



# Qualifications and Skills Mismatches in Cambodia: Evidence from Employee's Skills and Jobs Survey 2020

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National Employment Agency

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# **National Employment Agency**

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## LIST OF ACRONYMS AND ABBREVIATIONS

<b>ADB</b>	Asian Development Bank
<b>ASEAN</b>	Association of Southeast Asian Nations
<b>C1</b>	Certificate Level 1
<b>C2</b>	Certificate Level 2
<b>C3</b>	Certificate Level 3
<b>CDC</b>	Cambodia Development Council
<b>CSJ</b>	Cambodia Skills and Jobs
<b>GDP</b>	Gross Domestic Product
<b>GHE</b>	General higher education
<b>GNCMW</b>	General Secretariat of National Council for Minimum Wage
<b>ICT</b>	Information and Communication Technology
<b>IDP</b>	Cambodia Industrial Development Policy
<b>ISCED</b>	International Standard Classification of Education
<b>ISCO</b>	International Standard Classification of Occupations
<b>ISIC</b>	International Standard Industrial Classification
<b>LFPR</b>	Labour Force Participation Rate
<b>MLVT</b>	Ministry of Labour and Vocational Training
<b>NEA</b>	National Employment Agency
<b>NEP</b>	National Employment Policy
<b>NGOs</b>	Non-governmental Organisations
<b>NIS</b>	National Institute of Statistics
<b>NSSF</b>	National Social Security Fund
<b>OECD</b>	Organisation of Economic Co-operation and Development
<b>RGC</b>	Royal Government of Cambodia
<b>STEM</b>	Science, Technology, Engineering and Mathematics
<b>TVET</b>	Technical Vocational Education and Training
<b>UNDP</b>	United Nations Development Programme

## EXECUTIVE SUMMARY

The Cambodia Skills and Jobs (CSJ) survey is the country's first supply-side investigation into qualifications and skills mismatches. The dynamism of a job's complexity, qualifications, and skill requirements is a result of the world of work's dynamic change. To better understand these contexts, the CSJ was conducted to collect data on youth labour market behaviour and outcomes. The survey also aims to provide career guidance and counselling information to help job seekers, particularly students and first-time job seekers, make informed decisions about their study paths and career choices during and after the Covid-19 pandemic. As a result, this survey will contribute not only to the improvement of Cambodia's education and employment policies but also to the overall development of the country.

The survey was carried out by randomly selecting and interviewing 3,139 Cambodians aged 21 to 34 who worked in 11 emerging sectors of varying firm sizes, occupations, and skill levels. Respondents were asked questions about their educational background, current employment, the start of their current employment, skill development, and skill requirements.

According to the CSJ survey findings, there was an imperfect match between young employees' qualifications and skills and the qualifications and skills required by the labour market. Approximately 35% of respondents said they were under- or overqualified for their current jobs, with tertiary graduates having the highest proportion. Around 18% of respondents reported skill mismatches as a result of underutilization of their skills in their current positions. Despite the fact that the majority of respondents did not report skill mismatches, an average skill deficit of 33.4% was discovered. Qualification and skill mismatches have social and economic consequences in most cases, and Cambodia is no exception. Respondents with a perfect match of qualifications and skills earned between \$409.6 and \$438.0 per month, based on a confidence interval of 95%. This was higher than the average salary of respondents with incompatible skills and/or credentials. Those with the appropriate qualifications and skills reported high levels of job satisfaction and security.

Functional skills such as the foundation of literacy, numeracy, and ICT skills were reported as important for performing jobs in the current labour market. A large number of respondents also mentioned the importance of soft skills such as communication, teamwork, and problem-solving. Furthermore, respondents (92.8%) reported that learning new things had become more popular, and non-routine tasks during the course of work were also common (85.9%).

In the case of qualification and skill mismatches, career guidance and counselling are also essential. According to the CSJ survey, most first-time job seekers were unaware of public employment services and relied on word of mouth to find work. As a result, the majority of first-time job seekers typically faced difficulties during pre-employment, such as being nervous during the interview (64.7%) and lacking confidence (33.5%). As a result, while the government intends to expand this service to other locations, the visualization of these services should reach a large number of job seekers.

# RESEARCH METHODOLOGY

## Terminologies

Skills mismatches have been studied all over the world, and the National Employment Agency (NEA) had conducted many studies on skills gaps and skills shortages with a focus on employers' perspectives (demand side). The Cambodia Skills and Jobs (CSJ) survey, the first supply-side survey on skill mismatch, examines drivers of skill development and the dynamic evolution of skill mismatch in relation to the changing complexity of the tasks and skills required in people's jobs. In this report, some key terminologies are covered as follow:

Key Terms	Definitions
Skill gaps or under skilling	Individuals lack the skills and abilities necessary to perform the current job (as perceived by employees)/perform the job proficiently (as perceived by employers)
Skill deficit	Individuals lack the skills and abilities necessary to perform the current job relative to a given benchmark
Skill underutilization or over skilling	Individuals are not able to fully utilize their skills and abilities in their current job
Skills obsolescence	Skills previously utilized in a job are no longer required or have diminished in importance (economic) employees have lost them (physical)
Over(under) qualification	Individuals have a higher (lower) qualification than the current job requires, also known as a vertical mismatch in contrast to horizontal (field of study) mismatch

Source: Cedefop (2015). *Skills, qualifications and jobs in the EU: the making of a perfect match? Evidence from Cedefop's European skills and jobs survey.*

## Sampling

The main goal of sampling is to give results that are representative of the selected targeted groups. The samples were drawn from a contact list of registered members of the National Social Security Fund (NSSF) of the Ministry of Labour and Vocational Training (MLVT). By utilizing the contact list of NSSF members, the survey focused on collecting information on junior employees aged between 21 and 34 years old. The total number of employees registered with NSSF in this age-group was 71,158; among those, there were 64,163 employees were working within 11 selected prioritized sectors including accommodation and restaurant, construction, electronic assembly, finance and insurance, food and beverage, garment, footwear and apparel, human health, ICT, logistics, warehousing and transportation, real estate, and wholesale and retail trade. The sampling method ensured that the sample size was statistically large enough to represent the targeted groups, with a probability proportional to the number of employees in each sector. As a result, a stratified random sample of 7,932 employees was chosen for a sampling frame to ensure that enough samples responded to the survey. As a result of the fieldwork, a total of 3,139 employees were successfully interviewed

## Questionnaire design

The questionnaire was developed using Cedefop's manual guidelines. In addition, the questionnaires incorporated the results of a series of consultation meetings with stakeholders such as the NEA's career counselling team, the General Directorate of TVET of the Ministry of Labour and Vocational Training, and the Department of Vocational Orientation of the Ministry of Education, Youth, and Sports. Furthermore, Swedish experts provided valuable assistance in reviewing the questionnaire and providing input to improve it. The emergence of balancing between the questionnaire's content and the duration of the interview in order to gather the necessary data was viewed as a significant challenge for the questionnaire's design. The questionnaire was prepared in both English and Khmer, with the Khmer version chosen to help interviewers in gathering accurate information. There were pre-test interviews before it was used to check if the questionnaire was well prepared, sequenced, and understandable. The pilot demonstrated that the majority of the significant issues had been addressed. Finally, the questionnaire was amended and implemented, and it was properly arranged into the five sections listed below:

- A. Current employment
- B. The situation of the first start current employment
- C. Skills development and skills needs
- D. Education information
- E. General information

## Fieldwork and analysis

The CSJ survey was conducted via telephone interview with a structured questionnaire. The fieldwork lasted 20 working days, from November 26 to December 23, 2020. As a result, 3,139 people agreed to be interviewed for 45 minutes on average. Before the fieldwork operation began, enumerators and team leaders received training in the questionnaire and data entry form to ensure their understanding of the survey instruments. Epidata software was used to help with the data entry process, and double data entry was performed to ensure accuracy. Stata statistical software was used for tabulation and analysis after the data was finalized for analysis.

Some observations were omitted when analyzing specific characteristics due to their small number. Armed forces occupations were dropped from the analysis by broad occupational groups because there were only three observations. Furthermore, three specific types of industries with less than 30 observations were dropped. Agriculture, forestry, and fishery; electricity and water supply; and entertainment, other service activities, and non-governmental organizations (NGOs) are the three industries.

## Research objectives

The study aims to (1) measure qualification and skill mismatches as well as the impact of the mismatches on the labour market, (2) identify youth labour market behaviour and educational experiences such as skill development, skills need, dynamic change in the skill mismatch, and labour market outcome, and (3) learn about career guidance and counselling experiences and use it as a source of information to support career counsellors.

## Limitations

Despite efforts to make this report as comprehensive and objective as possible, there are still limitations. To begin with, the main limitation of this paper is that the results may be highly subjective because assessments were made based on the opinions of various people. The second limitation concerns the sample establishments. The survey only used the NSSF contact list for population and sample; thus, it would be preferable if future studies could expand their coverage. Third, by utilizing ISCO and ISIC for coding occupations and economic activities, it spends much of its time cleaning. Furthermore, some occupations' coding may not accurately reflect their task and responsibilities as described in the ISCO in the Cambodian labour market. Finally, the Cedefop's manual guideline, which was used to guide this paper, is overly ambitious for this paper; however, the research team attempted to cover as much key information as possible.

## INTRODUCTION

Responding to the change in the socio-economic context and labour market situation and improving employment generation and the quality of the labour force are priorities for the Royal Government of Cambodia. With the fifth and sixth legislatures of the National Assembly, the Cambodian government launched the Rectangular Strategy Phase III and IV for "growth, employment, equity, and efficiency in Cambodia," in which more employment generation for Cambodians is a priority among the four key strategic objectives. To support the socio-economic and political strategy, the government set out several policies, such as the Cambodia Industrial Development Policy (IDP) 2015–2025, with the vision, among others, to improve competitiveness and labour productivity. Also, the National Employment Policy (NEP) 2015-2025 was launched to increase decent employment opportunities for Cambodian people, increase labour productivity, promote skills and human resource development, and enhance labour market governance so that the needs arising from socio-economic development and changes in the national and regional economic architecture can be met.

However, in 2020, the world of work was profoundly affected globally by the COVID-19 pandemic. In 2020, the COVID-19 pandemic intensified and expanded in terms of its global reach, and Cambodia was no exception, with substantial impacts on public health and unprecedented shocks to economies and labour markets. Although the government has taken many interventions, the Cambodian economy and the job market have been subjected to continued negative demand shocks, involving the displacement of workers, especially in the manufacturing and tourism sectors. As the virus containment measures required reductions in mobility and physical interactions between people, there was a general slowdown in economic activity. Labour demand was expected to recover only slowly during the course of 2020, particularly for many of the service sector activities that involved physical interactions.

During this pandemic, the Cambodia Skills and Jobs (CSJ) survey, the first supply-side survey on skill mismatch carried out in Cambodia, tried to examine drivers of skill development and the dynamic evolution of skill mismatch concerning the changing complexity of the tasks and skills required in people's jobs. The survey aims to help inform the development of Cambodian policies on initial and continuing education, training, and employment. Also, the study attempts to measure qualification and skill mismatches as well as the impact of the mismatches on the labour market. In addition to this, the survey also provides extensive information on youths' labour market behaviour and educational experience, such as skill development, skill needs, dynamic change in the skill mismatch, and labour market outcome. Last but not least, this study aims to support the employment service operation; more specifically, it attempts to find out the career guidance and counselling experiences and use them as a source of information to support career counsellors in their employment service operation and to better support the students in being able to make informed decisions on study pathways and career choices.

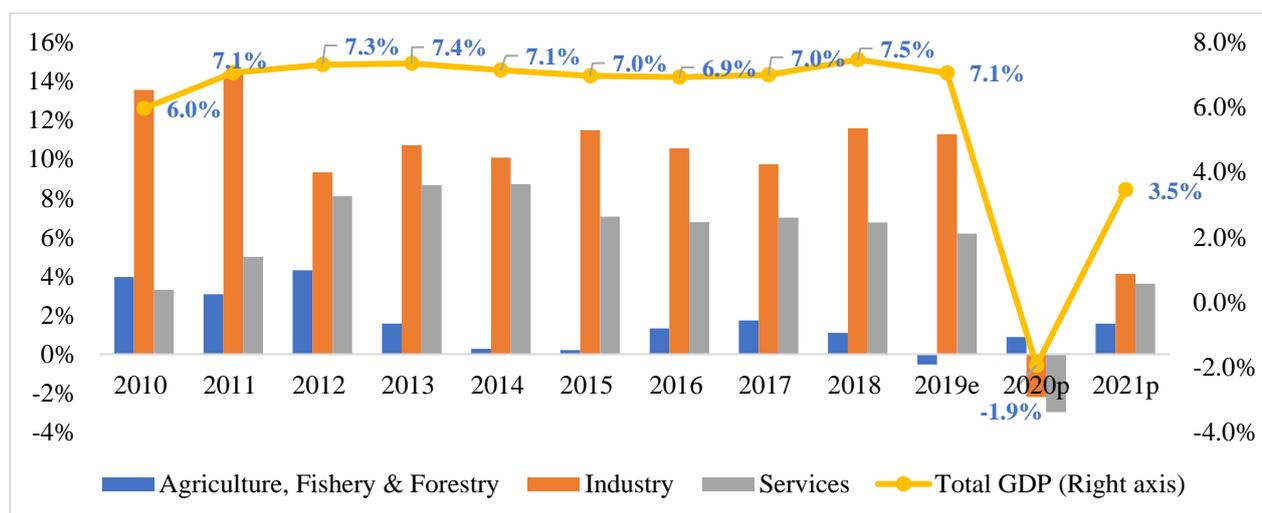
The report is divided into five main chapters, where Chapter 1 briefly describes the economic and labour market situation of Cambodia's labour force as evidenced by the latest available secondary data. The next three chapters present the findings from the survey on the existing qualifications and skills, their mismatching, and the skills needed for specific jobs in Cambodia's labour market. The conclusion is drawn in the last chapter.

# CHAPTER 1: Overview of Economic and Labour Market Situation

## 1.1. Economic Situation

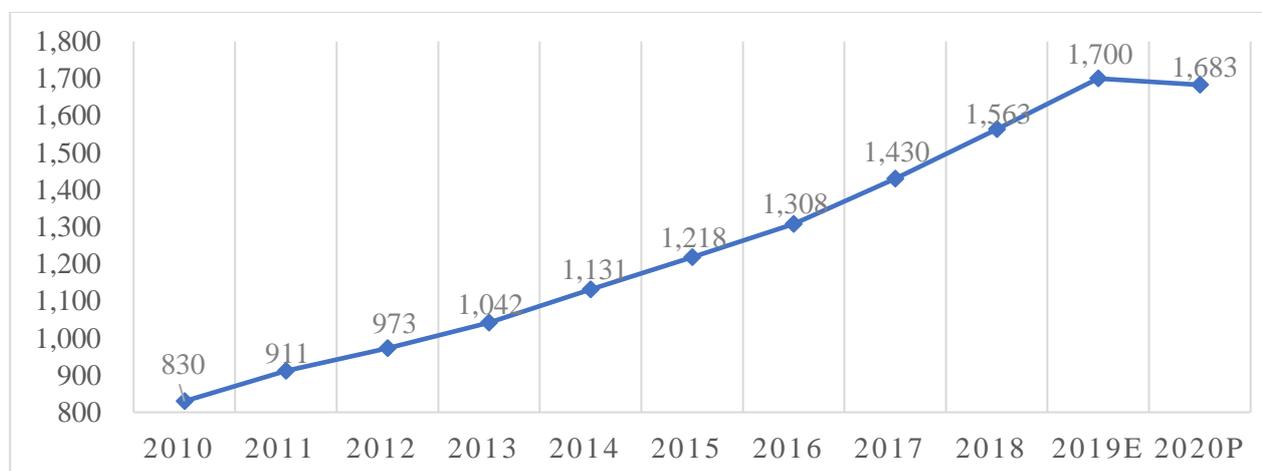
With economic and political stability in the last three decades, Cambodia has enjoyed fast economic growth, with an average of 7% from 2010 to 2019. During this period, the industry sectors registered the highest growth, an average of 11.3% per annum, followed by the service sectors with an annual growth rate of 6.8%. The GDP per capita of Cambodian people has increased significantly from US\$ 830 in 2010 to US\$ 1,700 in 2019. Having undergone a significant transition, Cambodia was well on its way to earning the status of a lower middle-income country in 2015. This was a significant milestone. The government has set a vision for Cambodia to become an upper-middle-income country by 2030 and a high-income country by 2050. However, the global economic shock triggered by COVID-19 had an adverse impact and weakened Cambodia’s economy at the time of the partial suspension of preferential access to the EU market under “Everything but Arms,” causing the projected negative economic growth rate of 1.9% in 2020. This also has a significant impact on the national development prospects in key sub-sectors such as manufacturing, tourism, and construction.

**Figure 1.1. GDP at constant 2000 prices by economic activity (Annual % Change)**



Source: Ministry of Economic and Finance, 2020

**Figure 1.2. GDP per capita in US\$**



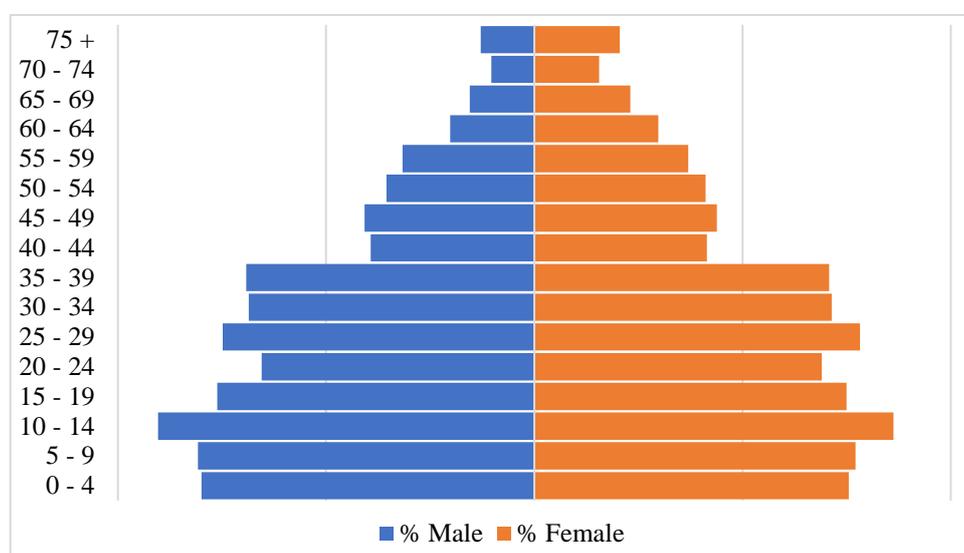
Source: Ministry of Economic and Finance, 2020

## 1.2. Labour Market Situation

### 1.2.1. Demographic Structure

Before going into detail on the labour market situation, it is important to look at the demographic structure of the Cambodian population. The percentage of the population decreases with increasing age. In 2019, Cambodia had more than 15.5 million people, and among that female population, 51.3% were women. Figure 1.3 is divided into two main groups: those aged 39 and below and those aged 40 and above. Noticeably, the majority of the Cambodian population was still young, with 72.5% of the total population aged 39 or below, and youth aged between 15 and 34 years old shared 34.7% of the total population. This can be a golden opportunity for Cambodia if these young people have the up-to-date skills required by the labour market amid the rapid changes in the global economy. Equipping young people with technical and workable skills makes economic sense for the country.

