Factbook Education System: Nepal

Report

Author(s):
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Publication date:
2022

Permanent link:
https://doi.org/10.3929/ethz-b-000615468

Originally published in:
CES Factbook Education Systems 24

ETH zürich

Chair of Education Systems

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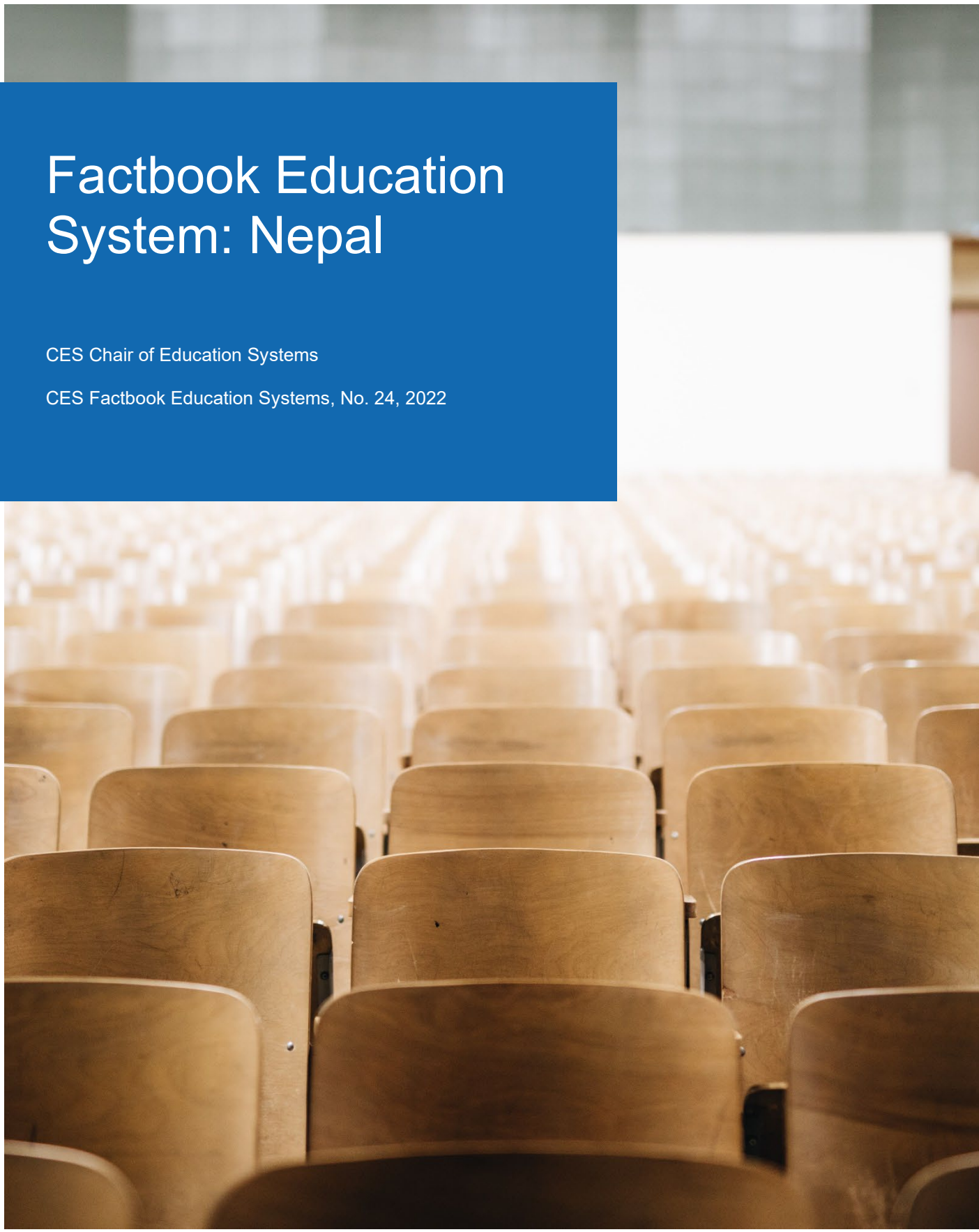
CES Factbook Education Systems, No. 24, 2022



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Editing and Acknowledgement

This Factbook was edited by Gaspare Greco and Ditjola Naço. We want to thank Manuel Sigg and Leotrim Zukaj for the elaboration of the contents.

Contents

List of Abbreviations

CDC	Curriculum Development Centre
CTEVT	Council for Technical Education and Vocational Training
ECDC	Early Childhood Development Center
EPL	Employment Protection Legislation
GCI	Global Competitiveness Index
GII	Global Innovation Index
GDP	Gross Domestic Product
GER	Gross Enrolment Rate
ICT	Information Communication and Technologies
ILO	International Labour Organisation
ISCED	International Standard Classification of Education
KOF	Swiss Economic Institute
LFPR	Labour Force Participation Rate
MOE	Ministry of Education
MoEST	Ministry of Education, Science and Technology
MPI	Multidimensional Poverty Index
NER	Net Enrolment Rate
OECD	Organisation for Economic Co-operation and Development
OJT	On the Job Training
PET	Professional Education and Training
SDG	Sustainable Development Goal
SEE	Secondary Education Examination
SLC	School Leaving Certificate
SSDP	School Sector Development Plan
TITI	Training Institute for Technical Instruction
ToT	Training of Trainers

TSLC	Technical School Leaving Certificate
UNESCO	United Nations Educational, Scientific and Cultural Organization
UGC	University Grants Commission
VET	Vocational Education and Training
VPET	Vocational Professional Education and Training
VPETA	Vocational and Professional Education and Training Act
WEF	World Economic Forum
WGI	World Governance Indicators
YLMI	Youth Labour Market Index

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Foreword

The increasing competitiveness of the world economy as well as the high youth unemployment rates after the worldwide economic crises in 2008/9 have put pressure on countries to upgrade the skills of their workforces. Consequently, vocational education and training (VET) has received growing attention in recent years, especially amongst policy-makers. For example, the European Commission defined common objectives and an action plan for the development of VET systems in European countries in the Bruges Communiqué on Enhanced European Cooperation in Vocational Education and Training for 2011-2020 (European Commission, 2010). In addition, a growing number of US states and other industrialized, transition, and developing countries (for example Hong Kong, Singapore, Chile, Costa Rica, Benin and Nepal) are interested in either implementing VET systems or making their VET system more labour market–oriented.

The appealing outcome of the VET system is that it improves the transition of young people into the labour market by simultaneously providing work experience, remuneration and formal education degrees at the secondary education level. If the VET system is optimally designed, VET providers are in constant dialogue with the demand-side of the labour market, i.e. the companies. This close relationship guarantees that the learned skills are in demand on the labour market. Besides practical skills, VET systems also foster soft-skills such as emotional intelligence, reliability, accuracy, precision, and responsibility, which are important attributes for success in the labour market. Depending on the design and permeability of the education system, VET may also provide access to tertiary level education (according to the ISCED classification): either general education at the tertiary A level or professional education and training (PET) at the tertiary B level. PET provides occupation-specific qualifications that prepare students for highly technical and managerial positions. VET and PET systems are often referred to together as “vocational and professional education training (VPET)” systems.

Few countries have elaborate and efficient VPET systems. Among these is the Swiss VPET system, which is an example of an education system that successfully matches market supply and demand. The Swiss VPET system efficiently introduces adolescents to the labour market, as shown by Switzerland’s 2007-2017 average youth unemployment rate of 8.1 percent compared to 14.8 percent for the OECD average (OECD, 2017).

Though not many countries have VPET systems that are comparable to Switzerland’s in terms of quality, efficiency and permeability, many have education pathways that involve some kind of practical or school-based vocational education. The purpose of the CES Education System Factbook Series[1] is to provide information about the education systems of countries across the world, with a special focus on vocational and professional education and training.

In the CES Factbook Education Systems: Nepal, we describe Nepal’s vocational system and discuss the characteristics that are crucial to the functioning of the system. Essential components comprise the regulatory framework and the governance of the technical and vocational education and Training (TVET) system, the involved actors, and their competencies and duties. The Factbook also provides information regarding the financing of the system and describes the process of curriculum development and the involved actors.

The Factbook is structured as follows: First, we provide an overview of Nepal’s economy, labour market, and political system. The second part is dedicated to the description of the formal education system.

[1] From 2013 to 2019, the Factbooks were produced within the framework of the Education Systems research division at the KOF Swiss Economic Institute. From 2020 they will be produced by the Chair of Education Systems (CES) group.

The third section explains Nepal's vocational education system. The last section offers a perspective on Nepal's recent education reforms and challenges to be faced in the future.

Suggested citation:

CES Chair of Education Systems (2022). Factbook Education Systems: Nepal. CES Factbook Education Systems, ed. 1. ETH Zurich.

The Education System Factbooks have to be regarded as work in progress. The authors do not claim completeness of the information which has been collected carefully and in all conscience. Any suggestions for improvement are highly welcome!

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1. Nepal's Economy and Political System

Table 1: Key statistics and information on Nepal

Category	Outcome
Population	29,192.480
Area	147,181 km^2
Location	South Asia
Capital City	Kathmandu
Government	Federal Multiparty Republic
Official Language	Nepali
National Currency	Nepali Rupee (NPR)

Source: Own table based on the Central Bureau of Statistics (2022a).

