Dialogue

Increasing the engagement of employers in TVET system is a basic requirement. This will both increase the quality of the program, as it gains social ownership. Apprenticeship within the dual system, however well-balanced and historically developed it may be, is enormously susceptible to crises and economic cycles due to its close connection to the labor market. The consolidation of the positive image of VET is - in addition to numerous other problems which have not been mentioned here - also an issue in Germany. This can be a good vintage for Nepal, as it is just embarking on the journey of the apprenticeship system.

TVET system in Nepal is regulated by its implementing body CTEVT though

employers witness most of the processes. They participate in the curriculum making process and also train apprentices in their industries. However, the study has shown employers' participation is not meaningful (Bajracharya & Paudel, 2021). Linking these key actors in the TVET system is inevitable to sustain. However, establishing collaboration between these social actors is equally challenging because each partner operates in a different frame of reference (Flynn, Pillay, & Watters, 2015). So, for this, boosting the image of VET in society, among employers and among young people according to country context counts equally. This requires an intensive dialogue and creates a win-win situation with power sharing among the actors (Caves et.al., 2019) so that they would be obliged to bear the responsibilities.

Clear Roles and Responsibilities

The principle of duality has been a major characteristic of apprenticeship (Wolter & Ryan, 2011). However, comparing two countries, the principle of duality is executed differently. In the context of Germany, it is the social partners (employers and trade unions) who decide the need of the training while in Nepal TVET providers in consultation with employers provide the training. Similarly, there are stipulated roles between the federal and state government in Germany. However, this was seen as absence in the context of Nepal which is waiting for governing TVET act in the federal context since 2015 when the new constitution came to restructure the centralized governance system with new constitution in place.

Actors of TVET, mostly the TVET providers and employers, interface in the various stages of TVET system. According to

Rageth and Renold (2017), their interaction can be observed in three stages: during curriculum designing where these actors decide on qualification standards, exams etc., implementation of the prepared curriculum together, and finally the gathering of the information for further move. The guideline prepared for implementing apprenticeship in Nepal defines the roles and responsibilities in articles number 10 and 11. However, the core issue is how these actors are independently executing their roles and responsibilities. In the context of Nepal, Lamichhane (2021) saw the gap in partnership with articulated roles that could have been a catalyst for increasing ownership and thus quality output of TVET.

A Robust Regularity Framework

The modern apprenticeship system is often seen as regulated by law. The experience of German shows it is a strong institution that makes the apprenticeship system a standard. In the context of Nepal, laws, policies, and plans are yet to be harmonized to calibre the implemented program (Caves & Renold, 2018). Currently introduced dual VET apprenticeship is governed by CTEVT Act, 1989 which envisioned the implementation of apprenticeship program long before. Despite having CTEVT as an apex body for the TVET, other ministries are also running the program in parallel. This has not only created confusion but also invited conflict among the actors. It also lacks a strong coordinated regulatory system in the absence of governing TVET act in the federal context. In the case of apprenticeship, it has been governed by the federal but there is a question of what would be the role of provinces and the local government which have a mandate by the constitution 2015 to

manage secondary-level education. Thus, it seems reformed TVET structure with guiding law can be a strong basis for making apprenticeships sustainable in Nepal.

Strong Labor Market Relevance

The skills gap has remained a common issue in many countries which is strongly considered to result in a poor employment situation (Jayaram & Engmann, 2017). Nepal is not an exception: an issue of a gap between the demand of the market and the supply of the programs is persistent (Sharma, 2013). The objectives of apprenticeship in Nepal aim at enhancing occupational skills and getting prepared basic and middle-level competent human resources according to the demand of the labor market (CTEVT, 2018). Apprenticeship can be instrumental in skilling the youth, as the Central Bureau of Statistics (2019) reveals about 80 % of people who were employed had less than secondary-level qualifications. In this situation, the employers have to invest on their own to groom the employee for their company, as the report of the Asian Development Bank (2015) also shows about 90% of youths who were in employment claimed to learn their occupational skills during their job. The foreign labor market has been also a strong venue for Nepali youth in the last decade. Every day, over 1,000 youths fly abroad for a job in different destinations, such as Gulf and Malaysia. A report by the Ministry of Labor, Employment and Social Security [MoLESS], (2020) about 60% of them go abroad without receiving specific occupational skills which makes them earn comparatively low wages.