**Figure 1.3. Population structure by age and gender in Cambodia, 2019**



*Source Authors' calculation based on the 2019 General Population Census*

### 1.2.2. Labour Force and Employment

Along with the young population, Cambodia also has a high labour force participation rate (LFPR), indicating a large supply of labour available to engage in the production of goods and services, relative to the population at working age. In 2019, the LFPR of people aged 15 and older was 79.1%, up 0.8 percentage points (see Table 1.1). This was higher than LFPRs in some neighbouring countries. For example, the LFPR in Thailand was 68.1% and 76.3% in Viet Nam (ASEAN Secretariat, ASEAN Stats Database 2018).

Noticeably, the LFPR of the age group 15–24 was only 58.4% in Cambodia for both women and men; this implied that most population in this age group were still in education or training, which would be a good prospect for the future country's investment. In all age groups, women's LFPR was lower than men's. This is the general pattern in Asia, where women face several prominent constraints to participating in the labour force. Social norms set women's domestic responsibilities, and some perceptions restrict the subset of jobs considered appropriate for women, etc. (Tanaka and Muzones, 2016).

**Table 1.1. Labour Force Participation Rate by age group**

Age Group	2008			2019		
	Both sexes	Male	Female	Both sexes	Male	Female
<b>15+</b>	<b>78.3</b>	<b>80.8</b>	<b>76.0</b>	<b>79.1</b>	<b>84.4</b>	<b>74.3</b>
<b>15-24</b>	60.1	57.1	63.2	58.4	58.9	57.9
<b>25-34</b>	91.3	95.4	87.4	91.3	95.5	87.3
<b>35-44</b>	93.3	98.4	88.7	92.2	97.8	86.8
<b>45-54</b>	91.6	97.6	87.0	89.8	97.0	83.4
<b>55-64</b>	84.2	92.9	77.9	81.2	90.8	73.7
<b>65+</b>	54.5	68.4	45.2	50.0	65.4	44.9

*Source: Authors' calculation based on the 2019 General Population Census*

Employment is an important socio-economic development indicator for a country, and the Cambodian government has so far placed a high priority on the topic of employment, both quantity and quality, by setting out several policy interventions. For instance, in the Decent Work Country Programme 2019-2023, the government committed to having more people in Cambodia have access to decent and productive jobs resulting from increasing economic diversification, productivity, competitiveness, and the development of the digital economy.

As a result of a positive transition in the past several decades, Table 1.2 showed a high employment-to-population ratio (EPR) and only a small number (1.3%) of unemployed. The EPR for the male and female labour forces was not much different (0.3 percentage points). The highest EPR was in the age group 35–44, which was 99.2%. The rate was increasing as the age increased up to the age group 35–44. This implied that the opportunity to be employed may be due to the accumulation of both educational attainment and working experiences. Consistent with the normal trend in other developing economies, in Cambodia, the senior labour force aged 65 and over also had a high employment rate of 96.2% for both men and women. Most of these people may be employed in rural areas, working in agriculture.

**Table 1.2. Employment and unemployment rate by age group**

Age group	Both Sexes		Male		Female	
	EPR	Unemployed	EPR	Unemployed	EPR	Unemployed
<b>15+</b>	<b>98.7%</b>	<b>1.3%</b>	<b>98.8%</b>	<b>1.2%</b>	<b>98.5%</b>	<b>1.5%</b>
<b>15-24</b>	98.2%	1.8%	98.0%	2.0%	98.4%	1.6%
<b>25-34</b>	98.9%	1.1%	99.0%	1.0%	98.9%	1.1%
<b>35-44</b>	99.2%	0.8%	99.3%	0.7%	99.1%	0.9%
<b>45-54</b>	98.9%	1.1%	99.1%	0.9%	98.6%	1.4%
<b>55-64</b>	98.6%	1.4%	98.9%	1.1%	98.3%	1.7%
<b>65+</b>	96.2%	3.8%	97.1%	2.9%	95.3%	4.7%

*Source: Authors' calculation based on the 2019 General Population Census*

Labour markets in developing countries present a complex combination of realities, including paid employment and self-employment. The labour market status reflects on labour market outcomes. In 2019, about 67.6% of total employed persons aged 15 and above were own account or unpaid family workers, while 31.6% were paid employees. The number of own-account and unpaid family workers decreased from 82.5%, and the number of paid employees increased from 17.3% in 2008. This was a good signal in the labour market as more employed labour forces moved to formal and relatively high-productivity jobs. The

report of the Cambodian Population Census 2019 indicated that the proportion of unpaid family workers, especially among rural women, dropped compared to 2008 data. This means that unpaid family workers may move to work as paid employees in various emerging sectors in urban areas. More interestingly, the shares of paid employees were lower as age increased, and vice versa for own-account workers. Specifically, young-employed labour forces aged between 15 and 34 tended to work in more productive sectors as the shares of the paid employee in these age groups increased from 42.5% in 2008 to 45.6% in 2019.

**Table 1.3. Employment status by age group**

Age Group	Employer	Paid Employee	Own Account	Unpaid Family Worker	Other
<b>15+</b>	<b>0.6%</b>	<b>31.6%</b>	<b>42.7%</b>	<b>24.9%</b>	<b>0.2%</b>
<b>15-24</b>	0.5%	45.6%	20.2%	33.4%	0.4%
<b>25-34</b>	0.6%	42.2%	33.2%	23.8%	0.1%
<b>35-44</b>	0.6%	29.4%	48.5%	21.4%	0.1%
<b>45-54</b>	0.7%	20.1%	56.2%	23.0%	0.1%
<b>55-64</b>	0.6%	12.4%	62.8%	24.1%	0.1%
<b>65+</b>	0.6%	7.6%	67.3%	24.2%	0.3%

*Source: Authors' calculation based on the 2019 General Population Census*

Among the employed population, the majority of Cambodian people were working as skilled agricultural, forestry, and fishery workers, as 61.0% of the total population resided in rural areas and agricultural work was still their main economic activity. However, compared to 2008 data, the employed population in this occupational group significantly decreased from 71.3%, and except for technicians and associate professionals, all other occupational groups were increasing the share of the employed population. Craft and related trade workers increased by 9.4 percentage points, followed by service and sales workers, who increased by 3.6 percentage points, and the employed population working as professionals also increased by 1.8% during the same period. This was a result of the Cambodian government's efforts toward economic diversification over the last decade garment sector, and other non-garment manufacturing and tourism sectors also absorbed many workers in recent years due to FDI inflows that were diverted to these sectors. By the third quarter of 2019, investment projects approved by the Council for the Development of Cambodia (CDC) had reached over US\$ 1,400 million, of which 57.4% were in tourism and 32.4% were in industrial sectors (ECOSOCC, 2019).

**Table 1.4. Distribution of employed population by occupational group 2008,2019 (5+)**

Occupational Group	2008			2019		
	Both sexes	Male	Female	Both sexes	Male	Female
Managers	<b>0.6%</b>	0.9%	0.2%	<b>0.9%</b>	1.1%	0.6%
Professionals	<b>1.7%</b>	2.2%	1.3%	<b>3.5%</b>	4.2%	2.9%
Technicians and Associate Professionals	<b>2.3%</b>	3.4%	1.2%	<b>1.4%</b>	2.0%	0.8%
Clerical Support Workers	<b>1.5%</b>	2.0%	1.0%	<b>3.3%</b>	3.8%	2.7%
Services and Sales Workers	<b>9.0%</b>	7.0%	10.8%	<b>12.6%</b>	10.1%	15.1%
Skilled Agricultural Forestry & Fishery Workers	<b>71.3%</b>	68.7%	73.8%	<b>53.4%</b>	52.0%	54.9%
Craft and Related Trades Workers	<b>7.2%</b>	6.2%	8.2%	<b>16.6%</b>	15.1%	18.1%
Plant and Machine Operators and Assemblers	<b>1.8%</b>	3.4%	0.2%	<b>2.3%</b>	4.0%	0.5%
Elementary Occupations	<b>4.7%</b>	6.2%	3.3%	<b>6.0%</b>	7.6%	4.4%

*Source: Authors' calculation based on the 2019 General Population Census*

### 1.2.3. Education Attainment of Labour Force

The education level of individuals is important first and foremost for society and has economic significance both in a general sense and in its direct impact on productivity. The Cambodian population, in general, has a low education level, especially for those aged 45 and over, due to the civil wars that continued for decades before 1979. In 2019, about 42.3% of the population reported not having completed primary school, while a small proportion of the literate population (1.1%) had become literate without any formal education (NIS, 2020). At the same time, the education of the labour force was also low. The Cambodian Social Economic Survey (2019/20) reported that the majority of the Cambodian labour force had completed or not completed primary education while only 14.5% completed upper-secondary and post-secondary education. Among them, the labour force that obtained post-secondary education was mostly in the age groups 20–24 and 25–30, with shares of 10.1% and 12.7%, respectively.

**Table 1.5. Education level of the labour force by age group 2019-2020**

Age group	2019-2020						Total
	None or only some education	Primary school not completed	Primary school completed	Lower secondary completed	Upper secondary completed	Post-secondary education	
Number ('000)							
<b>Total 15 - 64</b>	<b>1,115</b>	<b>2,865</b>	<b>2,385</b>	<b>1,341</b>	<b>654</b>	<b>663</b>	<b>9023</b>
<b>15-19</b>	29	202	341	217	35	9	833
<b>20-24</b>	58	251	388	221	153	120	1,191
<b>25-34</b>	191	656	752	420	255	332	2,606
<b>35-44</b>	314	737	478	253	121	142	2,045
<b>45-54</b>	248	576	304	149	72	47	1,396
<b>55-64</b>	275	443	122	81	18	13	952
Per cent							
<b>Total 15 - 64</b>	<b>12.4%</b>	<b>31.8%</b>	<b>26.4%</b>	<b>14.9%</b>	<b>7.2%</b>	<b>7.3%</b>	<b>100.0%</b>
<b>15-19</b>	3.5%	24.2%	40.9%	26.1%	4.2%	1.1%	100.0%
<b>20-24</b>	4.9%	21.1%	32.6%	18.6%	12.8%	10.1%	100.0%
<b>25-34</b>	7.3%	25.2%	28.9%	16.1%	9.8%	12.7%	100.0%
<b>35-44</b>	15.4%	36.0%	23.4%	12.4%	5.9%	6.9%	100.0%
<b>45-54</b>	17.8%	41.3%	21.8%	10.7%	5.2%	3.4%	100.0%
<b>55-64</b>	28.9%	46.5%	12.8%	8.5%	1.9%	1.4%	100.0%

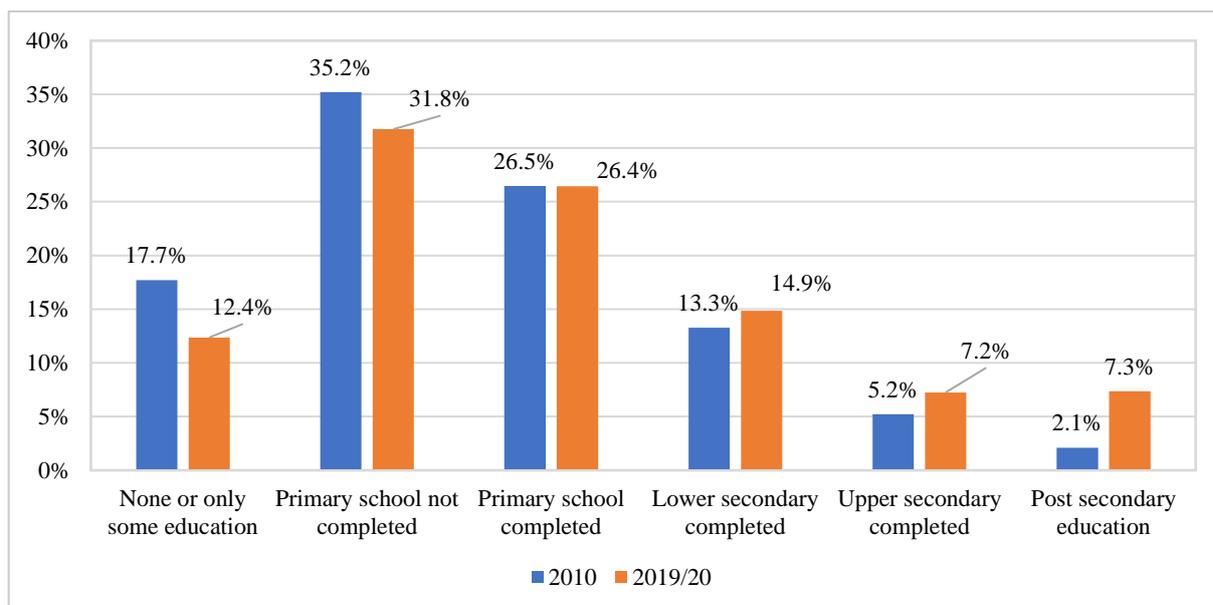
*Source: Authors' calculation based on Cambodia Social Economic Survey, 2010-2019/20*

The role of education is to expand knowledge, transform it into productivity, and enhance technological progress. Also, it can raise the individual competences and skills of workforces, thereby improving their capability both to accomplish a particular job and to adapt to the demands of emerging markets. It is a factor that enhances labour market flexibility and facilitates structural adjustment, as well as one that improves the adaptability of economies to social, cultural, and technological demands.

Having said that, the level of educational attainment of the labour force is economically important for the country's development. First, it has a potential macroeconomic impact on both the quality and quantity of goods and services it produces. Second, countries with more skilled labour forces may produce relatively higher value-added goods and services, and third, the level of educational attainment of the labour force also impacts the distribution of income among the population.

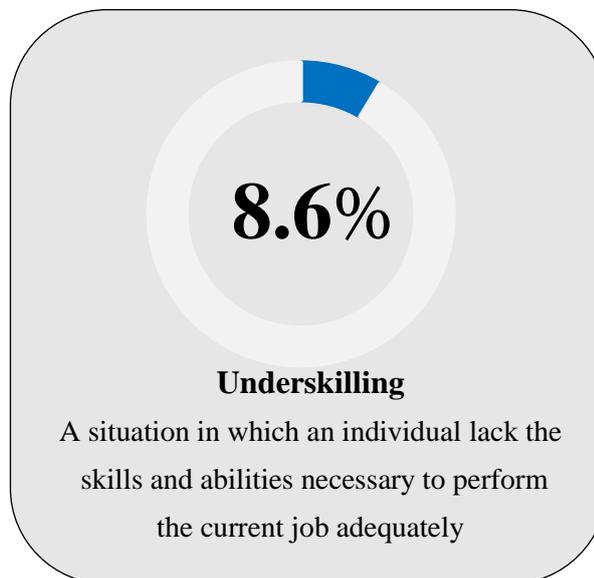
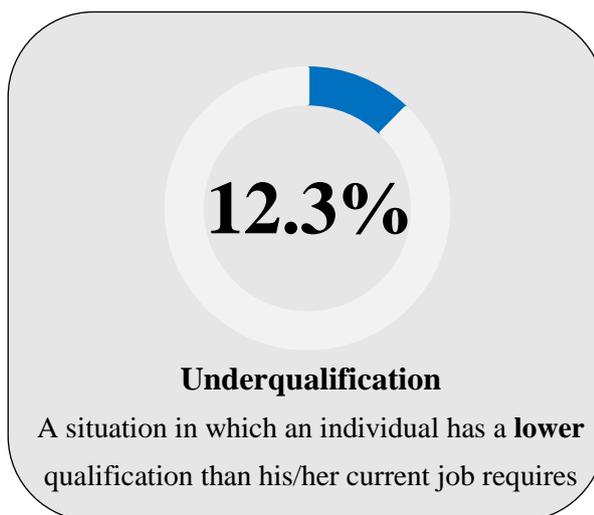
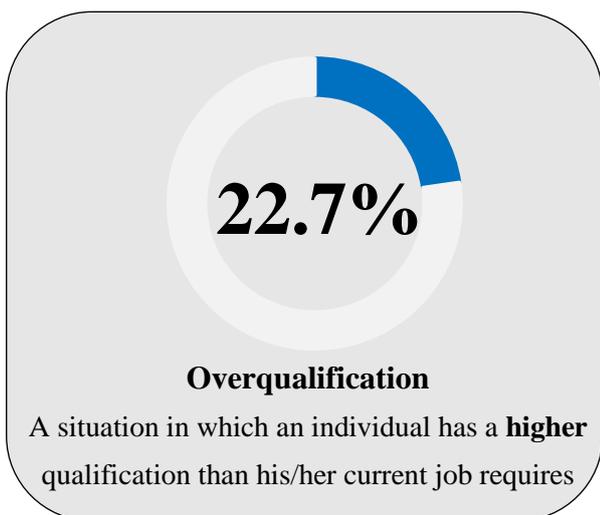
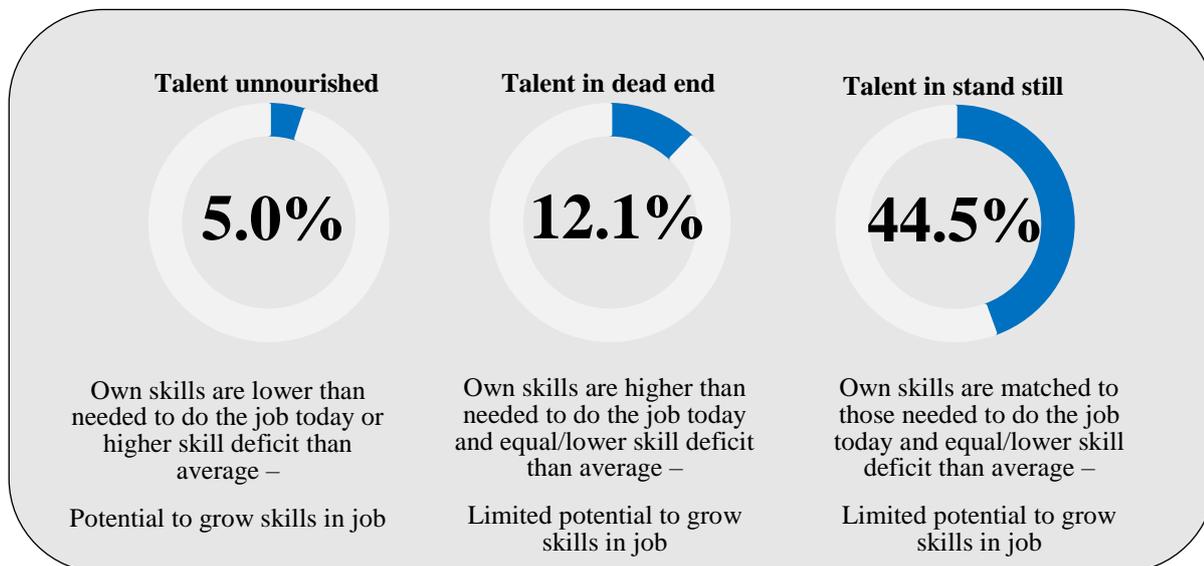
The Cambodian government has recognized these links, and several actions have been taken to improve the education level of its labour force, especially education reforms, which are now also underway. Figure 1.4 shows that the labour force with either no education or only some education and primary school not completed shrank in the last ten years, while the labour force with lower and upper secondary education completed increased from 13.3% to 14.9% and from 5.2% to 7.2%, respectively. Also, the labour force with post-secondary education increased by 5.2 percentage points. This is explained principally by the fact that, until recently, the quality of the Cambodian labour force had increased, and to some extent, this pattern reflects the well-preparedness of the labour force for the nature of current emerging economic activities.