One of the main purposes of an education system is to provide the future workforce with the skills required by the labour market. The particularities of a country's economy and labour market are critical factors that determine the current and future demand for skills. Therefore, they are briefly described in this first chapter of the factbook. In addition, this chapter provides an overview of Nepal's political system with an emphasis on describing key statistics and information about Nepal.

1.1 Nepal's Economy

Nepal is a landlocked country in South Asia with a gross domestic product (GDP) per capita of US$ 1,155.1, which is one of the lowest in the world. Compared with its peer countries,[2] Nepal's GDP per capita is considerably low. In particular, the difference between Nepal's GDP per capita and that of China is significant.

Between 1990 and 2020, Nepal's GDP grew at an annual rate of 4.6%. In the same period, Organisation for Economic Co-operation and Development (OECD) countries grew at a rate of 1.9%. Although Nepal's growth rate is above average among OECD countries, it has still been significantly lower than that of neighbouring countries. More crucially, it is relatively moderate for a developing economy.

More recently, considering the growth rate of the real GDP prior to the COVID-19 pandemic, Nepal's Central Bureau of Statistics reported a growth rate of 6.5% (Central Bureau of Statistic, 2022a). Compared with the growth rates Bangladesh (8.2%), Bhutan (4.4%), India (3.7%), and China (5.9%), Nepal's

[2] GDP per capita od peer countries US$ 3,000.8 (Bhutan), US$ 1,927.7 (India), US$ 1,961.6 (Bangladesh) and US$ 10,434.8 (China)

economy grew considerably faster in 2019 (IMF, 2022). The growth rate contracted by 2.1% in 2020, indicating that the economy handled the COVID-19 crisis well given the circumstances. Still, 15% of Nepal's population lives in extreme poverty, surviving on less than US$ 1.90 a day (World Bank, 2021).

Moreover, the economic crisis caused by the global COVID-19 pandemic confronted the country with numerous challenges. As a result, less privileged households have faced the risk of falling back into extreme poverty (World Bank, 2022b). In addition, Nepal suffers from the problem of large infrastructure gaps and is highly exposed to natural disasters. The Multidimensional Poverty Index (MPI) assists in understanding the sources of poverty in Nepal more profoundly. The MPI reflects the intensity of deprivation and the proportion of people who live under deprivation (head count ratio) with respect to the three dimensions of education, health, and living standards. Table 2 illustrates the different indicators of the MPI and the resulting MPI for Nepal and its peer countries:

Table 2: Head count ratio of MPI in Nepal and neighbouring countries

Dimension	Indicators	Nepal	Bhutan	India	China
Health (deprivation in %)	Nutrition	9.34	12.69	21.21	3.362
	Child mortality	1.0	12.73	2.23	0.036
Education (deprivation in %)	Years of schooling	11.64	29.74	11.67	1.992
	School attendance	3.48	8.66	5.54	1.786
Living Standards (deprivation in %)	Cooking fuel	16.26	27.84	26.15	2.771
	Sanitation	6.52	22.09	24.62	0.867
	Water	2.66	3.26	6.23	1.775
	Electricity	5.5	20.57	8.64	0.031
	Flooring and roofing	16.28	30.86	23.64	NA
	Assets	10.32	18.68	9.54	0.717
MPI		**0.074 MICS (2019)**	**0.175 MICS (2010)**	**0.123 DHS (2015–2016)**	**0.016 CFPS (2014)**

Source: Own table based on the University of Oxford (2021).

Nepal has an MPI of 0.074, which is higher than that of China. On the other hand, the MPIs of India and Bhutan are 0.123 and 0.175, respectively, which are considerably higher. Crucially, the latest available MPI of Bhutan is from 2010 and is therefore outdated. This is significant since the MPI decreased from 0.185 in 2010 to 0.074 in 2019. Consequently, it is difficult to compare the MPIs across the aforementioned countries.

Table 3 provides an overview of the value added and share of overall employment by sector for Nepal and the European Union's 27 Member States (EU-27). The data on the employment rates in Nepal were obtained from the 2017/18 Nepal Labour Force Survey. Examining the value added in both Nepal and the EU-27, the tertiary sector accounted for the largest share. More specifically, it contributed 60.4% of the GPA in Nepal and 73.1% in the EU-27, meaning that its contribution was significantly higher in the EU-27. However, the tertiary sector employed only 47.6% of the workforce in Nepal, whereas it employed 72.9% in the EU-27.

Furthermore, the employment rate in the secondary sector was 30.8% in Nepal and only 22.6% in the EU-27, which is significantly lower. This observation contradicts the relative importance of the sector with regard to value added. In Nepal, the secondary sector accounted for a considerably lower share of value added compared with the EU-27, indicating the presence of cost- and labour-intensive industries.

In general, a central characteristic of developing countries is the significant role of the primary sector. Accordingly, the value added of the primary sector in Nepal accounted for 25.8% of the GDP compared with 1.8% in the EU-27. A similar pattern can be observed for the employment rate of this sector. Thus, the primary sector is still a vital component of Nepal's economy.

Table 3: Value added and employment by sector

Sector	Nepal: Value added (2021; %)	EU-27: Value added (2021; %)	Nepal: Employment (2017; %)	EU-27 Employment (2017; %)
Primary sector	25.8	1.8	21.5	4.5
Agriculture, hunting and forestry, fishing	25.8	1.7	21.5	4.5
Secondary sector	13.1	25	30.8	22.6
Manufacturing, mining, and quarrying, and other industrial activities	7.4	19.5	17.0	16
of which: Manufacturing	5.1	16.2	15.1	14.4
Construction	5.7	5.5	13.8	6.6
Tertiary sector	61.1	73.1	47.6	72.9
Wholesale and retail trade; repairs; hotels and restaurants; transport; information and communication	24.8	23.3	28.1	27.1
Financial intermediation; real estate, renting & business activities	18.1	15.8	3.4	3.3
Public administration, defence, education, health, and other service activities	18.1	34.0	16.1	42.5

Source: Own table based on the Central Bureau of Statistics (2017, 2022b) and the World Bank (2022).

The Global Competitiveness Index (GCI) measures the competitiveness of an economy based on the set of institutions, policies, and factors that determine the level of productivity within the economy. In the 2019 Global Competitiveness Report issued by the World Economic Forum (WEF), Nepal ranked 100th out of the 141 included countries. Despite its relatively low overall ranking, Nepal reached 37th in *Macroeconomic Development* and 72nd in *Financial Market Development.* However, Nepal underperformed compared with the overall rating in the indicators of *Infrastructure* (131st), *Technological Readiness* (128th), *Innovation* (126th), and *Business sophistication* (126th) (WEF, 2019).

The Global Innovation Index (GII) determines the innovative capability of an economy based on the input to innovation, such as infrastructure or human capital, as well as the innovative output that an economy produces. In 2021, Nepal ranked 111th out of 132 countries, performing better in the input dimension (99th) than in the output dimension (116th). While Nepal ranked relatively highly in terms of *Business Sophistication* (59th) and *Market Sophistication* (68th), it ranked far worse internationally in terms of *Knowledge and Technology Outputs* (121st), *Human Capital and Research* (115th), and *Institutions* (115th) (WIPO, 2021).

1.2 The Labour Market

This section discusses Nepal's labour market. The first subsection describes the general situation of Nepal's labour market, while the second subsection focuses on the youth labour market in particular.

1.2.1 Overview of Nepal's Labour Market

Over the last years, Nepal's labour market has been rapidly adapting from a rigid structure to a new system to improve workplace cooperation and industrial relations. Legal reforms are restructuring the country's institutional framework and the revision of the Labour Law has allowed for further developments in its labour market. To this end, the Nepali Parliament approved the introduction of the Labour Law in 2017. The new legislation aims to govern working conditions, employment relations, and health and safety standards. Additionally, it acknowledges the right to form and join unions and introduces significant refinements. For example, the new legislation categorises the informal sector as well as ensures provisions for medical insurance and accident insurance within both the formal and informal sectors. Although the new legislation introduced is adapted for each Nepali worker, its implementation, especially within the informal economy, remains challenging (ITUC-NAC, 2019).

Nepal's population has a large proportion of young citizens. Due to the significant population growth rate of past years, 50% of Nepal's population is aged below 25 years. Hence, employment opportunities must be created to avoid high unemployment rates among the working-age population, and specifically for youth. The most recent labour market survey from 2017 indicated that high unemployment rates among young Nepalis are leading to significant outflows of young professionals from Nepal. Moreover, external labour migration is a vital part of Nepal's labour market, since 28% of Nepal's workforce is employed abroad (Central Bureau of Statistics, 2018). According to the Ministry of Foreign Affairs (MOFA), 500,000 Nepalis took up foreign employment in 2014. To this end, Nepal has entered into bilateral contracts with certain destination countries. These agreements aim to regulate the labour market process, creating the potential for recruitment fraud and wage theft. Indeed, recent reports have indicated precarious circumstances for Nepali workers in Qatar (Kathmandupost, 2022). Critically, almost 95% of migrant workers are men, as legislation prohibits women aged under 25 years seeking foreign employment. This restricts the labour market mobility of women to illegal migration, making them more vulnerable to being exploited by foreign employers (ITUC-NAC, 2019). In sum, external labour migration is a vital component of Nepal's labour market and economy, as reflected in the total remittances received in 2020, which accounted for 25% of the GDP (NRB, 2022).