Having a least developed economic country, the labor market absorption capacity also seems to be a roadblock. German experience

shows a demand for a huge labor force with the industrial revolution in the late 19th century. However, in Nepal, informal sector still dominates engaging the youth for their employment (62%). A recent report shows among the employed youth, only 15 percent was shared by the manufacturing industry followed by 14 percent in construction (CBS, 2019). This shows apprenticeship in Nepal not only need to enhance the employment skills but also prepare them as an entrepreneur to generate avenues for new employment.

Equitable Funding Arrangements

There are various practices for financing TVET across the world which mainly depend on how resources are mobilized in the concerned national contexts. However, in the context of TVET along with involvement of employers and coordination among the program implementing stakeholders, a sustainable fund source and fund mechanism is equally important (Johanson, 2009). In Nepal, TVET governance is fragmented as many ministries run TVET programs simultaneously. In this context, one of the major sources of financing is the government's regular fiscal budget. However, the budget allocated to TVET is negligible (Parajuli et. al., 2020). The community also invests in TVET in Nepal. This is funded in partnership model where government and community bear the cost for TVET. According to CTEVT report (2020) 572 schools are running TVET program in community across the country. These schools receive a partial grant from CTEVT and manage the remaining cost on their own. Similarly, international aid from developing partners has been also a strong source for it in Nepal.

Apprenticeship is also funded by both the government and employers. The government bears the cost that is required for institutional learning. The employers provide incentives to the trainee students as per their mutual bargaining although the guideline for apprenticeship recommends providing at least 25% of the basic salary. However, it seems important to have a strong regulatory mechanism of funding to ensure that a trainee student gets a respectful incentive for their contribution to the employers.

Inclusiveness for a Standard Apprenticeship System

Inclusiveness is also considered one of the strong pillars of quality apprenticeship (ILO, 2017). The TVET system in Nepal also shows implementing programs considering the issue of inclusion. Apprenticeship is a regular program of the CTEVT. As a rule, it ensures a certain number of enrolments for youth from the underprivileged community. Nevertheless, some occupations are traditionally taken, specifically for males while others are for females. For example, construction is a male job while nursing is female. In this regard, apprenticeship in Nepal has equal challenges to mitigate this social construct.

Country Context as the Next Pillar

The modern economy can not work with unskilled workers in a country like Nepal. The core question in this context is: "How can TVET successfully link the world of work with the world of education?" For this, we argue that developing TVET considering the national context is more sustainable and successful. German experience shows

that dual vet does not stand alone. On the contrary, it is embedded within the country's socio-economic context. The modern VET system is the continuation of the traditional guild system which was a strong social institution that continued for centuries. The German VET system can be suitable for Germany in many respects. But that does not mean that it is the same for Nepal, as Nepal has a different socio-economic context. In this regard, a national context also needs to be considered as an important pillar for developing a successful apprenticeship system. Nepal can benefit from the German experience but it is equally important how it is built in the country's context.

Conclusion

Apprenticeship regains attention in Nepal despite the modern TVET system disembarked traditional family-based apprenticeship system. Unlike Germany which developed a modern dual VET evolving over centuries, family-based apprenticeship was a roadblock for modern education. Nepal posits a distinct labor market and social context in which TVET needs to be a contributor and increase its social value. Apprenticeship can be a vehicle for recognizing largely occupying informal sectors, as TVET graduates also can be an innovator. Similarly, it can be a role model for strengthening public-private partnerships for national development, as employers have already started providing incentives to trainee students which were rare in the past.

In this context, what could be stepped on in Nepal's way to more practice-oriented training and more labor market-relevant apprenticeship? To this end, we put forward the following considerations for discussion:

- a) Introducing entrepreneurial learning at TVET schools. Entrepreneurial learning should prepare young people for the labor market or possible self-employment at an early stage. To make this possible – among others - explorations could take place in companies, or company representatives could come to the schools and report on their work, their experiences and their future needs;
- b) Enabling school-business cooperation by networks bringing together representatives of TVET schools and business. This will attract new employers to engage and build a social partnership;
- c) Establishment of equipped production houses or workshops in the school to increase the practical orientation of the students.

Well-equipped workshops at vocational schools could also be a lure for small enterprises that may not be so well-equipped. Companies and apprentices at schools could work together on more complex assignments and tasks. In addition, the schools could offer their products or services on the market (principle of production school) and thus raise funds for the maintenance of the workshops. We thus argue for how win-win situations can be created in the medium and long term and how development opportunities for the individual can be linked to development opportunities for a larger informal sector or a company.

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