**Figure 1.4. Education level of the labour force, 2010-2019**



*Source: Authors' calculation based on Cambodia Social Economic Survey, 2010-2019/20*

## Key Snapshots



## 2.1. Demography and Education

This section reports the general information of the respondents in the CSJ survey related to their demographic characteristics, education, and training. Some key characteristics of the respondents will be covered, such as gender, age group, marital status, employment and contract, employer, and ownership, as well as employment situation in the last 12 months. At the same time, general information about the respondents' education and training, such as their educational attainment, the field of study, and the reasons for choosing the field, will be covered as well.

### 2.1.1 Demographic Characteristics of Respondents

It is important to understand the characteristics of the respondents. From the survey, most of the respondents were male, single, between 25 and 29 years old, and currently living in Phnom Penh, the capital city. The data (Table 2.1) confirmed that 55.1% of total respondents were male, 55.4% were single, and 46.2% were in the age group between 25 and 29 years old. About two-thirds of the interviewees lived in Phnom Penh, the capital city. The survey also asked about disability; the result suggested that only 0.4% of all respondents claimed to be disabled, most of whom have a physical disability. Throughout the world of work, people with disabilities can greatly participate and contribute at all levels by utilizing their skills and potential. Furthermore, the majority of the respondents were full-time (96.6%), permanent or regular (96.4%), and contracted staff, for which 89.6% had written contracts and 9.9% had oral contracts. There was no significant difference between undetermined-duration contract staff and those who had determined-duration contracts. Moreover, almost half of the respondents (48.1%) had occupations as senior or experienced staff, while some were just in entry-level or junior positions. Employees who worked in higher-level positions, such as executives, senior managers, or specialists, were the least prevalent in our survey.

**Table 2.1. Distribution of respondents by age group, marital status, current address, employment type, and gender**

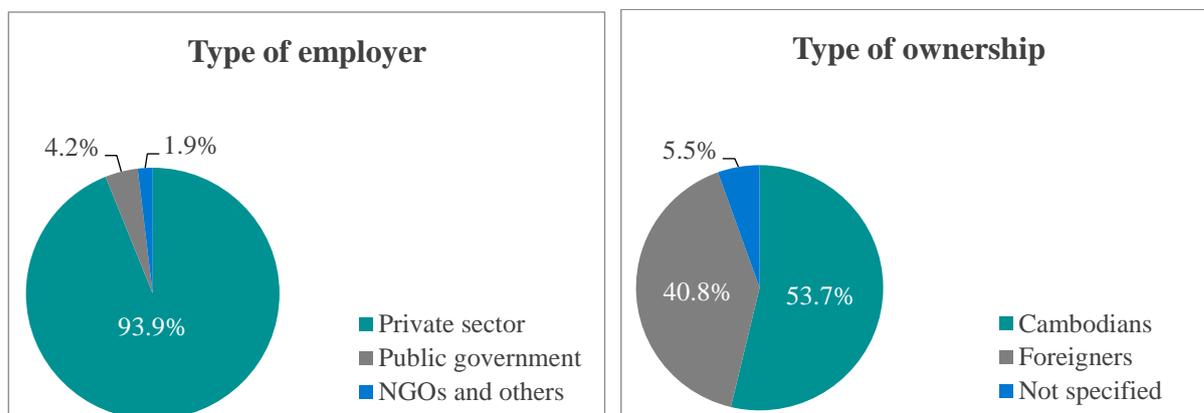
Age group	Absolute value			Column Percentage		
	Male	Female	Both sexes	Male	Female	Both sexes
21 - 24	386	431	817	22.3%	30.6%	26.0%
25 - 29	806	643	1,449	46.6%	45.6%	46.2%
30 - 34	537	336	873	31.1%	23.8%	27.8%
<b>Marital status</b>						
Single	952	786	1,738	55.1%	55.7%	55.4%
Married	770	614	1,384	44.5%	43.5%	44.1%
Divorced	7	10	17	0.4%	0.7%	0.5%
<b>Current address</b>						
Phnom Penh	1,121	956	2,077	64.8%	67.8%	66.2%
Provinces	608	454	1,062	35.2%	32.2%	33.8%
<b>Employment types</b>						
Part time	62	46	108	3.6%	3.3%	3.4%
Full time	1,667	1,364	3,031	96.4%	96.7%	96.6%
<b>TOTAL</b>	<b>1,729</b>	<b>1,410</b>	<b>3,139</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
<b>Row Percentage</b>	<b>55.1%</b>	<b>44.9%</b>	<b>100.0%</b>			

n (Total respondents) = 3,139

The greatest number of the surveyed respondents worked in the private sector, accounting for 93.9%, while the rest reported that they worked in the public sector (4.2%) and in NGOs and other

sectors such as autonomous bodies (1.9%). In addition, the majority of the respondents (53.7%) work for Cambodian nationality establishments, followed by foreigners (40.8%), while the rest 5.5% did not specify their ownership status (Figure 2.1).

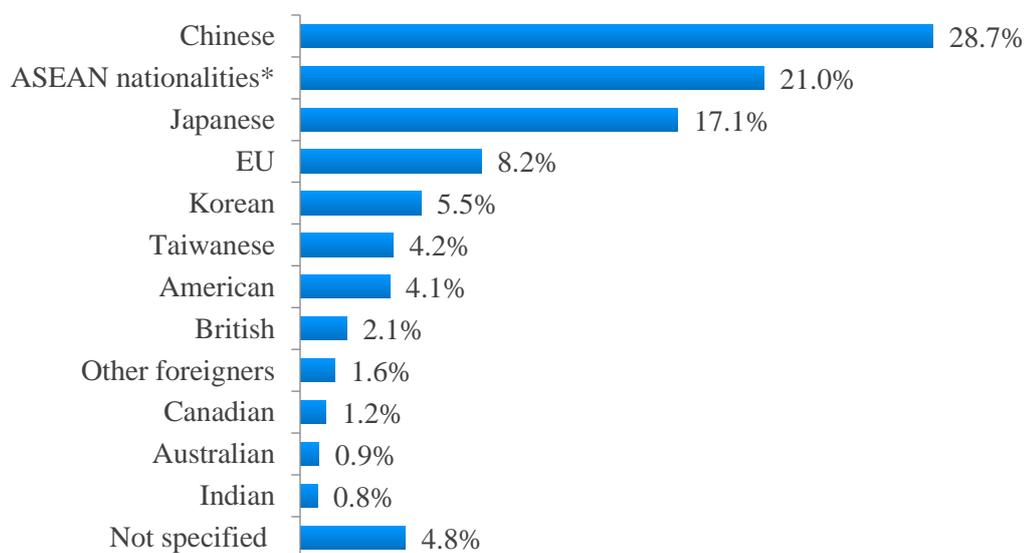
**Figure 2.1. Distribution of respondents by type of employer and type of ownership**



n (Total respondents) = 3,139

Among the foreign ownerships, most of the respondents reported that their foreign employers were Chinese (28.7%) and other ASEAN nationalities such as Thai, Vietnamese, Singaporeans, and Malaysians. Japanese took up 17.1% of total foreign-owned enterprises. However, the minority of foreign ownerships were held by Indians and Australians, at 0.8% and 0.9%, respectively (Figure 2.2).

**Figure 2.2. Distribution of respondents by employer's foreign nationality**



\* ASEAN nationalities except for Cambodia  
n (Respondents reported foreign ownership) = 1,280

Table 2.2 indicates the variation in the employment situation in the last 12 months. Most of the respondents reported that the employment number in their organizations remained the same, at 51.6%. Also, one out of four respondents said that the number of employees in the organization had increased, while 23.4% claimed that the number of staff had decreased in the last 12 months. The analysis also distinguished the employment situation by the size of establishments. Small-scale establishments with 10–49 employees and large-scale establishments with 200 or more employees took the most share,

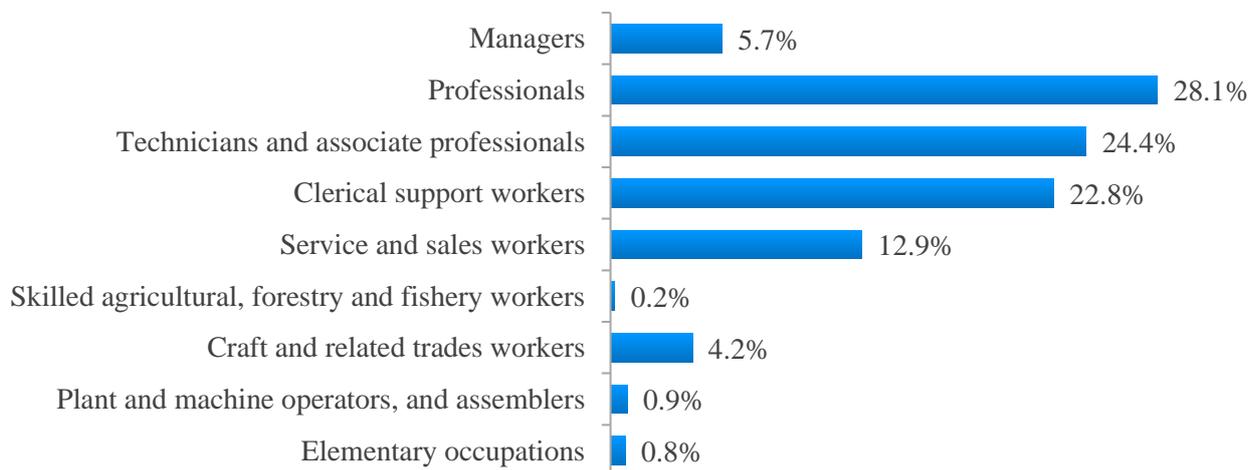
accounting for 35.0% and 34.9%, respectively. Most of the employees who worked in the small establishments also indicated that their organization's employment situation was stable.

**Table 2.2. Share of respondents reported employment situation in the last 12 months by employee size**

Employees	Employment situation in the last 12 months			
	Increased	Decreased	Remain the same	TOTAL
	Absolute value			
1-9	17	39	116	172
10-49	159	166	456	781
50-199	133	118	251	502
200+	250	199	330	779
<b>TOTAL</b>	<b>559</b>	<b>522</b>	<b>1,153</b>	<b>2,234</b>
Row percentage				
1-9	9.9%	22.7%	67.4%	100.0%
10-49	20.4%	21.3%	58.4%	100.0%
50-199	26.5%	23.5%	50.0%	100.0%
200+	32.1%	25.5%	42.4%	100.0%
<b>TOTAL</b>	<b>25.0%</b>	<b>23.4%</b>	<b>51.6%</b>	<b>100.0%</b>
Column percentage				
1-9	3.0%	7.5%	10.1%	7.7%
10-49	28.4%	31.8%	39.5%	35.0%
50-199	23.8%	22.6%	21.8%	22.5%
200+	44.7%	38.1%	28.6%	34.9%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

n (Respondents reported employment situation) = 2,234

**Figure 2.3. Distribution of respondents by major occupation (ISCO 1 digit)**

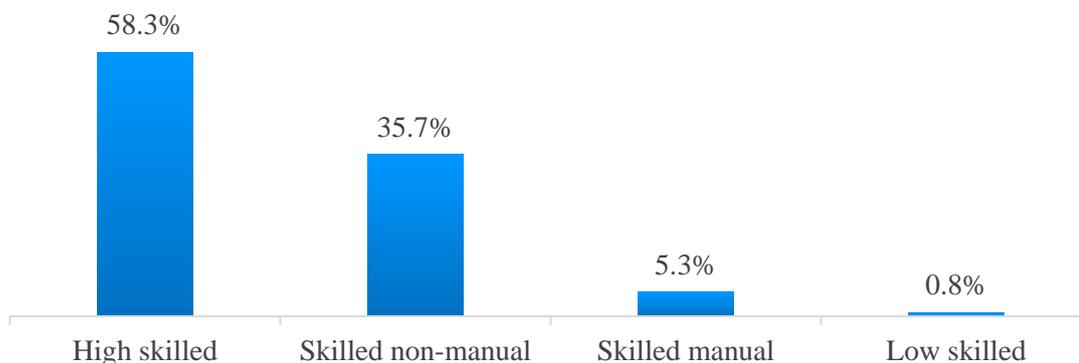


n (Respondents reported by occupations except for armed forced occupations) = 3,136

Broken down by major occupation, a higher proportion of total respondents was concentrated in professionals, technicians and associates professionals, and clerical support workers (28.1%, 24.4%, and 22.8%, respectively), as shown in Figure 2.3 above. However, by broad occupational groups, a high concentration of respondents was found in the high-skilled category, accounting for 58.3% of all respondents; skilled non-manual was 35.7%; the skilled manual was 5.3%; and low-skilled was 0.8% (Figure 2.4 below). It is worth noting that the number of observations in the low-skilled occupation was

only 24; thus, caution should be used for further interpretation or reference. Moreover, as already mentioned in the above section of methodology, a specific group of armed forces occupations is omitted due to its small number of instances.

**Figure 2.4. Distribution of respondents by broad occupational group**

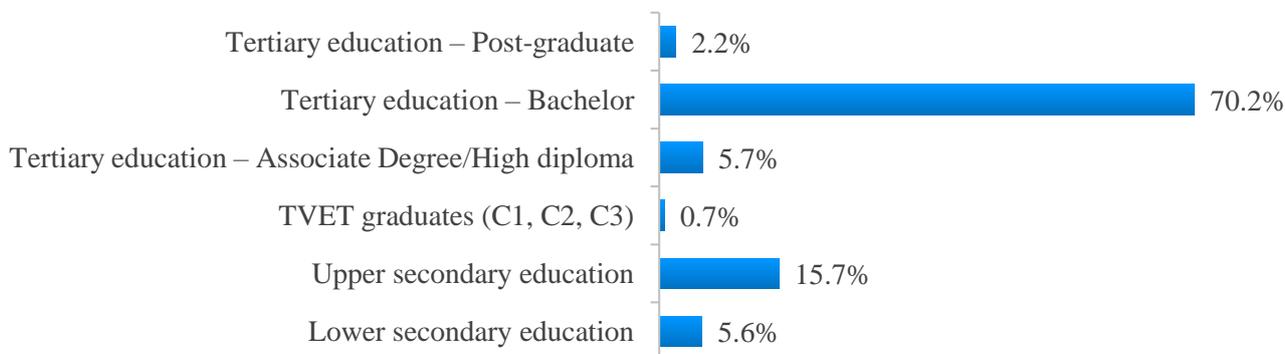


n (respondents reported by occupations except for armed forced occupations) = 3,136

### 2.1.2 Education and Training of Respondents

The respondents from the CSJ survey most commonly obtained a bachelor's degree, accounting for 70.2% of total respondents, followed by an upper secondary level (15.7%), an associate degree (5.7%), a lower secondary (5.6%), and a post-graduate degree (2.2%). TVET graduates (C1, C2, and C3) shared the smallest proportion, accounting for less than 1%, so the analysis based on this education may not solely reflect the whole TVET education system.