The labour market is typically divided into a formal sector and an informal sector. The latter is not covered by formal employment conditions, such as paid leave or social security contributions. A significant proportion of Nepal's workforce is informally employed. The share of the workforce employed in the informal sector is declining; however, informal work is still crucial in Nepal. The new Labour Law enables workers in the informal sector to access the same working conditions as formal workers. Nevertheless, the registration of informal workers is burdensome since most live in far-flung areas (ITUC-NAC, 2019).

Moreover, the minimum wage in Nepal is relatively high compared with other countries in South Asia and has been increasing in recent years. By contrast, the country's social protection is relatively moderate. Recent reforms have aimed to increase social protection significantly and address structural inequalities. Generally, Nepal's social security is divided into (1) social insurance, (2) labour market intervention, and (3) social assistance (ITUC-NAC, 2019).

Table 4 summarises the labour force participation rate (LFPR) and the unemployment rate by age group in Nepal and OECD countries. Nepal's unemployment rate is higher in each age category. It has one of the youngest populations in Asia, and the unemployment rate among the 15–24 age group is 21.4%, which indicates a high youth unemployment rate. Consequently, a large fraction of youth leaves the country to search for unskilled or low-skilled work abroad.

Considering the LFPR, only 28.6% of those aged 15–24 years actively engage in the labour market. According to the International Labour Organization (ILO), more than 70% of the economically active population in Nepal is involved in the informal economy, which may explain the significant discrepancy with the OECD average (ILO 2022 and OECD 2022). Comparing the LFPR between genders, the participation rate of female Nepalis is significantly lower, differing by 25.4 percentage points between men and women. Thus, significant disparities in labour market outcomes exist across age and between genders.

Table 4: Labour force participation rate and unemployment rate by age in 2017

	Labour force participation rate		Unemployment rate	
Age group	Nepal	OECD average	Nepal	OECD average
Total (15–64 years)	38.5	71.5	11.4	7.3
Youth (15–24 years)	28.6	45.9	21.4	15.0
Adults (25–54 years)	58.9	81.6	9.1	6.5
Adults (55–64 years)	28.6	63.7	4.9	5.2

Source: Own table based on the Central Bureau of Statistics (2018) and International Labour Organization (2022).

Table 5 illustrates the LFPR and the unemployment rate in Nepal and the OECD averages grouped by educational attainment in 2017. Considering unemployment, the proportion of people with no secondary education among the unemployed workforce is marginally higher than the OECD average. However, a different picture emerges for higher education. For example, the unemployment rate among citizens with a secondary education is 6.4 percentage points higher in Nepal compared with the OECD average. The LFPR of Nepal's population increases with the level of education and peaks among the population with higher education.

Table 5: Labour force participation rate and unemployment rate by educational attainment in 2017 (% of total working population)

	Labour force participation rate		Unemployment rate	
Education level	Nepal	OECD average	Nepal	OECD average
No secondary education	35.5	44.1	11.1	10.6
Secondary education	50.9	62.0	15.3	8.5
Tertiary education	67.5	76.7	8.4	6.1

Source: Central Bureau of Statistics (2018) and International Labour Organization (2020).

1.2.2 The Youth Labour Index for Low-Income Countries

Building on the KOF Youth Labour Market Index (Renold, Bolli, Egg, & Pusterla, 2014), which primarily relies on high-income country data, Kudrzycki et al. (2020) proposed an **index for low-income countries**. This index, which is the first to combine indicators specifically tailored to the realities of low-income countries, provides an assessment of individual countries' progress in addressing the needs of young workers. The Youth Labour Index for Low-Income Countries (YLILI) helps to make a complex and multidimensional phenomenon more tractable by generating country-specific rankings that allow for comparisons across countries.

To construct the index, **12 youth-specific labour market indicators** were selected from three broad dimensions that best reflect the situation of youth in the labour market: the transition from education to the labour market, working conditions in the labour market, and educational background. The indicators were obtained from three reputable compilers of international data – namely the ILO, UNESCO, and the Demographic and Health Surveys. The index score is calculated as the arithmetic mean of the three dimensions and is scaled to vary from 0 (dysfunctional youth labour market) to 100 (functioning youth labour market).

Dimensions and indicators of the YLILI
Transition - Share of youth not in education, employment, or training (NEET rate) - Relative unemployment ratio - Youth skills mismatch rate
Working conditions - Youth working poverty rate - Youth time-related underemployment rate - Share of youth in informal employment - Vulnerable youth employment rate - Share of youth in elementary occupations - Share of youth in agriculture, fishery, or forestry
Education - Share of youth with no secondary education - Youth illiteracy rate - Harmonised test scores
Source: Kudrzycki et al. (2020)

First, the transition dimension reflects the **quantity of employment** for youth and encompasses the following: (1) the share of youth not in employment, education, or training (NEET), which captures the share of inactive youth; (2) the relative unemployment ratio, which measure the degree to which unemployment affects young people more than adults; and (3) the skills mismatch rate, which indicates whether unemployment disproportionately affects those with high or low education.

Second, the working condition dimension captures the **quality of employment** and contains the following six indicators: (1) the youth working poverty rate measures the proportion of working youth in poverty; (2) the youth underemployment rate measures the share of employed youths who are willing to increase their workload; (3) the informal employment rate captures the share of young people employed without contracts and/or social security; (4) the vulnerable employment rate measures the share of own account workers and contributing family workers; (5) the share of workers in elementary occupations measures the proportion of young workers in low-skilled basic tasks, which may require great physical effort and can carry a high risk of injury; and finally (6) the share of workers in agriculture complements the previous indicator as the jobs are generally low-paid and labour-intensive.

Finally, the education dimension captures the **skill level of youth** and comprises (1) the proportion of youth with no secondary education, (2) the proportion of illiterate youth, and (3) a measure of schooling quality in the form of harmonised test scores.

1.2.3 The YLILI for Nepal

For Nepal, all of the YLILI indicators mentioned in Section 1.2.2 have been observed. Nepal received a Total YLILI score of 70.81 and thus ranked 13th out of a total of 54 low-income countries. While Nepal's performance in the indicators of *Transition* and *Working Conditions* is only average, the indicators of *Total Elementary Occupation* and *Underemployment Score* rank 45th and 41st, respectively, making

them Nepal's weakest indicators. In the *Total Secondary Schooling Rate*, *Mismatch Score*, and *Education*, Nepal outperforms its peers by ranking 5th, 11th, and 15th, respectively (Kudrzycki, Günther, & Lefoll, 2020).

1.3 Nepal's Political System

Understanding the basics of a country's political system and getting to know the political goals with respect to its education system are crucial for understanding the education system in a broader sense. Therefore, Section 1.3.1 presents Nepal's political system in general, and then, Section 1.3.2 focuses on the politics and goals of the education system.

1.3.1 Overview of Nepal's Political System

Before 1950, the political system of Nepal was predominantly based on an authoritarian monarchy. Subsequently, a prodemocratic campaign succeeded in establishing a constitutional monarchy and multiparty democracy with the king remaining the head of state. Transitioning from an oligarchic social order to a well-functioning democracy was demanding and resulted in weak governments. Consequently, a sequence of Maoist rebellions erupted supported by the rural population, who felt disregarded by the new government. Moreover, a tragedy in the royal family and a royal coup staged by the king's successor in 2006 put Nepal back into a monarchy, resulting in political unrest. However, the anti-regime movement forced the king to reinstate the parliament. As a result, an interim constitution was introduced in 2007, which consigned the political power to the prime minister. In May 2008, the first Constituent Assembly formally abolished the monarchy. The political system was structured as a federal democratic republic with the president as the head of state and the prime minister as the head of government (Nepal Country Report 2022, 2022).

Subsequently, the first Constituent Assembly encountered difficulty in reaching a consensus on key constitutional articles among the political leaders. In 2012, the Constitution Assembly was dissolved, leading to a coalition government under the Prime Minister until late 2013, which was unable to address the aforementioned constitutional issues. Consequently, an election for a new Constitution Assembly was held, resulting in a return of the Nepali Congress (the main opposition party) in 2014 as the governing political party (MoFA, 2022).

In 2015, a tragic earthquake led to a devastating loss of life and the destruction of infrastructure and property. However, the tragedy catalysed the development of a new constitution and the election of a new prime minister, both in the same year. Under the new constitution, Nepal held elections at the federal, provincial, and local levels. A new government was formed under the leadership of the Nepal Communist Party (NCP). Following an internal dispute, the party splintered into two factions. Consequently, the parliament has yet again been dissolved, although it was restored twice by the Supreme Court in 2020 and 2021 (Bhatta, 2022). Today, the government is formed under the leadership of the Nepali Congress Party (The Kathmandu Post, 2021).

Thus, Nepal's political system has been unstable over the past 30 years and has experienced numerous shifts in political power. The problems are understood, yet solutions remain to be implemented.

The Economist Democracy Index (2021) ranks Nepal 101st out of 167 considered countries and 20th in Asia and Australasia. During recent years, Nepal has lost nine places due to negative changes in civil liberties, the electoral process, and pluralism (Economist, 2021, pp. 40-41). Some of the reasons for this might be the ongoing political crisis, conflicts between different parties, and the dispute over the dissolving of the parliament (IRI, 2021).

Table 6 summarises the Worldwide Governance Indicators (WGIs) issued by the World Bank, which measure six dimensions of governance, and values between −2.5 (bad governance) and 2.5 (good governance) are assigned to each one. Clearly most of the governance indicators have experienced an

improvement between 2010 and 2020. Specifically, the *Political Stability and Absence of Violence* indicator increased from −1.6 to −0.2. Still, for each indicator, Nepal ranks below the median for all countries considered (for which data are available). For example, the government of Nepal is ranked in the 15.9 percentile of the distribution. As previously discussed, Nepal has suffered political instabilities and several power shifts throughout the past 30 years, which are also reflected in the *Government Effectiveness* indicator.