**Figure 2.5. Distribution of respondents by education level**

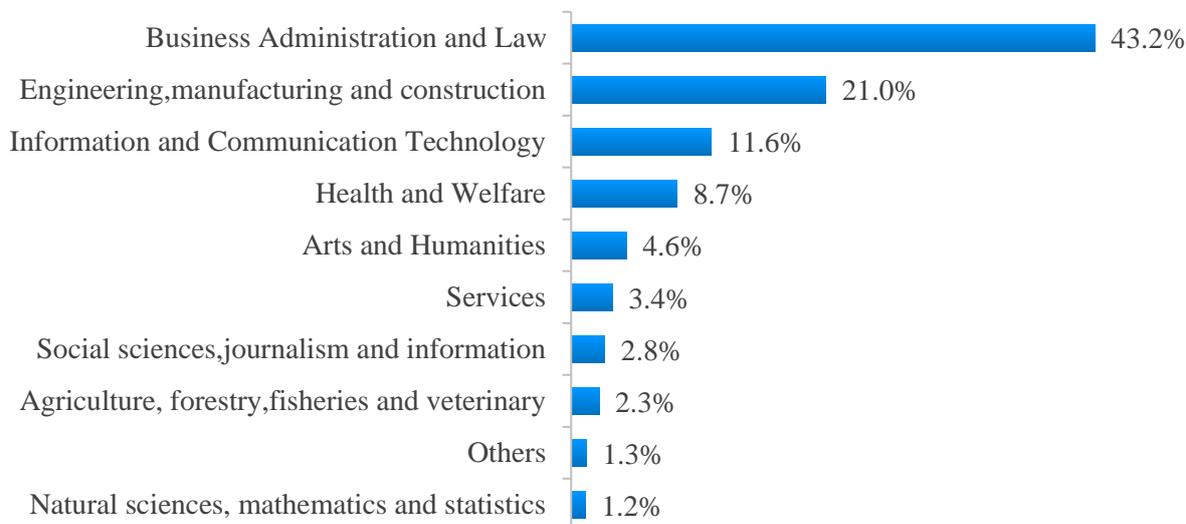


n = 3,139

The most familiar fields of study among the respondents were business administration and law (43.2%), engineering, manufacturing, and construction (21.0%), and information and communication technology (11.6%) (Figure 2.6 below). By contrast, natural sciences such as mathematics and statistics and agriculture, forestry, fisheries, and veterinary medicine shared the smallest percentages, accounting for 1.2% and 2.3%, respectively. Moreover, business administration and law were not distinguished between males and females; however, engineering, manufacturing, construction, and information and communication technology were more favourably favoured by males. On the other hand, the field of study that was most favourably selected by women was health and welfare. Furthermore, the samples of TVET

graduates (C1, C2, and C3) in the CSJ survey were mainly found in engineering, manufacturing, and construction; services; and business administration and law.

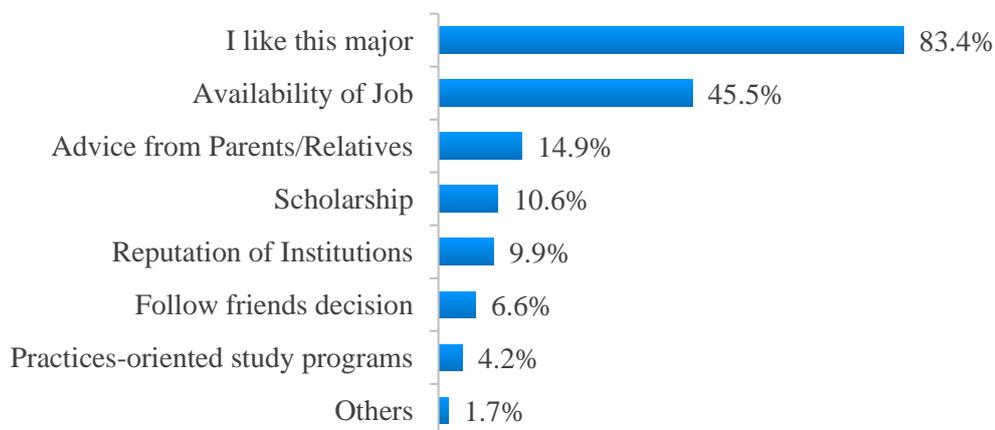
**Figure 2.6. Share of respondents at TVET and tertiary education by field of study**



n (respondents at TVET and tertiary education) = 2,471

The respondents who chose the field of study may be associated with their own decisions, as 83.4% of the total respondents claimed that they chose their field of study because they liked it, while 45.5% decided on their study pathways due to the availability of job opportunities. Advice from parents or relatives also influenced the respondents' decision to choose their major. In the past, the common sense of Cambodians believed that students were influenced by their friends when choosing majors for their university studies (Silong, 2015). Although this happens to be true, it was not the main factor in this survey. The CSJ data confirmed that only 6.6% of the total respondents would follow their friend's decision in choosing the university. It might be interesting to see the factors associated with the field of study; thus, the top three reasons for each field of study are detailed in Table A.1 in Appendix A.

**Figure 2.7. Share of respondents reported their reason for choosing a field of study**



n (respondents at TVET and tertiary education) = 2,471

## 2.2. Qualifications Supply and Demand in the Market

### 2.2.1 Economic and Social Benefits of Education and Training

The study provides a good understanding of the effects of education on some labour markets outcomes such as wage, job satisfaction, job security, and obsolescence of skills. The calculation of job satisfaction is the percentage of respondents with an answer score greater than 3 on a scale of 1 to 5 to the question, “To what extent are you satisfied with your current job situation?” And the answer was on a scale of 1 to 5, where 1 means "not at all" and 5 means "very satisfied." Job insecurity is indicated by the percentages of respondents with an answer score greater than 6 on a scale of 0 to 10 to the question “How likely or unlikely do you think it is that you will lose your job in the next year?” The answer was on a scale from 0 to 10, where 0 means "very unlikely" and 10 means "very likely." Skill obsolescence is taken as an indication of the percentages of respondents with an answer score greater than 6 on a scale of 0–10 to the question “How likely or unlikely do you think it is that several of my skills will become outdated in the next five years?” And the answer was on a scale from 0 to 10, where 0 means "very unlikely" and 10 means "very likely".

Table 2.4 offers a comparison of the labour market outcomes of the six groups of respondents: lower secondary graduates, upper secondary graduates, TVET graduates (C1, C2, and C3), and tertiary graduates (associate degree/high diploma, bachelor, and postgraduate graduates). Tertiary graduates earn higher monthly wages than those with lower levels of education. It can be seen from the table that higher education pays off. To illustrate, using the 95% confidence interval to assess average wage at different levels of education, respondents with a post-graduate degree earn the most, somewhere between US\$688.6 and US\$914.8, followed by respondents with a bachelor’s degree between US\$414.7 and US\$437.1, and respondents with an associate degree or high diploma between US\$302.3 and US\$360.2. Lower and upper-secondary graduates earn similar wages, between US\$250 and US\$290. The 95% confidence interval for the average wage of TVET graduates is larger than others’, probably due to its small sample size. However, an average of TVET graduates lying between US\$239.9 and US\$330.3 is possible and may illustrate a comparable wage received by these graduates to those with lower and higher education. This can be due to the fact that effective TVET provides students with knowledge and skills that enable them to perform specific tasks and pursue further improvements so that they can earn at a similar level to those with an associate degree or high diploma and vice versa.

Table 2.4 also presents the job satisfaction levels of the six graduate groups. A large proportion of respondents (79.5%, 79.1%, 90.5%, 86.0%, 85.9%, and 88.2% of lower secondary graduates, upper secondary graduates, TVET graduates, associate degree/high diploma graduates, bachelor’s graduates, and postgraduate graduates, respectively) reported that they were satisfied with their current job. Job choices by individuals can reflect their preferences (including a high salary, good working conditions, a positive work-life balance, challenging work, and a pleasant area of work) that are unrelated to the suitability of their qualifications with the job’s qualification demands. In this case, an individual who is mismatched in terms of qualifications may still enjoy a high level of job satisfaction.

On the other hand, only a minor proportion of respondents—less than 7% in each group—perceived that they were very likely to lose their job in the next year due to the rapid change in technology and their inability to keep their skills up to date. Skills becoming obsolete in the next five years were perceived by 10–20% of respondents in each of the three groups. Around 19% of vocational certificate graduates were more likely to think that their skills will become out-of-date, the highest proportion if compared to that of lower and upper graduates (around 11%) and tertiary graduates (14.0%,

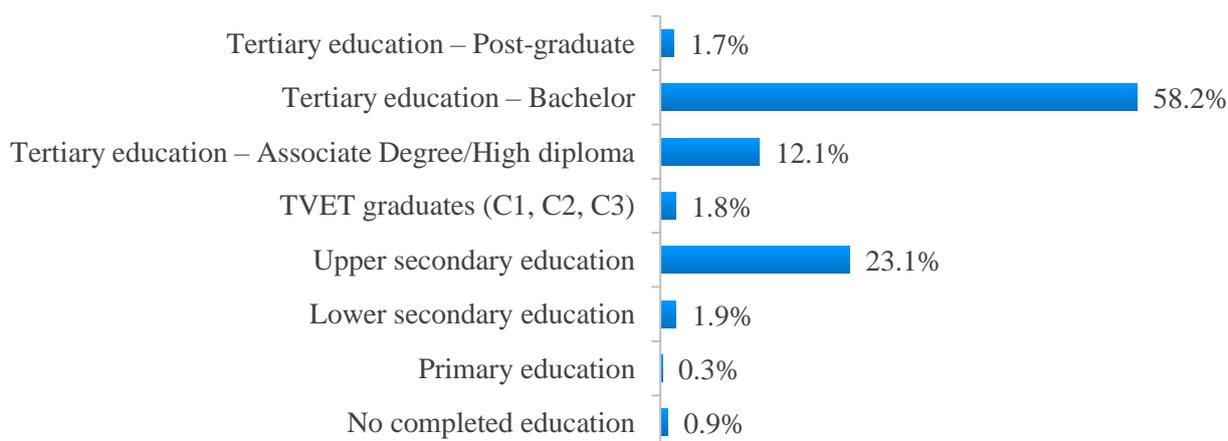
14.3%, and 16.2% for associate graduates, bachelor’s graduates, and postgraduate graduates, respectively). Therefore, the TVET training institutions may consider regular curriculum reviews so that graduates can keep pace with the skill changes, especially those related to the needs of industries and the fast transformation of technologies in the era of Industry 4.0.

**Table 2.3. Effect of Education on Labour Market Outcome**

Level of Education	Average Wages (US\$)		Job Satisfaction	Job Insecurity	Skill Obsolesce
	Confidence interval (95%)				
	Lower	Upper			
Lower secondary	252.3	288.7	79.5%	6.3%	11.4%
Upper secondary	258.3	281.4	79.1%	3.9%	11.0%
TVET graduates (C1, C2, C3)	239.9	330.3	90.5%	4.8%	19.0%
Tertiary education-Associate degree/High diploma	302.3	360.2	86.0%	5.1%	14.0%
Tertiary education-Bachelor	414.7	437.1	85.9%	3.7%	14.3%
Tertiary education-Post-graduate	688.6	914.8	88.2%	1.5%	16.2%

The following figure (Figure 2.8) provides the perceptions of employees on the education level required by employers for doing the current job. A bachelor’s degree is required at the workplace by more than 50% of total respondents (58.2%), followed by 23.1% for upper secondary education and 12.1% for an associate’s degree or high diploma degree. Only 58 respondents (equivalent to 1.8%) perceived that a vocational certificate was sufficient to perform their current job. This reflected a different perception between graduates and training institutions regarding the qualifications and skill level required to perform well in a specific occupation. The report of the Asian Development Bank indicated that 59% of training institutions in Cambodia believed that graduates were well prepared for entry-level positions (ADB, 2021). However, this result could be biased due to the low perception of TVET in Cambodia in general.

**Figure 2.8. Share of respondents reporting level of education needed for doing the current job**



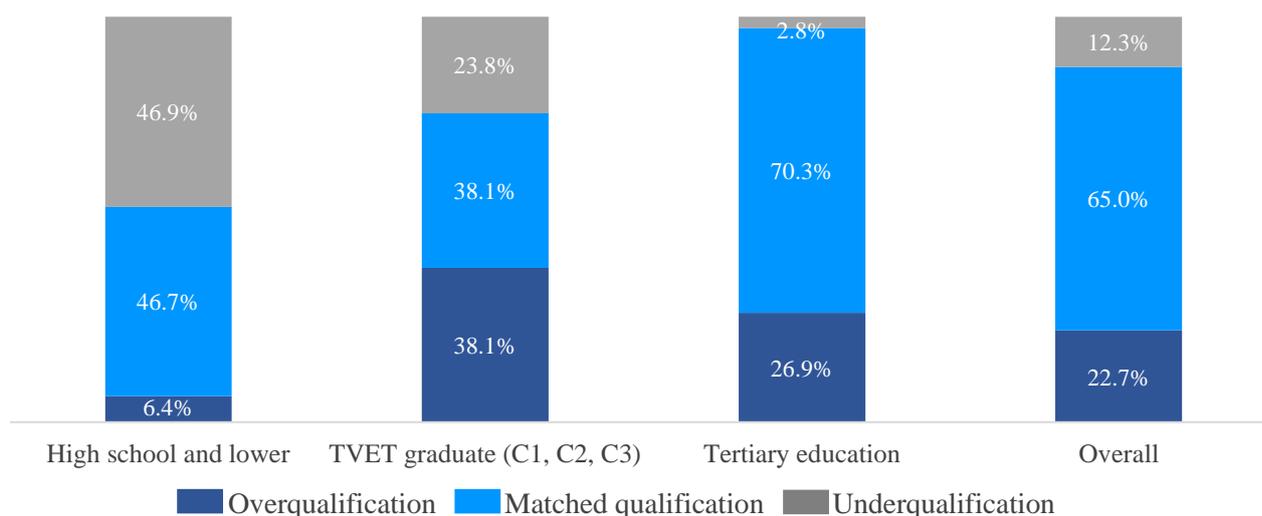
### 2.3. Qualification Mismatches

Qualification mismatch occurs when persons in employment occupied jobs whose qualification requirements do not match their formal qualifications (Stoevska, 2018). Or in another word, it is defined when there is a difference (higher or lower) between the highest qualification held by a worker and the qualification required for doing his/her job. Literature reviews on the qualification mismatches cited that young Cambodians with higher education would accept some perceived low-skilled occupations for which they are overqualified (UNDP, 2019; Stoevska, 2018; Michele Bruni, 2013). Overqualified workers can be affected by skills depletion, provided that the utilization of their skills was little, and the skills were not developed continuously as part of their job tasks.

The analysis of qualification mismatches in the CSJ survey is based on a direct comparison of the respondent's highest education level with the level of education required to do their current jobs. The result of the survey confirmed that a small share of the total respondents was employed in jobs that required different levels of qualifications, either higher or lower than they actually acquired. The incidence of workers who were affected by qualification mismatches was 35.0%, of which 22.7% were overqualified and 12.3% were underqualified, while 65.0% of total responses were doing jobs that perfectly matched their qualifications.

The survey reveals a qualification mismatch among respondents, as shown in Figure 2.9. It can be seen from the figure that respondents with tertiary education were less likely to be in a situation of qualification mismatch, as a majority of them (70.3%) were working in jobs that required the level of education they obtained, and only a minor share of them (approximately 3%) expressed themselves as having under qualification. TVET graduates seem to have a fair distribution of qualification mismatches: 38.1% for both overqualification and matched qualification and 23.8% for under qualification. Underqualification, however, was high among high school graduates and those with a lower level of education, with a share of 46.9%. Be noted that the samples of TVET graduates (C1, C2, and C3) in this survey were less than 30, and thus the result may not represent the whole TVET educational level.

**Figure 2.9. Incidence of qualification mismatch by broad educational level**

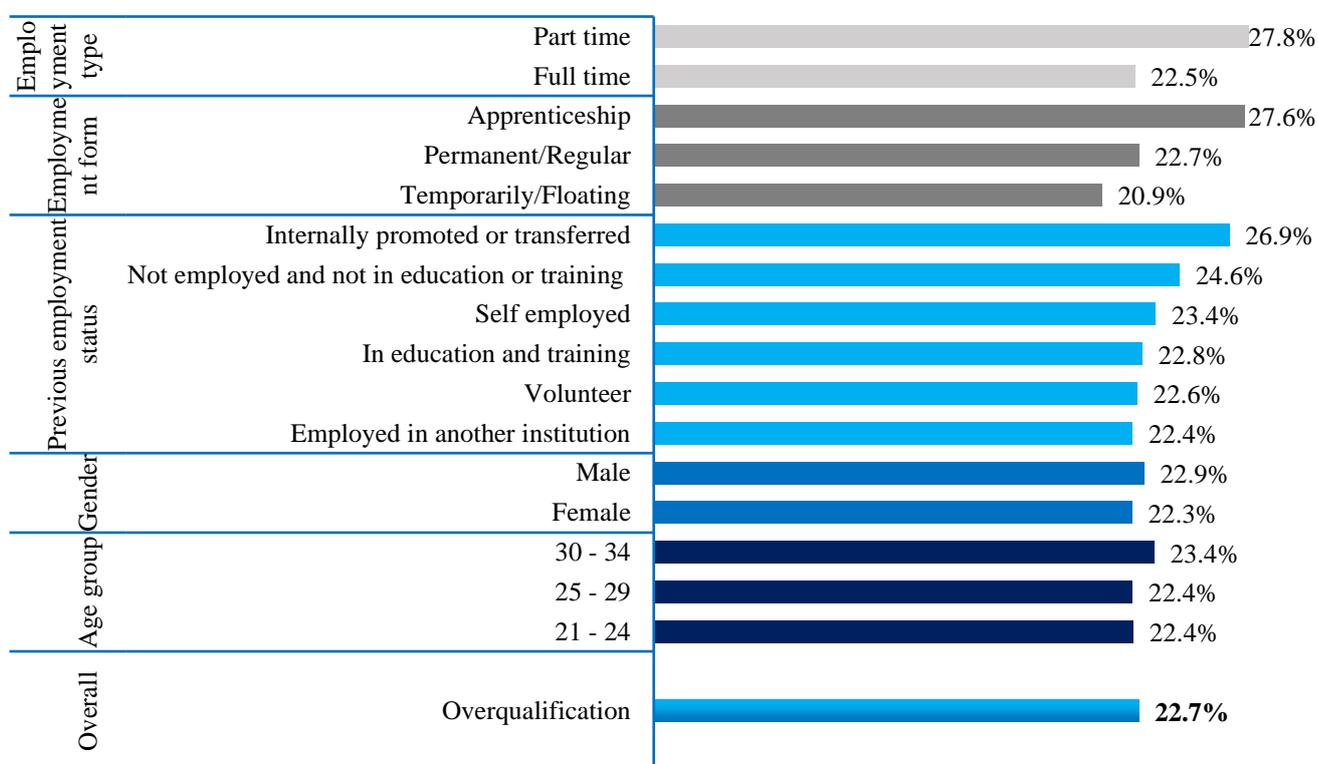


Underqualification is not a good signal in the labour market and education system, yet one cannot say that underqualified employees cannot perform the skills required for work. Qualification mismatches are the misalignment between educational choice and labour market needs. Thus, policy interventions should improve communication flows to converge the alignment.

### 2.3.1 Incidence and Determinants of Overqualification

Cambodia is affected by an overproduction of graduates from higher education. A literature review on general higher education (GHE) in Cambodia suggested that there are overqualified GHE graduates in the labour market (UNDP, 2019). From the CSJ survey, the rate of overqualification also differs based on different characteristics. As shown in Figure 2.10 below, among other groups, young employees in part-time jobs, apprentices, and employees who were internally promoted or transferred prior to accepting their current employment were predominantly affected by overqualification. Males were characterized by a slightly higher rate than females in our survey samples (22.9% for males and 22.3% for females). Moreover, the overqualification rate was higher among adult employees 30-34 years of age, which accounted for 23.4% of the respondents in this age group. Employees in the age groups 25-29 and 21-24 shared the same rate of 22.4%.

**Figure 2.10. Incidence of overqualification by employment type, employment form, previous labour market status, gender, and age group**



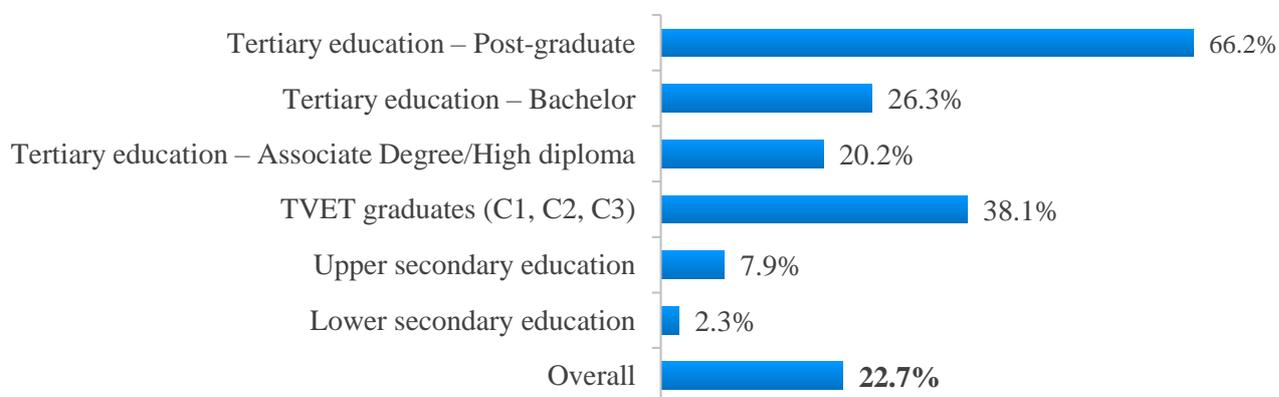
The CSJ survey follows the International Standard Classification of Education (ISCED) 2011, and the level of education was classified into three broad levels: low education, medium education and high education. From the survey samples, lower secondary is classified into low education, upper secondary and technical and vocational certificate levels 1, 2, 3 (simply known as TVET C1, C2, C3) are classified into medium education, while tertiary education including associate degree, bachelor degree, and postgraduate level is classified into high education (as shown in Table 2.4 below).

**Table 2.4. Classification of levels of education**

Broad ISCED level	ISCED level (2011)	Education level in the CSJ survey
Low education	ISCED 0: Early childhood education ('less than primary' for educational attainment)	
	ISCED 1: Primary education	
	ISCED 2: Lower secondary education	Lower secondary education
Medium education	ISCED 3: Upper secondary education	Upper secondary education
	ISCED 4: Post-secondary non-tertiary education	TVET graduates (C1, C2, C3)
High education	ISCED 5: Short-cycle tertiary education	Tertiary education-Associate or high diploma
	ISCED 6: Bachelor's or equivalent level	Tertiary education-Bachelor
	ISCED 7: Master's or equivalent level	Tertiary education-Post-
	ISCED 8: Doctoral or equivalent level	graduates

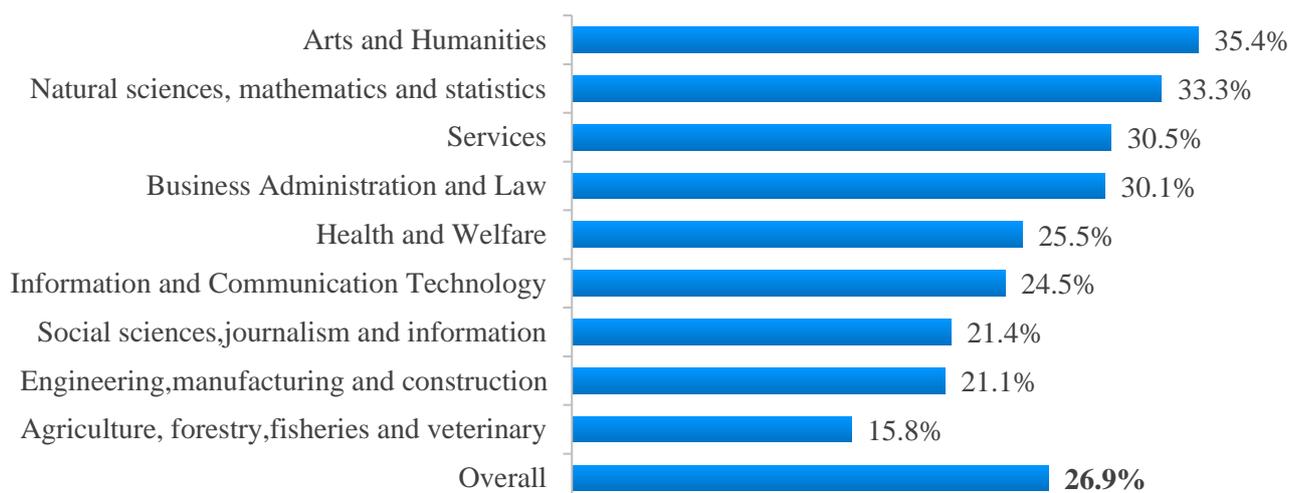
Generally, the share of overqualification was concentrated in high education, accounting for 92.8% of overqualified respondents, and the majority was distributed among those who held a bachelor's degree. From the survey, data revealed that the incidence of overqualification was very high with respondents who had a postgraduate degree, accounting for 66.2%, followed by TVET graduates (C1, C2, and C3), which accounted for 38.1% (Figure 2.11 below).

**Figure 2.11. Incidence of overqualification by level of education**



Moreover, Figure 2.12 illustrates the incidence of overqualification by field of study and shows that graduates of tertiary education were predominantly affected as those who studied fields such as arts and humanities; natural sciences; mathematics and statistics; services; and business administration and law. Observably, this may be because workers were employed outside their field of study and became overqualified. Agriculture, forestry, fisheries, and veterinary medicine were the least affected by overqualification.

**Figure 2.12. Incidence of overqualification by field of study, respondents at tertiary education**



n (respondents at tertiary education) = 2,450

The rate of overqualification varied depending on job characteristics, with overqualification probability being higher for individuals employed in service occupations. Breaking down by broad occupational groups, the incidence of overqualification was high in highly skilled workers (50.5% of overqualified workers) and skilled non-manual workers (42.3% of overqualified workers), specifically in clerical support workers, professionals, technicians, and associate professionals. Table 2.5 below indicates the top five occupations with the highest and lowest rates of overqualification.

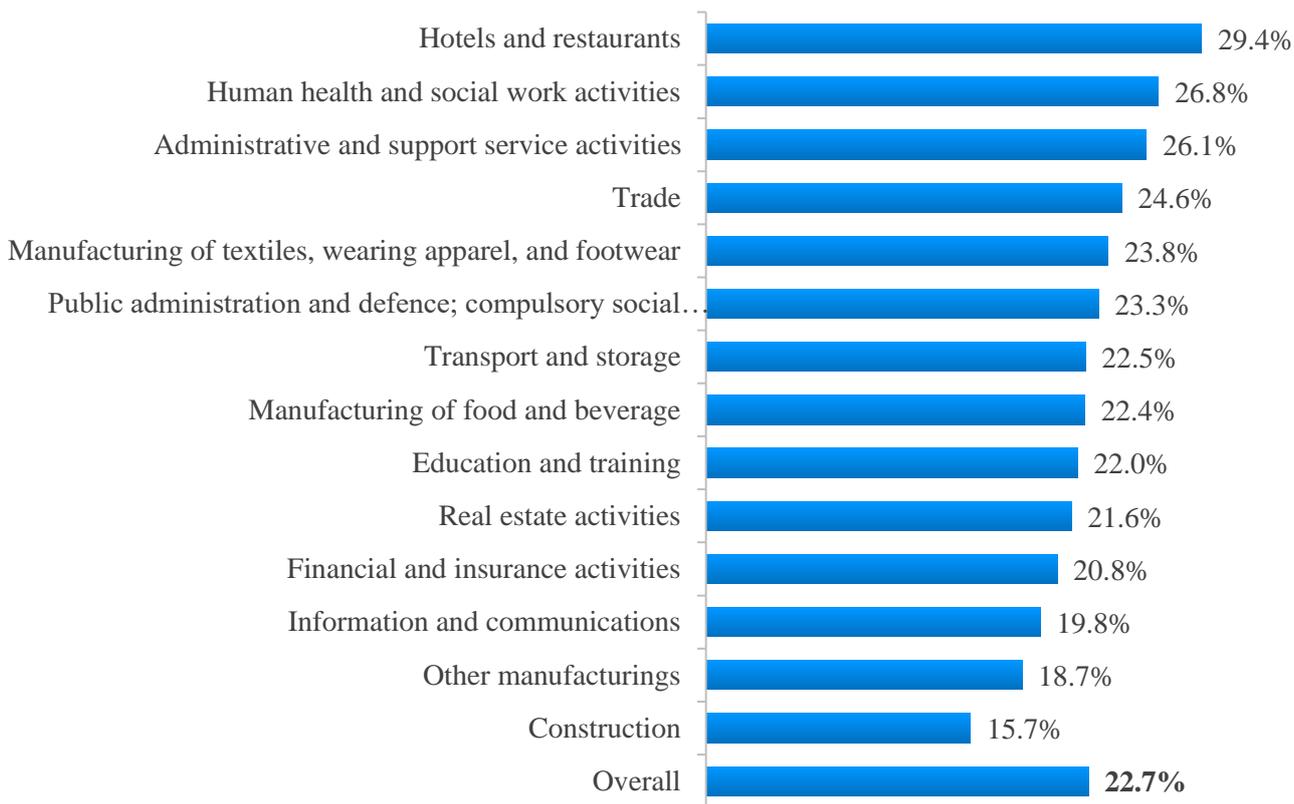
**Table 2.5. Top 5 occupations reported the highest and lowest rate of overqualification by ISCO 2 digit**

<b>Highest rate of overqualification</b>	<b>Percentage</b>
Drivers and mobile plant operators	50.0%
Handicraft and printing workers	50.0%
Building and related trades workers, excluding electricians	46.7%
Protective services workers	45.5%
Personal care workers	42.9%
<b>Lowest rate of overqualification</b>	<b>Percentage</b>
Chief executives, senior officials and legislators	16.7%
Information and communications technology professionals	15.9%
Production and specialized services managers	15.4%
Science and engineering associate professionals	15.2%
Refuse workers and other elementary workers	11.1%
<b>Overall overqualification</b>	<b>22.7%</b>

n (total respondents) = 3,139

Moreover, Figure 2.13 indicates that employees who worked in the hotel and restaurant, human health and social work, administrative and support service activities, and trade sectors were more likely to have a higher overqualification rate ranging between 26.4% and 29.4%. By contrast, workers in construction, other manufacturing, and information and communications seemed to have a lower overqualification rate, ranging between 15.7% and 19.8%.

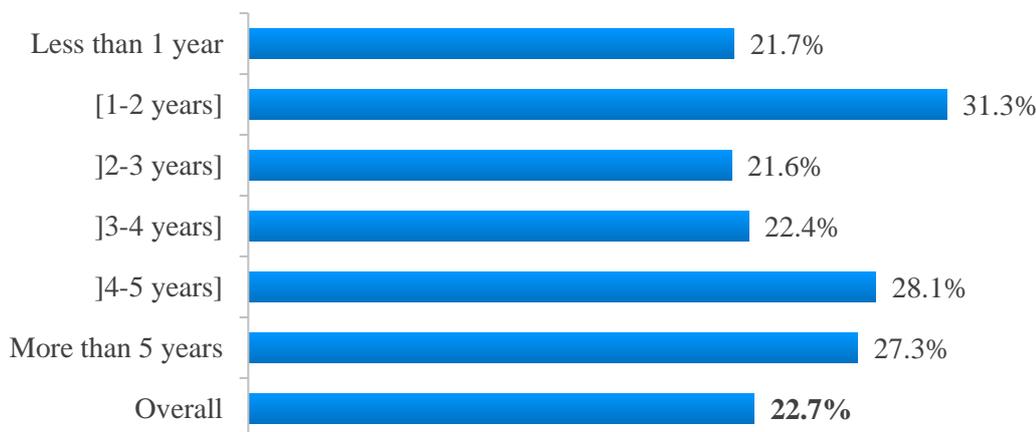
**Figure 2.13. Overqualification by type of industry**



n = 3,139

Figure 2.14 illustrates the frequency of overqualified workers by the length of their work, The highest percentage, 31.3%, was held by workers with 1-2 years of experience. Additionally, those who stayed at their jobs for 4-5 years or longer experienced a higher overqualification rate. This was evidence that overqualification was still present even after the employees had accrued more experience and were therefore potentially given more difficult tasks.

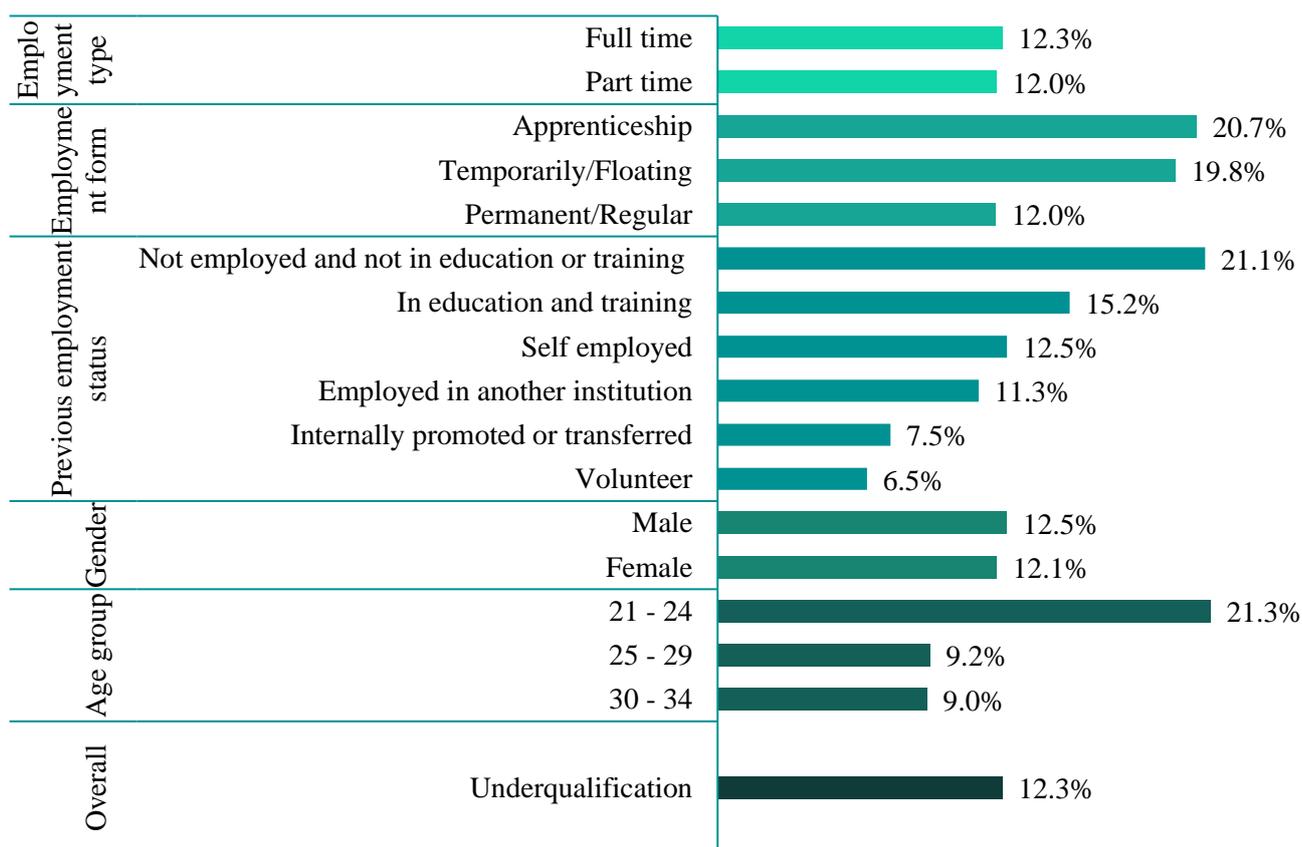
**Figure 2.14. Overqualification by the duration of work**



### 2.3.2 Incidence and Determinants of Underqualification

As was already mentioned above, about 12.3% of all respondents reported that their own qualifications were below the level of what was required to perform their current jobs. Most of the underqualified workers were found in lower secondary education (42.5%), followed by upper secondary education (38.6%), and associate degree holders (10.1%). According to the data collected, people with low levels of education were primarily impacted by underqualification. Additionally, as seen in Figure 2.15 below, the underqualification rate of male and female employees as well as those who worked full-time and part-time is more comparable within each group, but it is more frequent among apprentices and temporarily hired or "floating" staff. The proportion of underqualified workers was relatively high among young adult employees who were previously not employed and not in education or training, which accounted for 21.1% of the respondents in this specific group. The result also suggested that young employees aged 20–24 experienced the highest rate of underqualification compared to other age groups. The underqualified employees were mostly employed in highly skilled occupations (50.8% of total underqualified respondents) and skilled non-manual occupations (39.9% of total underqualified respondents), such as technicians, associate professionals, and clerical support workers. They were also less likely to change their jobs.