Table 6: Worldwide governance indicators for Nepal (2010 and 2020)

	2010		2020	
Worldwide Governance Indicators	Estimate	Percentile Rank	Estimate	Percentile Rank
Voice and Accountability	−0.4	33.6	−0.1	42.0
Political Stability and Absence of Violence/Terrorism	−1.6	7.6	−0.2	41.5
Government Effectiveness	−0.9	20.1	−0.9	15.9
Regulatory Quality	−0.7	25.4	−0.7	24.5
Rule of Law	−1.0	18.0	−0.5	34.1
Control of Corruption	−0.7	27.6	−0.6	29.8

Source: Own table based on the World Bank (2022b).

1.3.2 Politics and Goals of the Education System

The highest authority responsible for the education system in Nepal is the Ministry of Education, Science and Technology (MoEST). The responsibilities of the MoEST cover the development of policies, the establishment of educational programmes, and the planning and general management of education, science, and technology in the country (MoEST, 2018). The MoEST embodies the University Grants Commission (UGC), which is responsible for university education, and the Council for Technical Education and Vocational Training (CTEVT), which is responsible for the TVET.

Since the restoration of multiparty democracy in 1990, multiple education plans have been presented. Generally, they have focused on establishing a cogent education system in Nepal and placed education at the centre of the country's development plans. However, Gurung (2012) found a discrepancy between the formulation of policies and the actual implementations for the years 1990–2012. The current education sector plan (ESP) from 2021 to 2030 contains the following five aims:

- First, the plan aims to ensure a smooth federal transition, which entails the coordination of the three tiers of government to ensure certain educational standards;
- Second, the plan aims to prepare the educational sector for shocks and crises similar to COVID-19. The pandemic revealed severe issues, especially in infrastructure. Adequate and sustainable infrastructures for online teaching were scant. Furthermore, teachers were unable to hold online classes and students did not have access to modern digital devices. These issues were not constrained to lower education levels but also emerged in universities and research facilities (Pal, et al., 2021).
- Third, the demographic dividend should focus on the opportunity created by the demographic shift. The working-age population is expected to exceed the nonworking population, leading to opportunities in the educational sector.
- Fourth, the plan aims to provide job opportunities for the youth workforce. The pandemic led to an inflow of Nepali foreign workers who then struggled with unemployment.
- Fifth, the plan aims to restore confidence in public schooling.

However, as discussed earlier, the implementation of education plans has been burdensome in recent years. Nepal is experiencing an institutional transformation, which might lead to further adjustments to the education plans. Additionally, Nepal ranks as one of the most vulnerable countries to climate risk, which leads to severe infrastructure damage to schools and imposes additional stress on students and teachers. Moreover, schools are often used as shelters for affected families, resulting in their closure and the interruption of learning continuity (MoEST, 2021).

2. Formal System of Education

2.1 Formal System of Education

This section aims to provide a brief overview of the education system in Nepal. The introduction of the new constitution in 2015 brought substantial changes and is still to be fully implemented. Thus, the reader is strongly advised to re-evaluate this section.

The education system was restructured with the introduction of the 2016 Education Act and now consists of the basic, secondary, and tertiary education (MoEST 2020). The basic level consists of lower basic (1–5) and upper basic (6–8) grades. The secondary level is split into lower secondary (9–10) and higher secondary (11–12) grades. Generally, three types of schools exist in Nepal:

- Public schools, which are supported by the government;
- Private schools, which are funded with tuition fees;
- Religious schools, which are supported by the government once they are registered with local governments.

Public schools are further divided into the following subcategories: community-unaided schools, community-managed schools, and community-aided schools. Private schools are divided into private trust schools, public trust schools, and private schools. Private schools are highly dependent on the tuition fees paid by parents and are typically privately owned. However, the low teacher–student ratio, teaching of English early on, and high nationwide exam scores indicate higher quality in education (Ezaki, 2018).

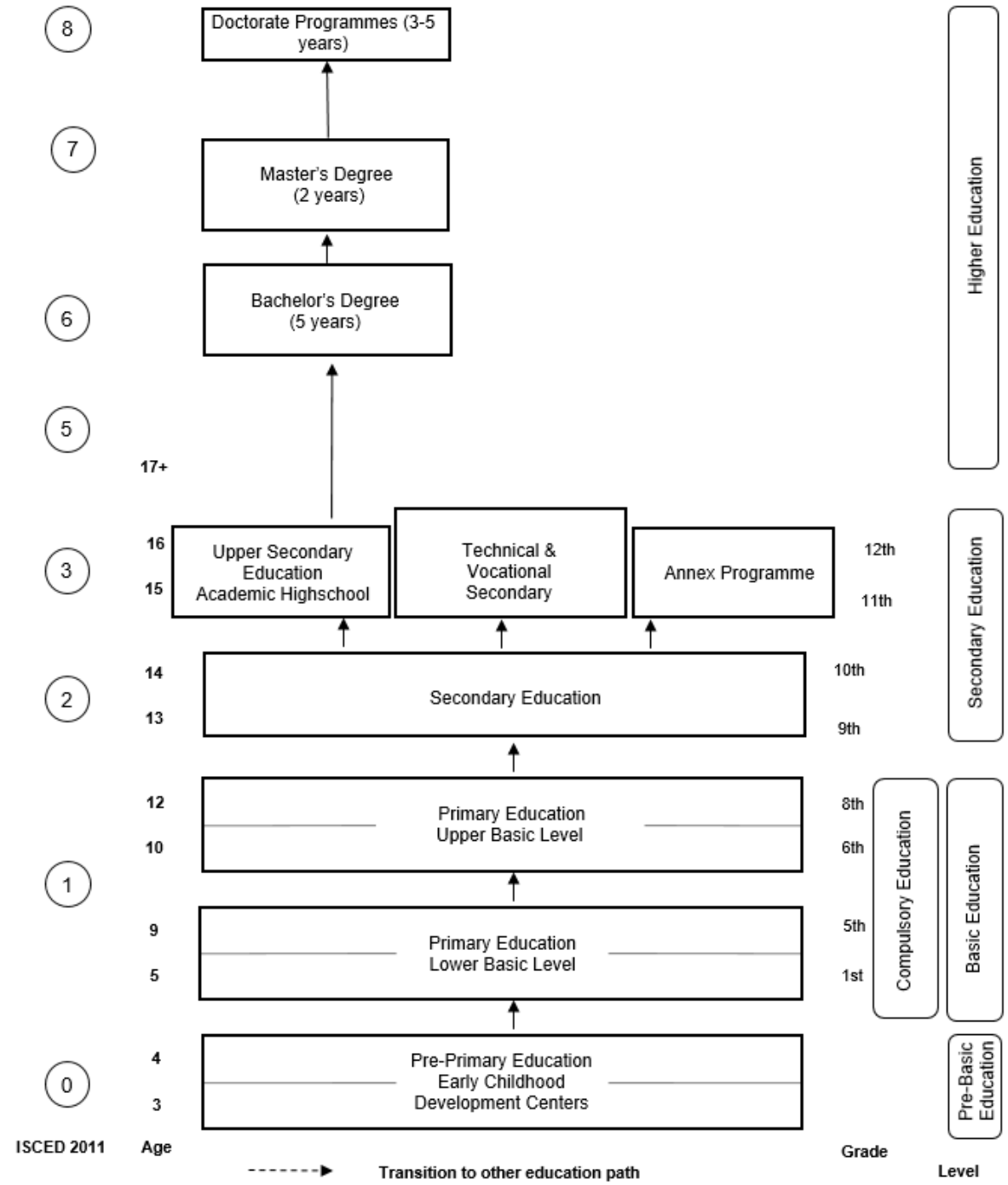
As discussed, the new constitution created a novel political framework, resulting in a federal structure of the government. While the transition of power from a central authority to a federal structure is challenging, the new structure is expected to result in more efficient and transparent service delivery. Thus, for the educational sector, the transition to the federal structure is a key element of the recently published educational plan. The involvement of local communities and resources is expected to be encouraged by giving municipalities more autonomy. The federal level is responsible for quality assurance and policy, while the provincial and local units are mostly responsible for service delivery (MoEST, 2021).

Additionally, basic education has been declared a fundamental right of all Nepalis, and the new education act advocates free and compulsory education from grades 1 to 8 and free secondary education from grades 9 to 12 (Governance Monitoring Centre Nepal, 2022).

The goals of Nepali education are as follows: (a) to ensure inclusive and equitable access to quality education and promote lifelong learning for all; (b) to promote a culture of peace, civic awareness, sustainable behaviour, social harmony, and shared values; (c) to promote skills learning and entrepreneurship to contribute to improved and sustained livelihoods, employability, and economic development; (d) to strengthen the application of information and communication technologies (ICT), scientific orientation,

innovation, and the knowledge-based economy; and (e) to strengthen the institutional capacity to enhance the delivery of the education sector (MoEST, 2021).

Figure 1: Map of Nepal's Educational System



Source: Own figure based on UNESCO (2022).

Table 5 presents the gross enrolment rate (GER)[3] and net enrolment rate (NER)[4] by education level for 2019. The NER quantifies the total number of students in the theoretical age group for a given education level enrolled at that level, expressed as a percentage of the total population of that age group. The GER quantifies the number of students enrolled at a given education level—irrespective of their age—as a percentage of the official school-age population corresponding to the same level of education. For example, for the primary education level, the NER indicates how many students of typical primary school age are actually enrolled in primary school, while the GER sets the actual number of students in primary education—irrespective of their age—in relation to those who are of the official age to attend primary education.[5] Some limitations to using the GER exist. It can exceed 100% due to the inclusion of over- and under-aged students because of early or late entrants and grade repetition. In this case, to rigorously interpret the GER, additional information is required to assess the extent of repetition and late entrants, among other things.

Table 7: Net enrolment rate (NER) and gross enrolment rate (GER) in 2019/20

Education level	ISCED 2011	NER	GER
ECED and PPE	0	67.2	86.4
Primary education	1	93.8	110.4
Lower basic	1	97.1	119.3
Upper basic	2	90.6	96.1
Secondary education	2–3	47.6	71.4
Lower secondary education	2	69.0	94.6
Upper secondary education	3	26.2	51.5
Compulsory education age group	1–3	N/A	127.57
Tertiary education	5–8	N/A	15.00
Bachelor or equivalent level	6	N/A	18.91
Master and Doctoral level	7	N/A	5.52

Source: Own figure based on the Centre for Education and Human Resource Development (2020).

The NER in both pre-primary and secondary education is considerably low. With respect to pre-primary education (PPE), this can be explained by the difficulty of accessing early childhood development centres, especially in rural regions, even though PPE has been compulsory in Nepal since 2019. However, the GER for the same education level is 86.4%, which is much higher, suggesting that many parents send their children to PPE when they are older than designated. This picture typically emerges for primary education. With a NER of 93.8%, almost all children of the specified age group attend primary school. Still, many challenges at the primary education level remain, including a poor quality of education and inequity in access. On the other hand, the GER is 110.4%, which is considerably high. One expla-

[3] The UNESCO Institute for Statistics (UIS) **Invalid source specified.** defines the gross enrolment rate as the "number of students enrolled in a given level of education, regardless of age, expressed as a percentage of the official school-age population corresponding to the same level of education."

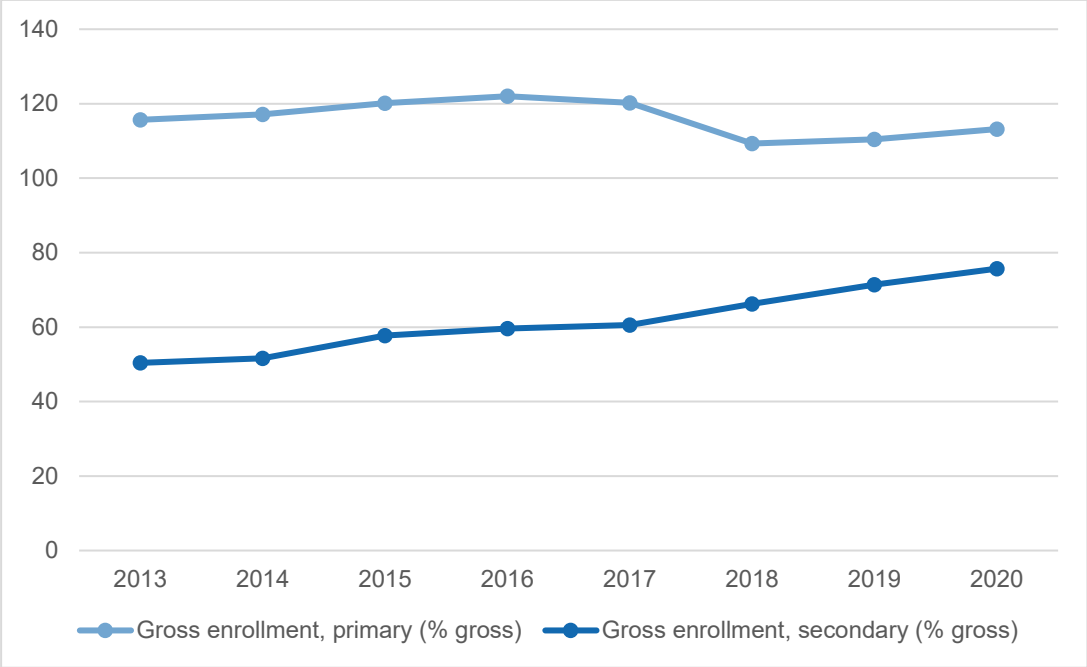
[4] The UIS **Invalid source specified.** defines the net enrolment rate as the "Total number of students in the theoretical age group for a given level of education enrolled in that level, expressed as a percentage of the total population in that age group."

[5] A gross enrollment rate of 100 corresponds to a situation where each child in a given country is enrolled in the corresponding education level. A value above 100 could occur due to students who are older than the typical enrolment age for primary education (e.g. have to repeat grade, adult learners). A value below 100 implies that not everyone who is in the typical age for primary education is actually enrolled.

nation for this observation could be that children who enter PPE later than designated would start primary education at an older age. Moreover, the dropout rate is relatively high, and students need to repeat grades due to failing their final examination.

For secondary education, the NER of 47.6% and GER of 71.4% suggest that students might quit school after mandatory education (CEHRD, 2020). Furthermore, the recent reform of 2016, the structural changes to secondary education, and the inaccessibility of secondary education for a large fraction of the population indicate a lack of qualitative data for drawing conclusions about the development of enrolment rates (Unicef, 2022).

Figure 3: Development of the GER from 2010 to 2020 in Primary and Secondary Schools



Source: Own figure based on the Central Bureau of Statistics (2021).

2.2 Pre-Primary Education

Nepal has made considerable progress with PPE. Yet, PPE opportunities in more rural regions and for underprivileged families remain sparse. Early childhood education is provided either by the government and consists of Early Childhood Development Centres (ECDCs) or by privately owned kindergartens. ECDCs are free of charge and provided by local communities, while kindergarten fees must be paid for by parents. Kindergarten can mostly be found in urban areas. While the language of instruction in ECDCs is Nepali, kindergartens often also incorporate English (Bhandari, 2017). The Nepali government has agreed to ensure that 90% of children have access to early childhood development (Ezaki, 2018).

Since EDCDs are not compulsory and not accessible for every child, their enrolment rates are moderate. In 2019, the Center for Education and Human Resource Development (CEHRD) reported a NER of 67.2% for early childhood education. The GER is 86.4%, which suggests that some children enter ECDCs later than expected (CEHRD, 2020).

However, attendance at the lowest quintile of income distribution is approximately 12% (Governemnt of Nepal & Unicef, 2018). Prior to the educational reform of 2016, school-based pre-primary classes were offered. Now, children attend ECEDs at the age of 3–4 years and enter primary school at the age of 5 (World Education News + Reviews, 2018). Thus, an inequality in access to ECEDs exists. According to

UNICEF, girls, and children from less privileged backgrounds (e.g., from a low caste) are less likely to attend PPE (Unicef, 2020).

In sum, the goal of early childhood development in Nepal is to pass the following competences to the children: (1) the use of language for expression and communication; (2) the identification of nutritious food items and daily use; (3) healthy habits and good social behaviour, demonstrating the model as required; (4) the adoption of personal security measures; (5) the use of thematic learning and creative thinking in the process of performing daily tasks; and (6) involvement in all-round development activities and the use of basic skills in them (NPC, 2020).

2.3 Primary Education

Basic education in Nepal is compulsory and free of charge, consisting of eight years of schooling. Grades 1–5 are categorised as the lower basic level, while grades 6–8 are the upper basic level.

Children typically enter the lower basic level at the age of 5 years, which includes grades 1–5. As discussed, public schools are free of charge, while tuition fees for private schools must be paid for by parents. Subjects covered at the primary education level include Nepali, English, mathematics, sciences, social sciences, and physical education (Devkota & Bagale, 2015).

For the 2019/20 school year, the dropout rate at the lower basic level was relatively high at 4.8%, while the repetition rate was 12.8%. This observation is to a certain extent attributable to the low NER in PPE. Approximately 30% of children entering grade 1 had not experienced PPE. To counter this, NCE Nepal (2016) suggested 1 year of compulsory PPE, which was implemented in 2019.

After passing the lower basic level, students enter the upper basic level, which is also compulsory and free of charge at government schools. The upper basic level lasts for 3 years. Similar to the lower basic level, passing is based on students reaching a specific grade. In addition to the subjects at the lower basic level, students can choose some elective subjects.

The NER in primary schools is 93.8% (2019), which is high. This means that most children in Nepal attend school. However, the GER is 110.4%, which suggests that a considerable number of students are older than the theoretical age group that should be attending primary school (CEHRD, 2020).

Basic education in Nepal is confronted with numerous challenges. In some schools, only 13% of students are fluent in Nepali, which hinders their learning. Furthermore, many schools cannot reach the minimum standards and 29% of students drop out by grade 8. Another challenge is the inclusion of children with special needs. Schools are often not accessible for wheelchairs and children with disabilities do not have specific facilities or provisions to ensure a learning environment adapted to their needs (Unicef, 2018).

2.4 Secondary Education

Secondary education in Nepal is divided into two parts. After the successful completion of the upper basic level, students are eligible to enter the lower secondary level. Theoretically, students entering the secondary level are 13 years old. Secondary education in Nepal is free but not compulsory. This is clearly observed in the decrease in the NER from primary to secondary education.