**Figure 2.15. Underqualification by employment type, employment form, previous labour market status, gender, and age group**



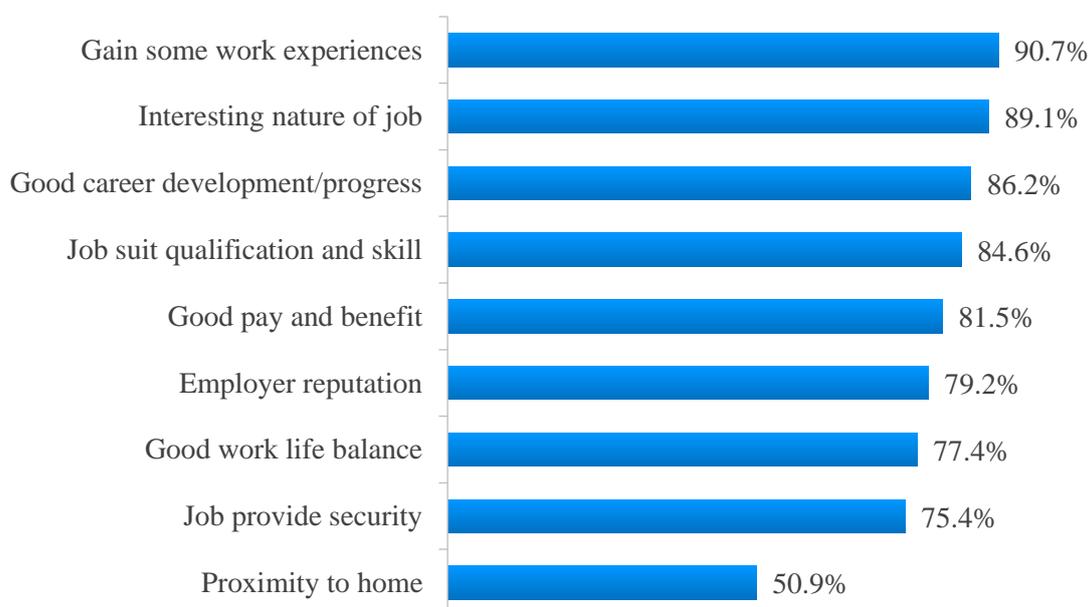
n = 3,139

### 2.3.3 Reasons for Choosing Current Job

There were a number of reasons why employees chose their current jobs. The reasons may attribute to proximity to home, the employer’s reputation, the interesting nature of the job, good pay and benefits, good work-life balance, good career development or progress, gaining some work experience, the job's qualification and skills, and job security, which was rated on a scale of 0 (no importance at all) to 10 (very important). The evaluation of the reason is calculated based on the respondent’s rating score of 6 or higher, which indicates that the reasons are “somewhat important” or “very important.”

As the detailed reasons highlighted in the following figure illustrate, the empirical evidence revealed that the most important reasons decided by individuals when accepting their current jobs were to gain work experience (90.7%), followed by being interested in the nature of the job (89.1%). The next reasons were the importance of good career development and progress (86.2%), a match of qualification and skill to the job (84.6%), and as well as a well-paid job with other benefits (81.5%). On the flip side, proximity to home did not matter much among the employees.

**Figure 2.16. Reasons for choosing the current jobs**



## 2.4. Skill Mismatches

Skills mismatch is defined as when workers have higher or lower skill proficiency than that required by their jobs (OECD, 2016). While some workers' qualifications may be mismatched with their jobs, others may be over- or under-skilled. Overskilling describes the situation whereby the employees believe that the skills they acquired are more than their current jobs require, whereas underskilling describes the situation where the employees believe that their current skills do not meet the demands of their jobs (Seamus McGuinness, 2017).

To evaluate the extent to which skill mismatch affected Cambodian workers in 2020, the CSJ survey asked respondents a series of questions designed to address the importance of their skills matching their jobs and also the overall degree to which their skills are at the level needed to do their

job. The respondents could either report that their skills are higher than or match what is required by their job, or that some of their skills are lower than what is required and need to be further developed. Some of these questions were asked several times, referring to different periods of the individual’s working life: at the time of the survey, at the start of the current job, and in the previous job.

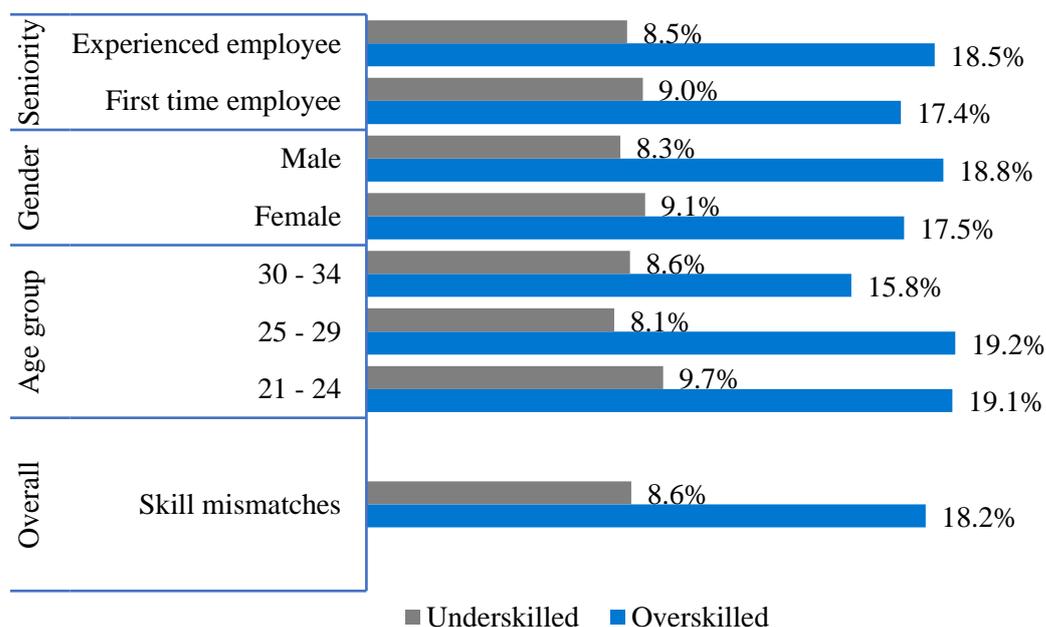
In the CSJ survey, the measurement of skill mismatch is based on a question that asked respondents, “How would you best describe your skills in relation to what is required to do your current job?” Four answers were provided: 1 = skills were higher than what was required by the current job; 2 = skills were matched; 3 = some of the skills were lower than what was required by the current job and needed to be further developed; and 4 = don't know. The answer to number 1 is translated as an indication of overskilling, while number 3 indicates underskilling. However, it is not always clear that the respondents were thinking only of work-related skills when answering the question.

In addition, the survey further asked, “To what extent would you say that your skills were higher than those required to do your job at that time?” with a response scale of 1 to 5, where 1 means your skills were a little lower than required and 5 means your skills were a lot lower than required. The values of 3, 4, and 5 are taken as an indication of a high level of overskilling. There was a separate underskilling question on the same scale: “To what extent would you say that your skills were lower than those required to do the job at that time?” And again, the values of 3, 4, and 5 indicate a high level of underskilling.

### 2.4.1 Skill Mismatches Related to Required Level

The CSJ data showed that 18.2% of total respondents reported having overskilling, while 8.6% were affected by underskilling. At an extreme level, 15.8% of total respondents were overskilled (high level), and 4.0% were underskilled (high level), and the rate of skill mismatches (over or under) was more prevalent in male employees. The data also suggested that the skills of workers aged 20–24 and those who were first-time employees were not well-matched to their current jobs. This may reflect the fact that younger employees with less work experience were more likely to be underskilled, and this incidence can reduce over time (Figure 2.17).

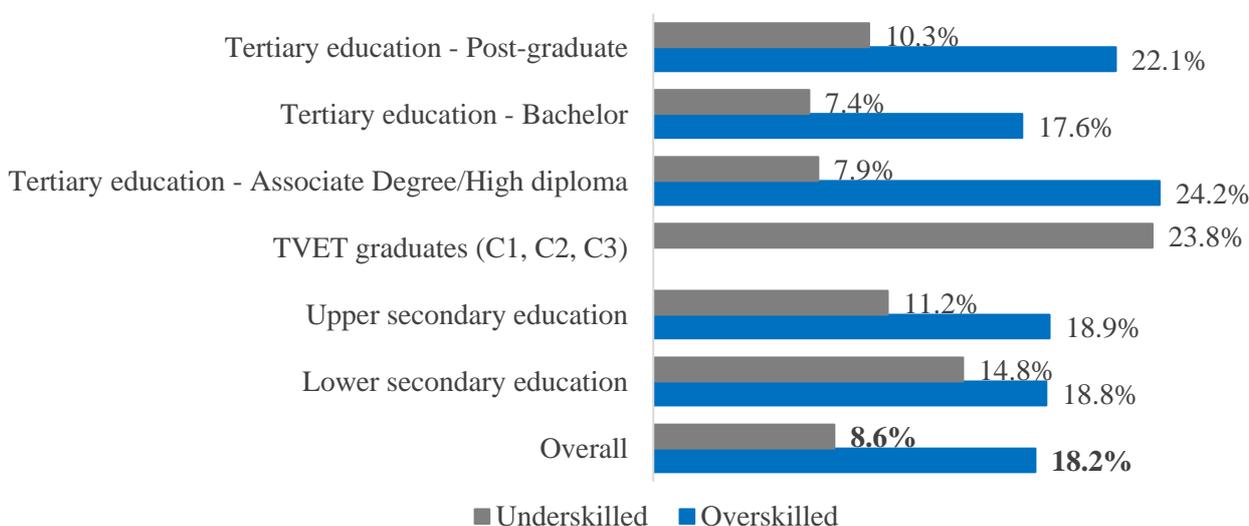
**Figure 2.17. Skill mismatches by gender and age group (% in total respondents)**



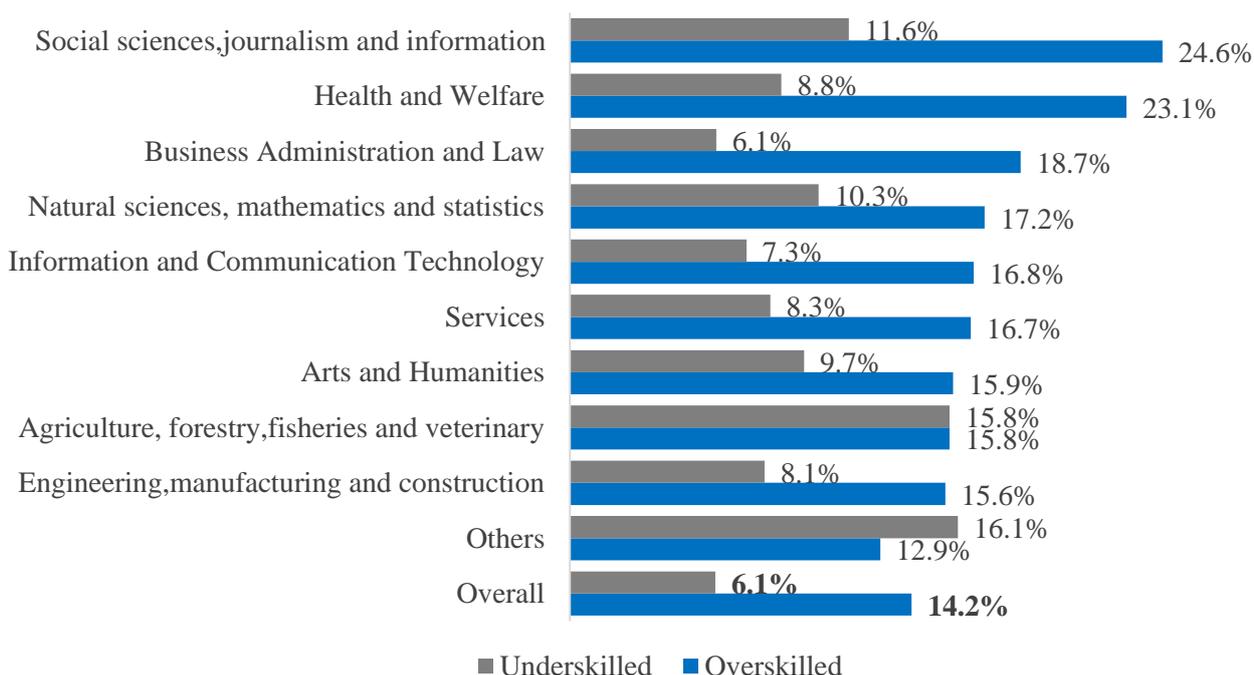
The result can also be seen in the employers' survey conducted by the National Employment Agency (NEA) in 2017: nearly 30% of the establishments declared to have encountered the issue of underskilling, especially in the construction, finance, and insurance sectors, and the main reason for underskilling was being new to the role.

Breaking down by education level, respondents who obtained a bachelor's degree and a postgraduate degree in the survey experienced a higher level of overskilling, accounting for 24.2% and 22.1%, respectively. For those who reported that their skills were lower than needed to do their jobs and needed to be further developed, this was more frequent among TVET graduates (C1, C2, and C3), followed by those in lower secondary education (Figure 2.18). Employees whose field of study related to social science, journalism, and information, as well as health and welfare, were more likely to be affected by overskill, while underskilled employees were those who studied agricultural, forestry, fisheries, and veterinary majors (Figure 2.19).

**Figure 2.18. Incidence of skill mismatches by level of education**

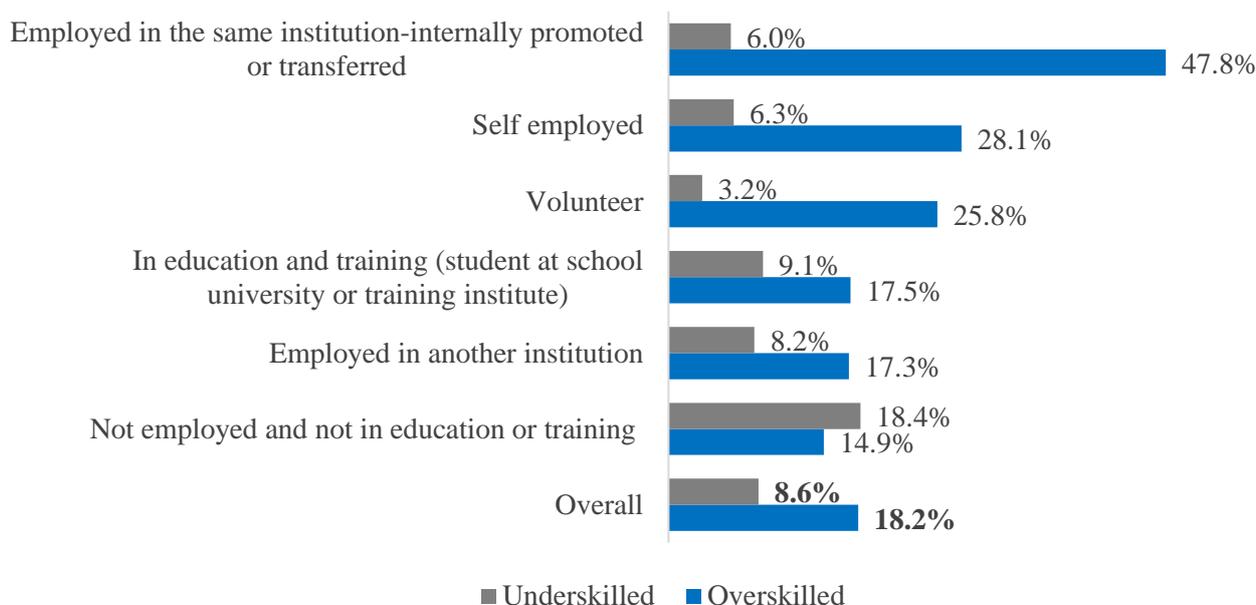


**Figure 2.19. Incidence of skill mismatches by field of study**



The incidence of overskilling was also found in those who were employed in the same institution, self-employed, and volunteers, accounting for 47.8%, 28.1%, and 25.8%, respectively. On the other hand, the rate of underskilling was more frequent in those who were not employed and not in education or training, accounting for 18.4%. This could be due to the fact that they did not have a chance to improve their skills or gain any experiences before having their current jobs, and if this group stayed longer in their previous labour market situation, they would be at risk of both labour market and social exclusion.