The lower secondary education consists of two years split into grades 9 and 10. At the end of grade 10, nationwide examinations are held (Comfort & Karkee, 2016). Students who pass grade 10 receive a Secondary Education Examination (SEE) certificate. However, only a fraction of the students in public

schools manage to obtain an SEE certificate, which stands in contrast to the high proportion of passing students in private schools.

After passing the nationwide examinations at the end of grade 10, students face two distinct options:

1) Attending upper secondary education at an academic high school consisting of grades 11 and 12: Nationwide examinations are held at the end of grades 11 and 12. After the exams, students receive a certificate.
2) Entering Technical and Vocational Education (TVET): Generally, students study for 1.5 years after passing the SEE to obtain a pre-diploma and for 3 years to receive a diploma. The Council for Technical Education and Vocational (CTEVT) is responsible for conducting nationwide examinations.

The NER in secondary schools is 47.6%, which is considerably lower than that of primary schools. The relatively high dropout rate at the lower secondary level and the nonmandatory nature of secondary education might explain the low NER. As expected, the GER is higher, which indicates that students are older than the usual students in secondary education (CEHRD, 2020).

2.5 Postsecondary and Higher Education

Higher education is offered at 11 universities in Nepal, among which Tribhuvan University is the largest and oldest. Campuses can be constituent, privately owned, or subsidised by local communities. Tertiary education in Nepal is not mandatory and the universities charge fees. All universities in Nepal are overseen by the University Grants Commission (UGC) (World Education News + Reviews, 2018).

The university admission requirements depend on the institution and programme. Commonly, a minimum requirement is to pass the national examination at the end of the final year of secondary education. Students with a diploma, either from a standard secondary school or vocational secondary education, are eligible to enrol in a Bachelor programme unless it has some special requirements. However, a significant proportion of students fail the final examination at the end of the upper secondary level. Moreover, for engineering and medicine programmes, entrance exams must also be passed. The theoretical age for entering the bachelor level is 17 years. Depending on the field of study, the duration required to obtain a bachelor's degree is 3–4 or 5 years. After successfully obtaining a bachelor's degree, students have the option to enter a master's programme, which has a theoretical duration of 2 years. Finally, there is the option of enrolling in a Ph.D. programme, the duration of which is usually 3–5 years (MoEST, 2021).

The GER of tertiary education is 15.3%, which is considerably lower than that in OECD countries (CEHRD, 2020).

2.6 Continuing Education (Adult Education)

In 2020, only 58% of the adult population aged over 15 years were literate in Nepal. Over the last 30 years, the literacy rate among adults has increased substantially from 33% to 58%. However, the improvement of the literacy rate has stagnated, as indicated by the rate being 56.5% in 2013. The low literacy rate is mainly driven by the female population. Indeed, the gender gap is significant in Nepal with regard to the literacy rate (MoEST, 2021).

Compared with that in peer countries, the adult literacy rate in Nepal is relatively low. India (74%) and China (97%) have been able to increase the literacy rate in recent decades substantially.

Nepal is eager to move towards the Sustainable Development Goal (SDG) 4.6, which is as follows: "[B]y 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy

and numeracy" (UN, 2015). UNESCO together with several NGOs have started a programme to teach Nepalis the basic skills of reading, writing, and numeracy. After a pilot phase starting in 2016, 8-month Basic Literacy Classes (BLC) were introduced throughout the country, where an experiential approach to the learning process is used to engage learners actively. The programme has been implemented successfully and there is a plan to make BLC accessible to a wider population (ILL UNESCO, 2020).

3. The System of Vocational and Professional Education and Training

3.1 Technical and Vocational Education and Training (Upper Secondary Level)

In Nepal, students can enter Technical and Vocational Education and Training (TVET) programmes under the CEHRD or the CTEVT. The entry conditions for the programmes differ marginally. TVET under the CEHRD starts at the lower secondary level, where the entry requirement is the completion of the upper basic level (UNESCO Institute for Statistics, 2019). Under the CTEVT, students must finish grade 10 to enter the programme. The CTEVT has offices in seven provinces and the 429 affiliated institutes are spread throughout the country, making it the largest organisation offering TVET (CTEVT, 2020).

Considering the number of enrolled students, programmes under the CTEVT are larger compared with those under the CEHRD. As mentioned, the entry requirement for TVET under the CTEVT is to pass the final examination at the end of the upper basic level. These programmes typically last 18 months, 12 of which are spent undertaking in-classroom training. Then, the students experience 6 months of on-the-job (OJT) training (Bardal, Kemper, & Maldonado-Mariscal, 2019). Nepal has more nonformal TVET programmes than formal ones, since a large fraction of the economy is informal. The nonformal programmes are highly diverse in terms of duration, accessibility, and quality (Bardal, Kemper, & Maldonado-Mariscal, 2019).

Moreover, TVET is organised differently under the CEHRD and the CTVET. Under the CTEVT, it is offered (1) in its constituent schools, (2) in partnership with community institutions, (3) in community schools, or (4) in private institutions. By contrast, the CEHRD offers TVET in general schools with technical and vocational education specialised subjects throughout grades 9–12 (Ministry of Education, Science and Technology, 2019).

No age restrictions exist for TVET schools; however, students are typically aged between 16 and 22 years. A fraction of the classroom training comprises Nepali, English, and Mathematics. The remainder consists of vocationally oriented topics. Usually, workplace learning starts after the completion of the final examination of the in-classroom training and focuses on the teaching of job-specific skills. The providers of workplace learning are government agencies, semi-government corporations, companies, and community-based organisations. At the end of the in-classroom training, the students must pass a final exam (Bardal, Kemper, & Maldonado-Mariscal, 2019). The CTEVT currently offers 260 short-term training curricula, 49 diploma-level curricula, 33 pre-diploma-level curricula (including apprenticeship), and nine curricula for professional courses in fields ranging from engineering and agriculture to health and hospitality (Bajracharya, 2022).

Furthermore, the programmes differ in enrolment capacity and availability at different schools. In 2019, the Diploma in Civil Engineering and the Diploma in Agriculture, with enrolment capacities of 5568 and 4680, respectively, were the two largest programmes. The programme Biomedical Equipment Engineering enrols only 30 students and is therefore the smallest programme offered (Ministry of Education, Science and Technology, 2019). Approximately 80% of students manage to pass the final exam and

graduate, most of them on their second attempt. Students who obtain a diploma are likely to obtain a job in the formal sector (Bardal, Kemper, & Maldonado-Mariscal, 2019).

The TVET programmes offered by CEHRD schools do not charge tuition fees and are financed by public funds. Private schools do collect tuition fees and are profit-oriented. In recent years, such programmes have been criticised for not considering the concerns of the private sector. However, the participation of the private sector has increased in recent years (Bardal, Kemper, & Maldonado-Mariscal, 2019).

Vocational education is well structured and provides students with crucial skills for finding employment in the formal sector. It offers OJT training, which is completed at the end of the programme. Furthermore, its duration is only 6 months, which is significantly shorter than that in Switzerland, where the OJT training, depending on the apprenticeship, lasts for 3–4 years. The diploma at the end of the programme offers a degree that is recognised by the private sector (Council for Technical Education&Vocational , 2020).

In addition to formal TVET, there are also nonformal TVET programmes. Nepali society is divided into different castes and ethnicities. Different castes were traditionally involved in distinct traditional occupations. However, these skills and occupations are not included in the TVET system. An example of such a profession is pottery, traditionally conducted by the caste group Kumale in Thimi. By learning from a master, apprentices learn the art of pottery. This nonformal education is provided by the Kumale community and is only accessible in some areas of the country and for members of that community. Typically, graduates from a nonformal apprenticeship end up working in the informal sector (Bardal, Kemper, & Maldonado-Mariscal, 2019).

3.1.1 Central Elements of TVET Legislation

The education system of Nepal is governed by the newly reformed Constitution of Nepal in 2015. Based on the new constitution and the Eighth Amendment of the 1971 Education Act, which ensures compatibility between and among educational institutions, the School Sector Development Plan (SSDP) has been developed. The SSDP encompasses Nepal's education sector, including nonformal education and basic education. Additionally, it offers a framework for secondary education, including vocational secondary education. Among the goals of the SSDP is the strengthening of technical education and vocational education and improving their quality (Ministry of Education, 2016).

The Council for Technical Education and Vocational Training Act 1988 formed the legal basis for the establishment of the CTEVT. The council is responsible for systemising and maintaining the quality of technical education and vocational training, for maintaining coordination among various agencies that provide such training, and for determining the standard of skills and certifying them (Government of Nepal, 1988).

3.1.2 Key Actors

Government

The CTEVT, which operates under the MoEST, is responsible for vocational training and education in Nepal. It was constituted in 1989 and is, besides the CEHRD, a national autonomous apex body of TVET. Its main responsibilities are formulating policy, providing advice regarding TEVT policy and programmes, being responsible for quality control, and preparing the competency-based curriculum, as explained further later. Other responsibilities include developing the skill standards for various occupations, which is mainly important for short-term programmes. People's skills are tested through examinations at the end of programmes. For example, the CTEVT is responsible for the pre-diploma and diploma examinations at the end of secondary TEVT. Last but not least, the CTEVT conducts research studies and training (CTEVT, 2022).