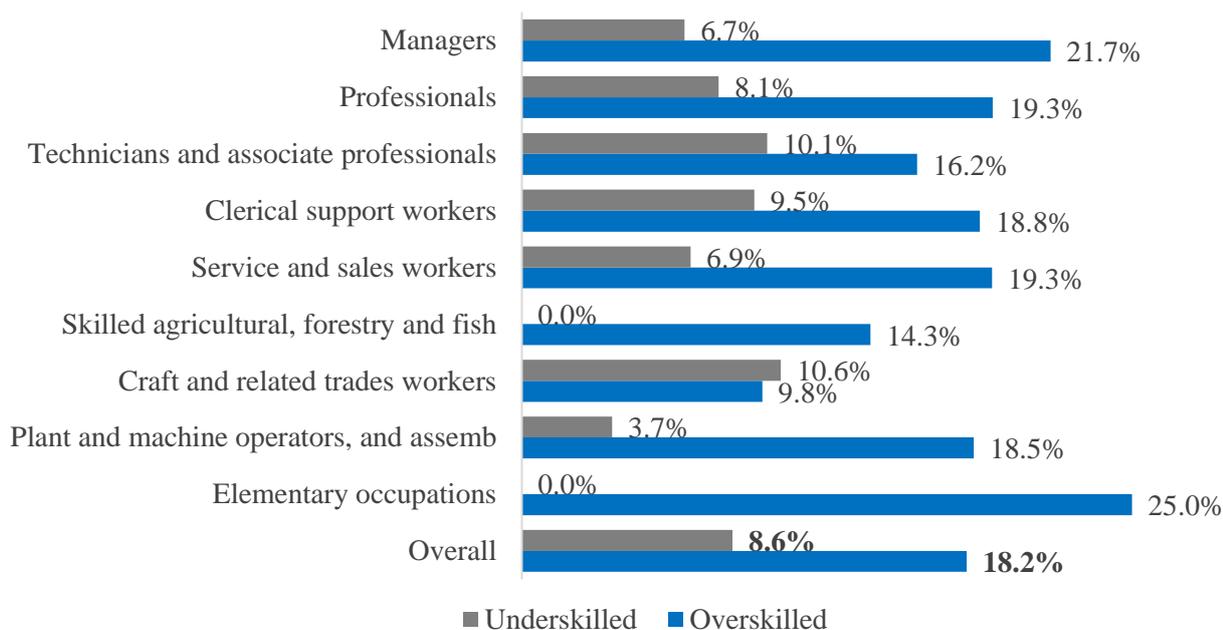
**Figure 2.20. Incidence of skill mismatches by previous labour market status**



#### 2.4.2 Factors Related to Skills Mismatches

Some specific groups in the CSJ survey were more likely to consider that their skills exceeded or were lower than those needed to do their jobs. However, the proportion of overskilling was concentrated among male respondents, those who were aged 25–29 years old, and individuals with a higher level of education. The prevalence of overskilling is found to be greatest for low-skilled workers. Employees in these occupations were more likely to say that their skills were higher than needed, while underskilling was found to be greatest for skilled manual workers. Underskilling reflected that the labour forces were not well utilized in the labour market. Figure 2.21 below presents the skill mismatches by major occupations.

**Figure 2.21. Skill mismatches by major occupations**



### 2.4.3 Skills Deficits Undermining Productivity Potential

In addition to overskilling and underskilling, the concept of "skill deficit" is a new skill mismatch at work. Skill deficit refers to a situation where the skills and abilities of individuals are lower than a given benchmark level of skills (Cedefop, 2015). Another literature review refers to "skill deficit" as the situation when the market is in equilibrium (supply equals demand) but the skills both supplied and demanded are below what they could be (Green, 2016). The measure of skill deficit used in this paper attempts to detect the extent to which the skills of individual workers have space to grow in their jobs; thus, skills deficits are derived as the difference between the level of skills needed by an employee to do his or her job as well as possible (equal to a score of 100) and his or her own assessed skill level relative to that benchmark.

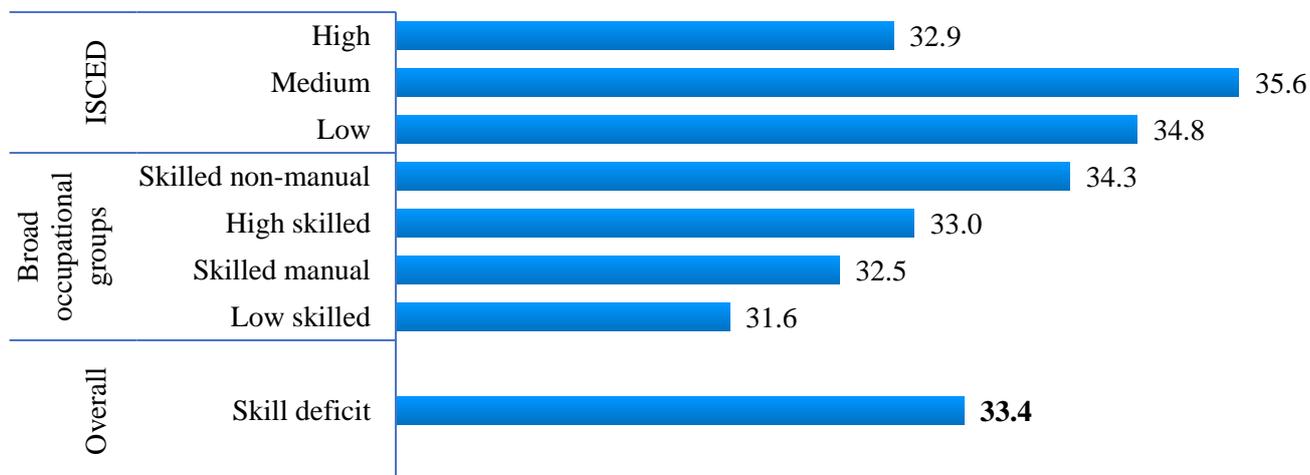
To assess the extent to which the level of skills of employees have room to be further developed, the survey asked a novel question: "How would you rate your own level of skills?" with a scale of 0 to 100, where 0 means you need to develop all of your skills and 100 means you have all the skills you need. Respondents were asked to think about the level of skills needed to do their jobs as well as possible. They then rate their own level of skills; hence, skills deficit = 100 – the individual's assessed skill level.

A smaller skills deficit implies that workers' skills are relatively closer to being fully productive, while the opposite case indicates that employees have more room to develop their potential productivity in their jobs via continuing training or other forms of skills upgrading (Cedefop, 2015). According to the CSJ survey, the average employee who rated his or her skills at 67 on the 0-100 scale, therefore, has a skill deficit of 33, suggesting that the Cambodian workforce should be developed by about one-third if Cambodia wishes to reach the maximum productivity.

From Figure 2.22, the average skill deficit by the level of education revealed the highest average skill deficit (35.6%) at the medium level of education. Employees in skilled non-manual occupations, especially service and sales workers and clerical support workers, suffered the most from the skill deficit

(34.4%). Overall, among the total respondents, only 45.1% rated themselves between 70 and 80 on the scale, implying that they acknowledge that their skills need to be developed to some extent.

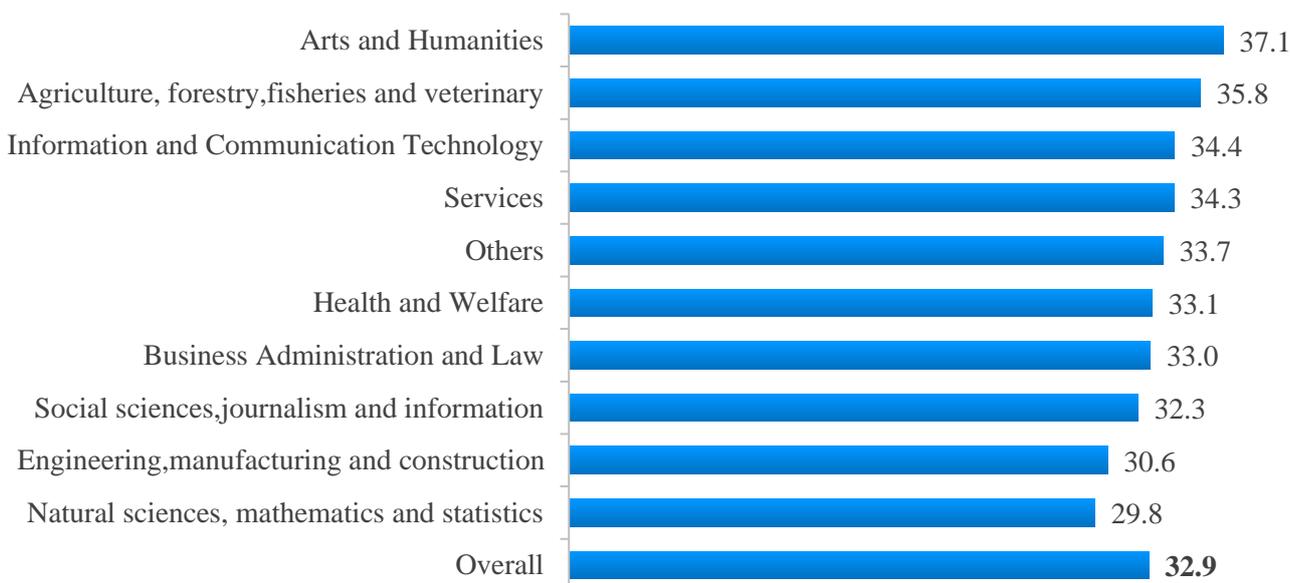
**Figure 2.22. Average skill deficit by education (ISCED level) and broad occupational groups**



n = 3,139

On average, adult workers who studied in the fields of arts and humanities; agriculture, forestry, fisheries, and veterinary medicine; information and communication technology; and services were more likely to face greater skill deficits. This reflected that their skills have scope to develop further to perform their current job well, and some of them may feel that they had surplus skills that were ineffectively utilized at present.

**Figure 2.23. Average skill deficit by field of study**



n = 2471

Furthermore, the survey further categorizes three prominent groups of employees to identify whether individuals' skills are matched to their jobs or not. First, "talent un nourished" refers to skills

that are lower than needed to do the job today or a higher skill deficit than average—the potential to grow skills on the job. “Talent in a dead end” refers to skills that are higher than needed to do the job today and have an equal or lower deficit than the average—limited potential to grow skills in the job. Finally, “talent at a standstill” refers to skills that are matched to those needed to do the job today and have an equal or lower skill deficit than the average—limited potential to grow skills in the job. The degree is measured by the extent to which an individual’s skills can be increased or matched to the job’s upper threshold of skill requirements.

Table 2.6 points out that the skill deficit of about 5.0% of the respondents lies above the average (33.4). For this group of workers, the unnourished talent, there is an additional score to improve their skills and productivity in their jobs. On the contrary, 12.1% of adult employees (total respondents) were in dead-end jobs, defined as jobs where their skills are not only ineffectively utilized but also do not require continuous improvement as they are closer to the optimal productivity threshold than the average employee. 44.5% of all respondents were in a standstill situation, meaning their skills were matched to what was needed to do the jobs and were close to the average skill deficit.

**Table 2.6. Worker groups by type of skill mismatch**

Skill Mismatches	Frequency	Average Skill Deficit
Talent unnourished	156	5.0%
Talent in dead end	379	12.1%
Talent in stand still	1,396	44.5%

#### **2.4.4. The Imperfect Relationship Between Qualifications and Skills Mismatches**

While workers can be perfectly matched in terms of qualifications, they may nevertheless become mismatched in their levels of skills, and vice versa. Some workers may fall into the category of “genuinely overqualified,” meaning individuals employed in jobs that require both lower qualifications and skills than their own. Some workers may be forced to accept a job below their qualification level because of a poorly performing labour market or because of other individuals' constraints. This group of workers tends to be locked in a low skill intensity equilibrium, given that their jobs are characterized by low skill content. Therefore, there is a necessary need for such things as career guidance and counselling for this group of workers.

By contrast, there are fewer concerns for workers who may have accepted jobs below their qualifications. Overqualified workers may not suffer from simultaneous underutilization of their competence and may enjoy a high level of job satisfaction, making them “apparently mismatched.” The CSJ data confirmed that overqualified workers (3.2%) have a surplus of skills relative to those needed for their jobs. However, 1.2% of overqualified workers were in jobs where their level of skills was lower than what was required.

**Table 2.7. Qualification versus skills mismatch**

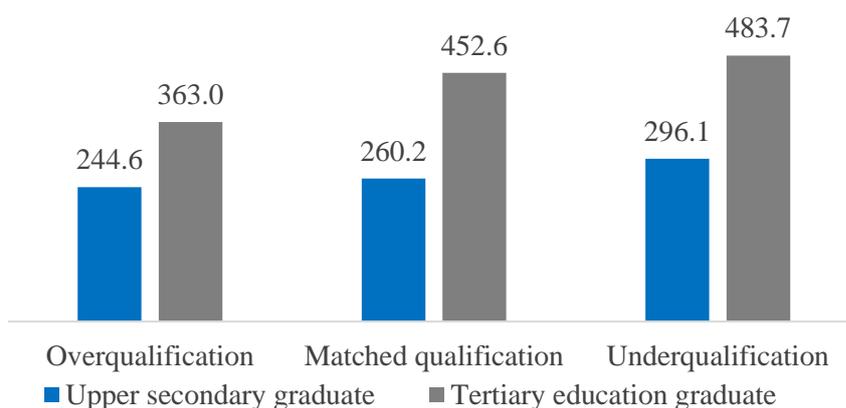
Mismatches	Percentage in total respondents		
	Overskilled	Matched	Underskilled
Overqualified	3.2%	8.3%	1.2%
Matched	13.9%	59.5%	6.7%
Underqualified	1.1%	5.0%	0.7%
<b>TOTAL</b>	<b>18.2%</b>	<b>72.7%</b>	<b>8.6%</b>

## 2.5. The Cost of Qualifications and Skills Mismatches

### 2.5.1. Impact of Qualification-Skill Mismatch on Labour Market Outcomes

Mismatches of qualifications and skills cause individuals significant economic and social costs. From the following figure (Figure 2.24), overqualified workers earned less than matched and underqualified workers. When compared to workers with the same level of tertiary education, underqualified workers tend to enjoy the highest monthly earnings, and they can earn a higher wage of UD\$ 31 compared to the matched group. On the other hand, overqualified workers earned the least per month compared to other groups.

**Figure 2.24. Impact of qualification mismatch on gross monthly earnings (US\$)**



In addition, employees who had a perfect match of both qualifications and skills enjoyed the best labour market outcomes relative to other mismatched population groups. As shown in Table 2.9, this group of employees can earn between US\$409.6 and US\$438.0 per month on average. In general, those who have matching qualifications can earn more than those whose qualifications are higher or lower. Furthermore, employees with high skills may expect a higher return from labour force participation.

**Table 2.8. Impact of qualification-skill mismatch on gross monthly earnings (US\$)**

Skill mismatch status	Average Wage (US\$)					
	Overqualification		Matched qualification		Underqualification	
	Lower	Upper	Lower	Upper	Lower	Upper
Overskilled	303.9	359.4	372.0	426.9	283.1	387.4
Matched skills	345.7	387.7	409.6	438.0	292.4	342.2
Underskilled	286.1	378.9	376.3	467.0	262.4	350.0

Table 2.9 points out that employees whose skills and qualifications were higher than what was required were associated with a lower level of job satisfaction compared to those who were overqualified yet underskilled. At the same time, respondents who had a perfect match of both skills and qualifications were mostly satisfied with their jobs.

**Table 2.9. Impact of qualification-skill mismatch on job satisfaction**

Skill mismatch status	Overqualification	Matched qualification	Underqualification	Total
Overskilled	72.6%	78.3%	89.1%	77.6%
Matched skills	81.7%	89.3%	80.1%	86.7%
Underskilled	86.0%	80.0%	87.8%	82.7%
<b>Total</b>	<b>79.6%</b>	<b>86.7%</b>	<b>82.4%</b>	<b>84.5%</b>

*Note: The scales of job satisfaction us measured on a 1 to 5, where 1 = not at all and 5 = very satisfied*

Moreover, adult employees who were in the matched group, both in skills and qualification, did not worry much about their job loss in the next year, while overqualified workers with skill mismatches ranked their insecurity higher than other groups, the matched group (Table 2.10).

**Table 2.10. Impact of qualification-skill mismatch on job insecurity**

Skill mismatch status	Overqualification	Matched qualification	Underqualification	Total
Overskilled	4.8%	4.3%	1.6%	4.2%
Matched skills	3.0%	3.2%	5.9%	3.5%
Underskilled	10.5%	5.5%	6.1%	6.6%
<b>Total</b>	<b>4.4%</b>	<b>3.6%</b>	<b>5.2%</b>	<b>4.0%</b>

*Note: The scales of job insecurity is measured on a 0 to 10, where 0 = very unlikely and 10 = very likely*

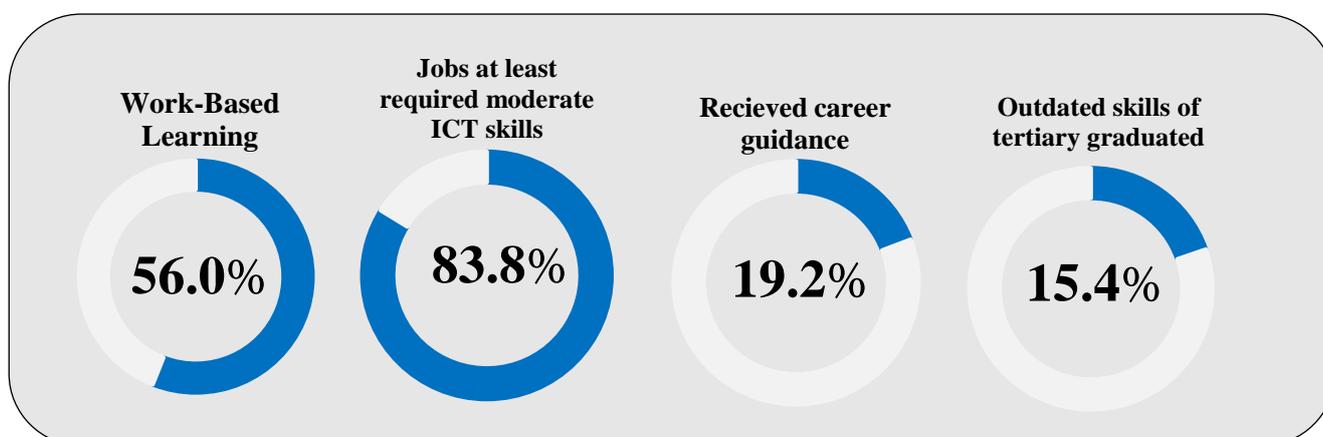
Furthermore, respondents employed in jobs demanding higher qualifications and skills than what they possess were significantly more likely to have greater levels of skills obsolescence, while respondents whose qualifications and skills were perfectly matched had a lower level of skills obsolescence. Of the total respondents, the employees who were underskilled and overqualified are more likely to have the greatest skills become obsolete (17.5%) in the next five years.