Representation and advisory bodies

According to the CTEVT Act 1988, two supreme bodies are responsible for managing secondary TEVT in Nepal, namely the CTEVT Council and the CTEVT Assembly. The Assembly consists of 24 members and the Council is the governing board. The Assembly is responsible for formulating policies, approving budget and policies formulated by the council, and providing a general direction to any organ or member of the CTEVT. The Council is responsible for determining the scope and standards of programmes, determining policies, establishing and operating polytechnic schools, and implementing TVET curricula (Nepal, 2010). Both bodies are chaired by the MoEST and consist of various representatives. Some of the members come from government institutions, such as members of the National Planning Commission, Public Service Commission, Ministry of Industries Commerce and Supplies, Ministry of Labour Employment and Social Security, and Ministry of Tourism, Culture and Civil Aviation. The private sector is also represented on the CTEVT Council, such as through the Federation of the Nepali Chamber of Commerce and Industry. However, CTEVT programmes have been criticised for not sufficiently considering the concerns of the private sector. Today, efforts are ongoing to improve the situation. Last but not least, representatives from academia form the last group of members of the CTEVT Council. They include personnel form the largest university together with other universities and academic institutions (Bardal, Kemper, & Maldonado-Mariscal, 2019).

3.2 Educational Finances of the TVET System

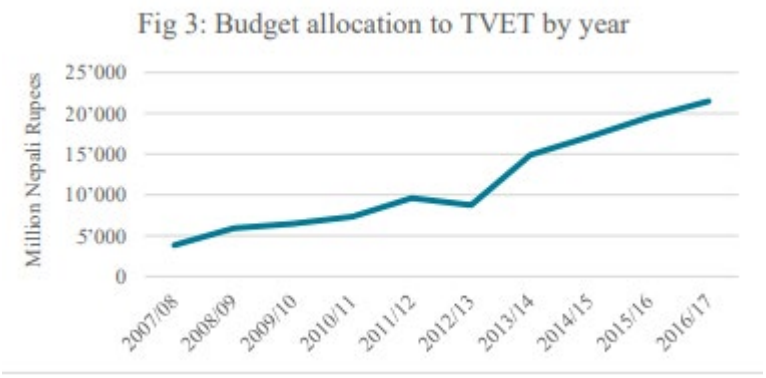
3.2.1 Educational Finances of the TVET system

When examining the financing of the TVET system, the distinction between public and private TVET schools can be observed to be significant. Private schools are profit-oriented and financed through tuition fees, whereas public schools are financed by public funds. The following elucidation concerns public TVET schools' financing. The reform of the political system and the adoption of a federalised system impacted the financing of the TVET system. However, the country is still in the process of transitioning to the new system. Before the reform, the Ministry of Finance in coordination with the National Planning Commission allocated and transferred funds to the MoEST, which granted a budget to the CTEVT. After the CTEVT received the funds, it distributed them to its constituent schools through the corresponding District Treasury Control Office (Parajuli, Renold, Bhandari, & Lamsal, 2020).

However, after the formation of the federal, provincial, and local governments in 2017, the federalisation is expected to have impacted the educational finances of the TVET system. With the Local Government Operation Act 2074, TVET has been categorised as the exclusive function of local governments. Thus, schools cannot receive any funds directly from the federal or provincial government. In the new federal system, all three levels of government have their own treasury. Local governments are meant to finance their expenses through tax revenues and grants from higher-level governments (Parajuli, Renold, Bhandari, & Lamsal, 2020).

Figure 4 indicates a significant increase in the budget allocated to TVET from 2007/08 to 2016/17, from approximately 5,000 million Nepali rupees annually in 2013 to 20,000 million in 2016. However, how sustainably this budget is allocated and how much of it is allocated to formal TVET programmes remain fuzzy.

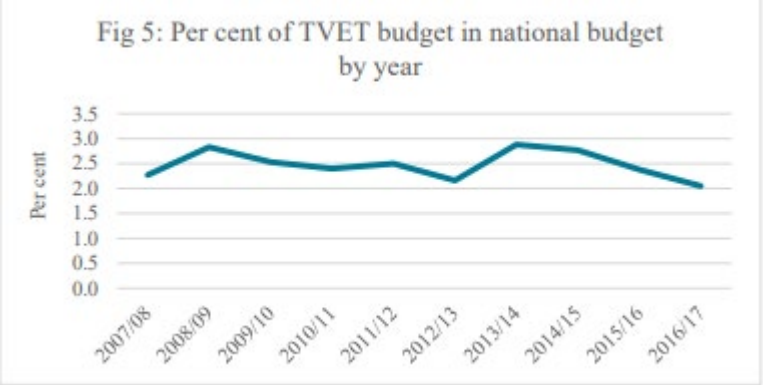
Figure 4: Budget Allocation to TVET by Year



Source: Parajuli, Renold, Bhandari, & Lamsal, 2020.

However, TVET spending as a percentage of the national budget has remained stagnant, since approximately 2% of the national budget has been allocated to TVET for the past 9 years. Although TVET education has been prioritised in government policy documents, the fraction of the national budget allocated to TVET has remained constant over recent years, as illustrated in Figure 5.

Figure 5: Percentage of the TVET Budget in the National Budget by Year



Source: Parajuli, Renold, Bhandari, & Lamsal, 2020.

Crucially, TVET education in Nepal is not only financed by national public sources. A considerable part (37% in 2017) is financed through foreign sources. The largest proportion of this foreign aid (approx. 80%) consists of grants, while approximately 20% consists of loans for 2007–2017 (Parajuli, Renold, Bhandari, & Lamsal, 2020).

During OJT training, apprentices receive a wage, which is paid by the company that conducts the training. The legally prescribed minimum wage for apprentices is 28 Swiss francs per month. The average apprentice's wage is 45 Swiss francs per month, which is considerably higher than the minimum wage and slightly lower than the average income of Nepalis. Significantly, the apprentices already earn almost the average wage during their apprenticeship (KOF Swiss Economic Institute, 2020).

3.2.2 Educational Finances of the PET System

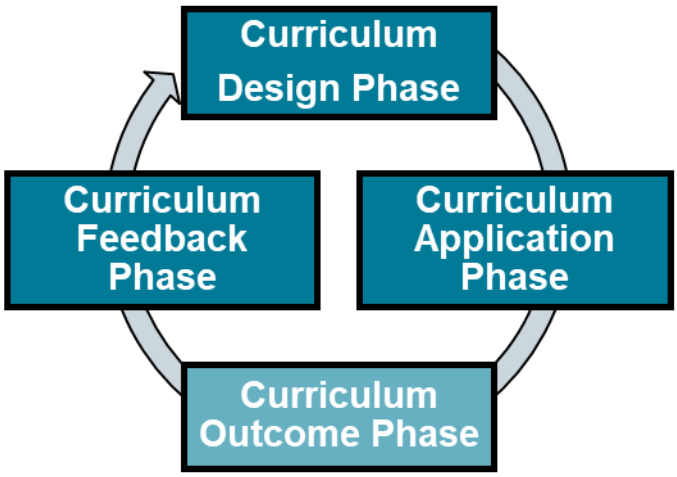
Since professional education at the postsecondary level are provided by universities, the financing of the programmes goes hand in hand with common tertiary education at universities. In 2009, the percentage of the education budget spent on tertiary education was 9.92%. The main sources of funding for higher education institutions in Nepal are (a) government grants managed by the University Grants Commission (UGC); (b) student fees; (c) donations from various organisations and individuals; and (d)

other sources, including rents and leases. Government funding consists of either regular or developmental funding. While public campuses heavily rely on government funds, private campuses are mainly financed through tuition fees (Asian Development Bank, 2015).

3.3 Curriculum Development

The curriculum is a central element for the functioning of a TVET system because it defines the system's framework and the (quality) standards. The development of a curriculum can be decomposed into the following three-step process: curriculum design, curriculum application, and curriculum feedback. This theoretical concept is called the curriculum value chain and is depicted in Figure 6 (for more details, see Renold et al. 2015; Rageth & Renold, 2019):

Figure 6: Curriculum Development



Source: Renold et al. (2015) and Rageth & Renold (2019).

In the curriculum design phase, the relevant actors decide upon the TVET curriculum's content and qualification standards. Therefore, the discussion in Section 3.3.1 focuses on the degree and the amount of stakeholder participation concerning curriculum design in Nepal. The curriculum application phase revolves around the implementation of the curriculum. Because learning environments differ substantially across countries, especially with respect to the prevalence of workplace learning, Section 3.3.2 focuses on the learning environments. Specifically, it addresses where learning takes place and whether the curriculum dictates both school and workplace learning or only one of the two. Finally, curriculum outcomes can be collected and analysed in the curriculum feedback phase, which Section 3.3.3 focuses on. This evaluation process is vital because it could render a more refined curriculum design than was originally possible.

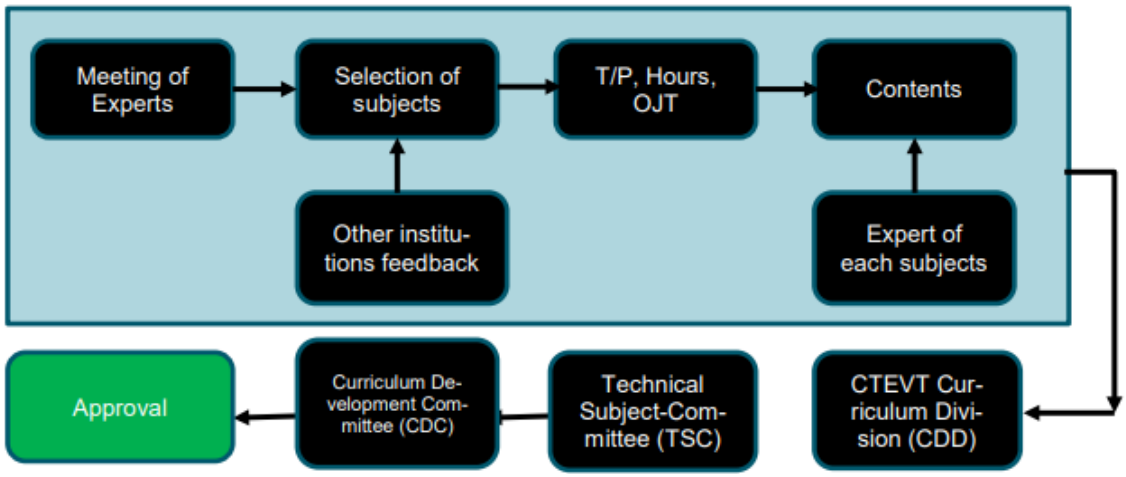
3.3.1 Curriculum Design Phase

The design phase is crucial for the curriculum process. To ensure that skills taught in the VPET programmes correspond to the needs of the labour market, experts from companies should be involved in defining the qualification standards and learning the content of the curricula.

The Curriculum Development Committee (CDC), which is a body within the CTEVT, is responsible for the preparation of the qualification standards of Technical School Leaving Certificate programmes, which entails all higher education programmes under the CTEVT (CTEVT, 2022). These standards list competences and abilities that should be developed during the programme. All courses offered by the CTEVT or affiliated institutions are designed by the Curriculum Development Division (CDD) of the

CTEVT. Depending on the trade and occupation, there is a team of experts who develop the curricula. First, the involved experts decide which subjects to include in the programme. The designated team considers the information and feedback of other institutions. Furthermore, the weekly resources for in-classroom training are allocated and the provisions of examinations and the assessments are created, including the certification process. Subsequently, the draft created by the CDD is finalised by the Technical Subject Committee (TSC), which is composed of experts from programme-related fields. Finally, the CDC, chaired by the Member-Secretary, rejects or approves the curriculum. The TSC has the final vote on the programme. Experts such as teachers, the state, and employers actively engage in creating the curriculum. Figure 5 depicts the general process of curriculum design by the CTEVT (Bardal, Kemper, & Maldonado-Mariscal, 2019):

Figure 7: Curriculum Design Phase



Source: Bardal, Kemper, & Maldonado-Mariscal (2019).

3.3.2 Curriculum Application Phase

The manner in which a curriculum is implemented, especially with respect to learning environments, is important for achieving the intended learning outcome.

The TVET curriculum is mainly applied by public, private, and community technical schools and focuses on practical learning. Tertiary programmes are conducted by affiliated campuses of universities under the CTEVT's supervision. However only approximately 20% of the programme consists of practical training, with the remaining 80% being theoretical learning. Theoretical learning occurs in the classroom, whereas the practical training is conducted through workplace learning. The Technical Division of the CTEVT prepares a framework which guides workplace learning. This includes regulations on how learning, supervision, and evaluation should be implemented. The content, instructors, and assessment criteria of the workplace learning are not covered by those guidelines. Although the CTEVT conducts regular supervision and monitoring, the quality and provision of infrastructure vary considerably from institution to institution. Only public schools receive money from the government to improve their infrastructure.

Internal assessments, such as theoretical and practical examinations and the yearly examination, are directly taken by the individual technical schools. The final exam, however, is conducted by the Office of Controllers of Examination, a subsection of the CTEVT. The workplace learning and in-classroom training are assessed separately, and students are sent to workplace learning after passing the final examination of in-classroom training (Bardal, Kemper, & Maldonado-Mariscal, 2019).

3.3.3 Curriculum Feedback Phase

The collection of feedback on the TVET programme lacks an established procedure and mechanism. There is no designated evaluation body under the CTEVT. Nevertheless, some feedback on the programmes occurs during the workplace learning supervision and evaluation by the CTEVT through different communication channels. Another form of feedback is collected through interactions with education providers and employers. This occurs rather informally through discussions between employers and associates of the CTEVT. This feedback is used for the curriculum update and revision process (Bardal, Kemper, & Maldonado-Mariscal, 2019).

3.4 Supplying Personnel for the TVET System (Teacher Education)

The body responsible for training teachers for the TVET system is the Training Institute for Technical Instruction (TITI). The TITI offers instructor training at different levels, such as Instructional Skills 1, Instructional Skills 2, and Training of Trainers (ToT). Even though the TITI exists, the majority of teachers have never received any specific instructor training. Moreover, such training is only offered for instructors at government technical schools and some community technical schools. Since most teachers at private schools are only employed on a temporary contract, they often do not receive any training, and therefore, it is also not mandatory. In some cases, those instructors are experienced technicians from local industries and enterprises (Bardal, Kemper, & Maldonado-Mariscal, 2019). A possibility also exists to obtain a bachelor's degree in Technical Education. This programme is affiliated with Kathmandu University. It lasts 4 years and has the goal of preparing instructors, teachers, or trainers in technical subjects and extension work in the community. Currently, no data are available regarding how many people become VPET teachers out of the total number of teachers (TITI, 2022).

4. Major Reforms in the Past and Challenges for the Future

4.1 Major Reforms

The reform of Nepal's political system into a federal structure has also had an impact on TVET education. To implement the reform of Nepal's constitution in 2015, an agreement between the Government of Nepal and UNICEF – namely a "country action plan" – has been developed, which is meant to be implemented between 2018 and 2022. Responsibilities for basic education, secondary education, and nonformal education have been transmitted to the seven provinces and the 753 local levels to improve accountability and cooperation with local partners and communities. Besides federalising the education system, its goal is to implement affirmative action for women and lower castes. This means making education more available for them, geographically as well as financially, and extending the mandatory years of schooling. Further short-term professional education is also provided to improve their financial situation. Another example is literacy classes for older people (Bardal, Kemper, & Maldonado-Mariscal, 2019).

The federalisation of the different school levels has also changed and extended the mandatory school years as well as the subsequent examinations. Hand in hand with that reform, a separate TVET track was added to the school system. Under the guidance of the Department of Education, students now

have the possibility to opt for this track after grade 8 and continue it until grade 12. After grade 10, they will take the same SEE as all other secondary students and thereafter have the possibility to stay on the TVET track or change to the general education track. The reform replaced the simple pass/fail system with grades from A (the highest score) to E (the lowest). Taking the SEE is the minimum requirement to continue with upper secondary school after grade 10. In contrast to the old system, students can enter the pre-diploma programme with any grade. Students on the TVET track can earn the pre-diploma, which is conducted by the CTEVT. The duration of the pre-diploma programmes has been adapted from 15 and 29 months to a general duration of 18 months for all programme (Bardal, Kemper, & Maldonado-Mariscal, 2019).

4.2 Major Challenges

The TVET education in Nepal faces various challenges. One of them is the insufficient consideration of the private sector's concerns. Another challenge, especially in public schools, is that teachers lack special instructor training and are only employed on a short-term contract. Additionally, not all schools meet the quality standards regarding infrastructure and equipment, and those standards can vary considerably from school to school. OJT training, on the other hand, lacks specific guidelines regarding the content as well as the requirements for instructors (Bardal, Kemper, & Maldonado-Mariscal, 2019). Nepalese society still suffers from discrimination against lower castes, despite legal provisions against discriminatory practices, which also impacts enrolment in education programmes (Baral, 2019).

Another challenge is that only a small proportion of students choose the vocational track. This is related to the fact that TVET education was not well established until recently and has a rather weak reputation, especially because of the differing quality levels between institutions. Moreover, many parents want their children to follow an academic career path instead of learning work and skills. Furthermore, many people are not aware that these programmes even exist. Vocational secondary education is also not available everywhere across Nepal. In addition, too little reliable information exists about training institutions and their performance, which makes it difficult for students and employers to compare them (Basnet, 2014).

Even though Nepal has increased investment in TVET, its efficiency and output have not increased. There is also a serious lack of information, especially financial information, which leads to severe problems regarding planning and decision making. This has created planning hazards, and therefore, a large risk exists that the implemented programme will fail to achieve its intended objectives. Improving this is one of the keys to improving the effectiveness of TVET funding in Nepal (Renold, Bolli, & Caves, 2018).

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6. Annex

VET pathway enrolment share out of all upper secondary (%)	3.9%
Program enrolment share out of all VET pathway (%)	Ca 25%
Number of curricula/qualifications	24
Ø Share of time spent in workplace (vs. classroom)	1/3
Work contract (Yes/No)	No
Ø Share of vocation-specific content (vs. general) in classroom education	N/A
Classroom/workplace sequencing (Alternating, Sequentially)	Sequentially
Frequency of workplace learning (Annually, Semi-annually, quarterly, monthly, weekly)	Only once at the end of the programme
Program duration	18 months
Involved Actors	CTEVT, Technical Schools, Private Schools
Reform Years	2016
Reforms Summary	After chapter 3

SOURCES: (Bardal, Kemper, & Maldonado-Mariscal, 2019); (UNESCO, 2020) and (Council for Technical Education&Vocational , 2020)

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Publisher: Chair of Education Systems CES
Layout: ETH Zürich
Photos: Photo by Jeremy Bishop on Unsplash