**Table 2.11. Impact of qualification-skill mismatch on skills obsolete**

Skill mismatch status	Overqualification	Matched qualification	Underqualification	Total
Overskilled	16.1%	11.2%	7.8%	12.4%
Matched skills	17.2%	12.9%	13.2%	13.8%
Underskilled	17.5%	15.8%	10.2%	15.1%
<b>Total</b>	<b>17.2%</b>	<b>12.9%</b>	<b>12.2%</b>	<b>13.8%</b>

*Note: The scales of skill obsolescence is measured on a 0 to 10, where 0 = very unlikely and 10 = very likely*

## Key Snapshots



### 3.1. Skills Need

#### 3.1.1. Importance of Key Competent

As mentioned in the above section, 8.6% of interviewed employees entered their current jobs with fewer skills than needed. The proportion varies depending on their previous labour market status, with those who were not employed and not in education or training before they started their current jobs facing a high incidence of underskilling (18.4%), followed by those who were in education and training (9.1%). In contrast, employees who had some sort of work-related experience or work-based learning had a lower percentage of underskilling. And a large majority of respondents who claimed to have previous work experience reported that their skills matched the demand for their jobs (53.9%).

Of all underskilled employees, the share of respondents who were previously employed in another institution and who described their skills as lower than what was required by their current jobs is the highest (68.0%), followed by those who were previously in education and training (20.7%). The rest reported a gap between their skills and the skills required by their jobs of 7.9% and 0.4% (Figure A.1 in Appendix A).

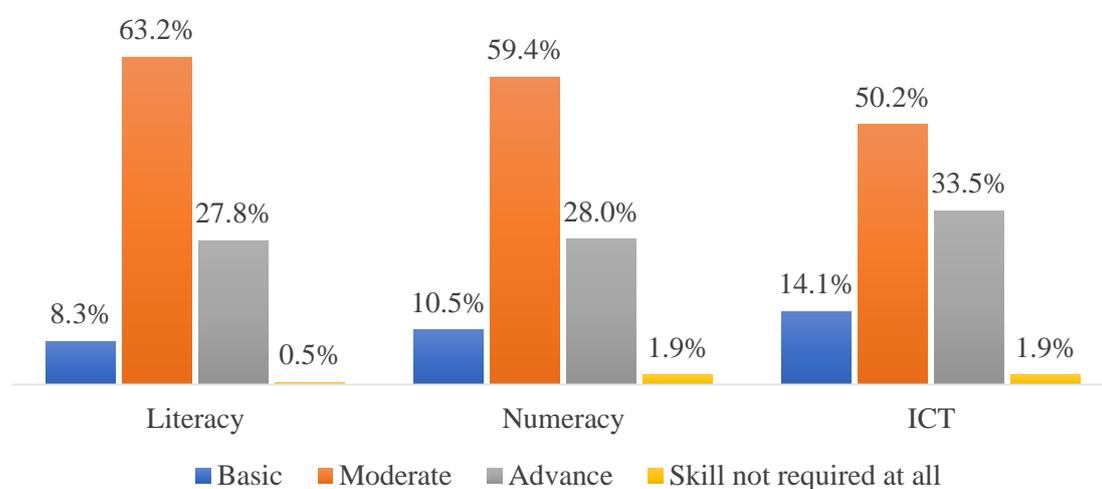
To understand the skill needs, the survey also investigated the type, level, and importance of skills required to perform the work demanded by employers. The individuals were asked to report the level of fundamental skills and rank the importance of transversal and technical skills needed for their jobs using the specific meaning of those skills, which is defined in the following table.

**Table 3.1. Definition of skills**

Fundamental skills	
<i>Basic literacy</i>	Reading manuals, procedures, letters or memos.
<i>Moderate literacy</i>	Writing short documents such as short reports, memos, letter, procedure or instruction.

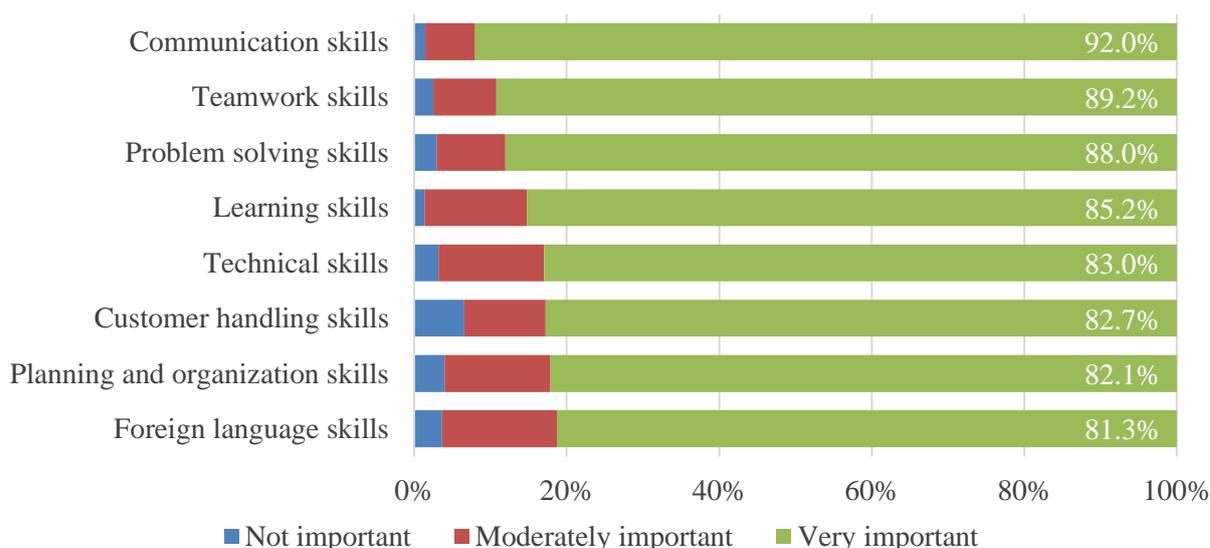
<b>Advanced literacy</b>	Writing long documents such as long reports, handbooks, articles, manuals or books.
<b>Basic numeracy</b>	Calculations using decimals, percentages or fractions, understanding tables and graphs.
<b>Moderate numeracy</b>	Calculation using simple mathematical and statistics such as mean, median, ratio, distribution; and able to understand and interpret table and graphs.
<b>Advanced numeracy</b>	Calculations using advanced mathematical or statistical procedures.
<b>Basic ICT</b>	Using a PC, tablet or mobile device for email, internet browsing.
<b>Moderate ICT</b>	Word-processing, using or creating documents and/or spreadsheets.
<b>Advanced ICT</b>	Developing software, applications or programming; use computer syntax or statistical analysis packages.
<b>Technical and transversal skills</b>	
<b>Technical skills</b>	Specialist knowledge needed to perform job duties; knowledge of particular products or services; ability of operating specialized technical equipment.
<b>Communication skills</b>	Sharing information with co-workers/clients; teaching and instructing people; making speeches or presentations.
<b>Teamwork skills</b>	Cooperating and interacting with co- workers; dealing and negotiating with people.
<b>Customer handling skills</b>	Selling a product/service; dealing with people; counselling, advising or caring for customers or clients.
<b>Problem solving skills</b>	Thinking of solutions to problems; spotting and working out the cause of problems.
<b>Learning skills</b>	Learning and applying new methods and techniques in your job; adapting to new technology, equipment or materials; engaging in own learning.
<b>Planning and organization skills</b>	Setting up plans and managing duties according to plans; planning the activities of others; delegating tasks; organizing own or other's work time.
<b>Foreign language skills</b>	Using a language other than your mother tongue to perform job duties.

**Figure 3.1. Level of fundamental skills required for the job**



As can be seen from Figure 3.1, more than half of respondents were more likely to report that their jobs required a moderate level of literacy, numeracy, and ICT skills. In addition to the demand for fundamental skills, on average, more than three out of four interviewed employees said that workable skills are very important for doing their jobs. Specifically, communication skills (92%) were considered to be very important for performing jobs by most of the respondents, closely followed by teamwork skills (89%) and problem-solving skills (88%; Figure 3.2). The employers also reflected the same that, among job seekers, customer handling skills, communication skills, teamwork skills, and problem-solving skills were among the top skills that were lacking (NEA, 2018). Even though soft-skills or workable skills can be obtained from working experiences, it is also important for education and training institutions to equip students with some knowledge while they are in class.

**Figure 3.2. Importance of skills for jobs**



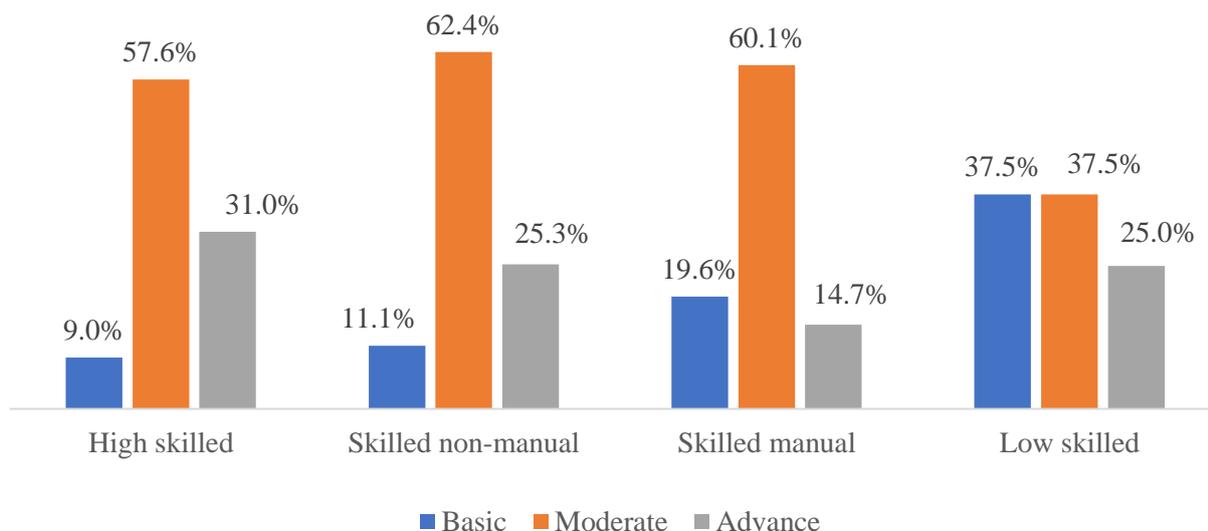
*Note: The scales of the level importance of skills for doing the jobs are measured on a 0 to 10, where 0 = Not important, 5 = moderately important, 10 = very important*

### 3.1.2. STEM Skills

The term "STEM" graduates used in this report is defined as retaining tertiary education graduates whose field of study is either life science, computer science, physical science, mathematics and statistics, or engineering. It is worth noting that STEM skills refer to skills expected to be held by STEM graduates.

Numeracy is one of the STEM skills, and the majority of the respondents (59.2%) stated that they need moderate numeracy skills to be able to perform their jobs. It confirmed that the employees need to be able to carry out calculations using simple math and statistics such as mean, median, ratio, and distribution, and to understand and interpret tables and graphs as part of their job duties. Breaking down by broad occupation groups, high-skilled employees who need to be competent enough to perform their tasks with moderate numeracy skills account for 57.6%; the individuals whose occupations were classified as skilled non-manual employees, skilled manual employees, and low-skilled employees represent 62.4%, 60.1%, and 37.5%, respectively (Figure 3.3).

**Figure 3.3. Numeracy skill need by broad occupational groups**



Among STEM graduates, 91.4% of them needed to possess at least moderate numeracy skills to perform their jobs (52.3% at the moderate level and 39.1% at the advanced level). Interestingly, more than three in four STEM graduates were employed as highly skilled employees; 92.6% required at least a moderate level of such skill (Table A.5 in Appendix A).

According to the survey responses, 75.3% of STEM graduates identified a match between their skills and jobs. At the same time, STEM graduates (75.1%) were more likely to be employed in jobs that matched their level of qualifications. Despite a large proportion of matches between jobs and qualifications, only 4.5% of respondents reported that they had all of the skills needed to perform their jobs. Among those who reported having a skill deficit, 67.5% assessed their skills below the average deficit, while 32.5% assessed their skills above the average (Table A.6 in Appendix A). It suggests that, although a large proportion of STEM graduates face the challenge of a skills deficit, the skills of the majority thereof are relatively closer to being fully productive. STEM graduates are more likely to be absorbed by the construction and other manufacturing industries. Figure 3.4 below shows that graduates whose studies involved STEM subjects distributed significantly to the industries of construction and other manufacturing, which accounted for 70% and 50% of respondents with tertiary degrees interviewed in the industries, respectively.

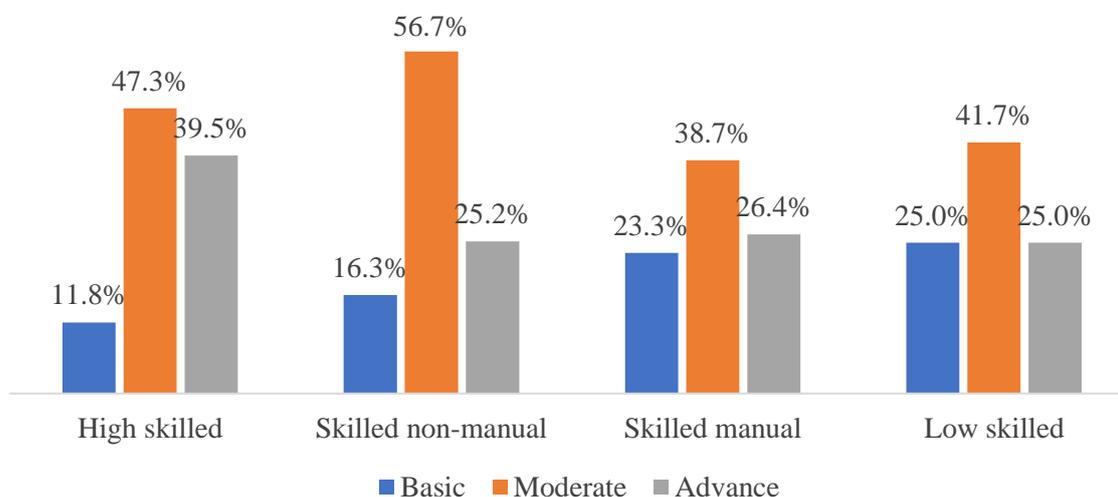
**Figure 3.4. Shares of STEM Graduates by Industries**



### 3.1.3. Digital Skills

A total of 83.8% of respondents reported that their jobs required them to have at least a moderate level of ICT skill—50.2% had a moderate level and 33.5% had an advanced level. There are some interesting within-occupation similarities, where the demand for moderate ICT skills covers the highest proportion. At the same time, the proportion of demand for advanced ICT skills was found mainly in high-skilled occupations (39.5%), followed by skilled manual occupations (26.4%), skilled non-manual occupations (25.3%), and low-skilled occupations (25.0%). Digital skills are the foundations that can provide new ways of working while technological advancement continues to enter the labour market. Reflecting on this report, the Cambodian labour market is also in the process of transforming and absorbing new technology, and the economist believed that technology has the potential to create more, better, and more inclusive jobs to some extent.

**Figure 3.5. ICT/Digital skill needs by broad occupation groups**

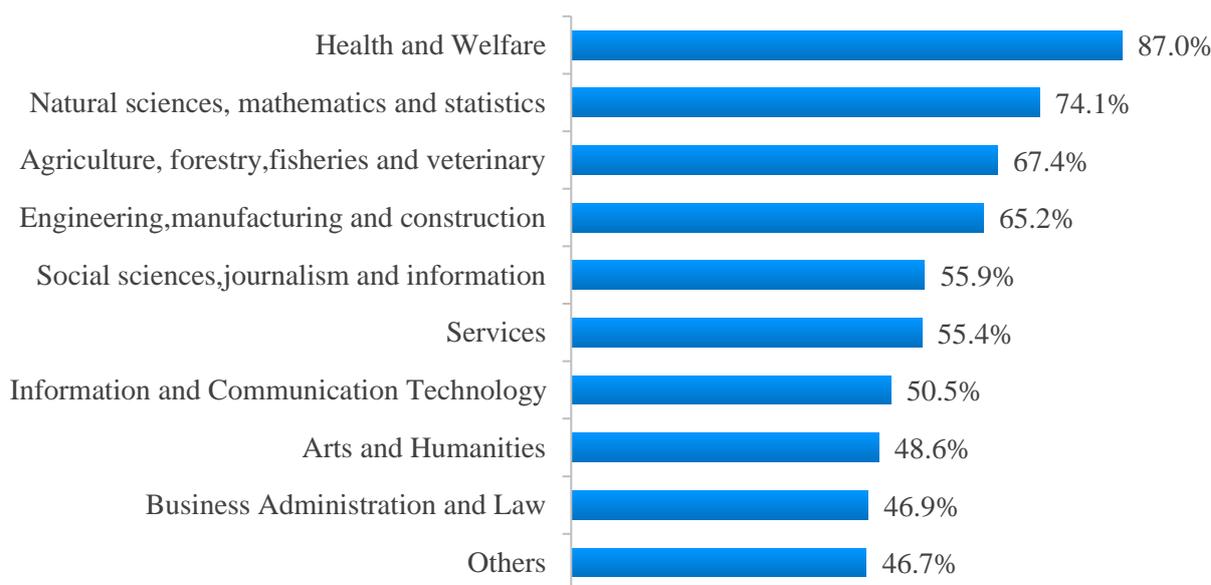


### 3.2. Promoting All Forms of Work-Based Learning (WBL)

Coordinate and collaborate between training institutions and industries to strengthen the quality and implementation of apprenticeships, field visits, internships, and on-the-job training. This is one of the key elements to promoting public-private partnerships and aggregating resources from stakeholders to support the sustainable development of TVET (MLVT, 2017). When looking at the findings from our survey, over half (56.1%) of respondents who graduated from the technical and vocational program (C1, C2, and C3) and tertiary education claimed to have involved some learning at the workplace by doing an internship during their course of study: 75.5% were required by the school and 24.5% were not required by the school. As suggested by the data, the internship is commonly a requirement set by education and training institutions rather than something students themselves volunteer to fulfil during their course of study.

The incidence of respondents experiencing work-based learning (WBL) varies by field of study. In particular, the individuals who studied in the field of health and welfare encountered the highest proportion (87.0%), followed by natural science, mathematics, and statistics (74.1%), agriculture, forestry, fisheries, and veterinary medicine (67.4%), and engineering, manufacturing, and construction (65.2%). The proportion of those who studied in other majors is less than 60.0% (Figure 3.6).

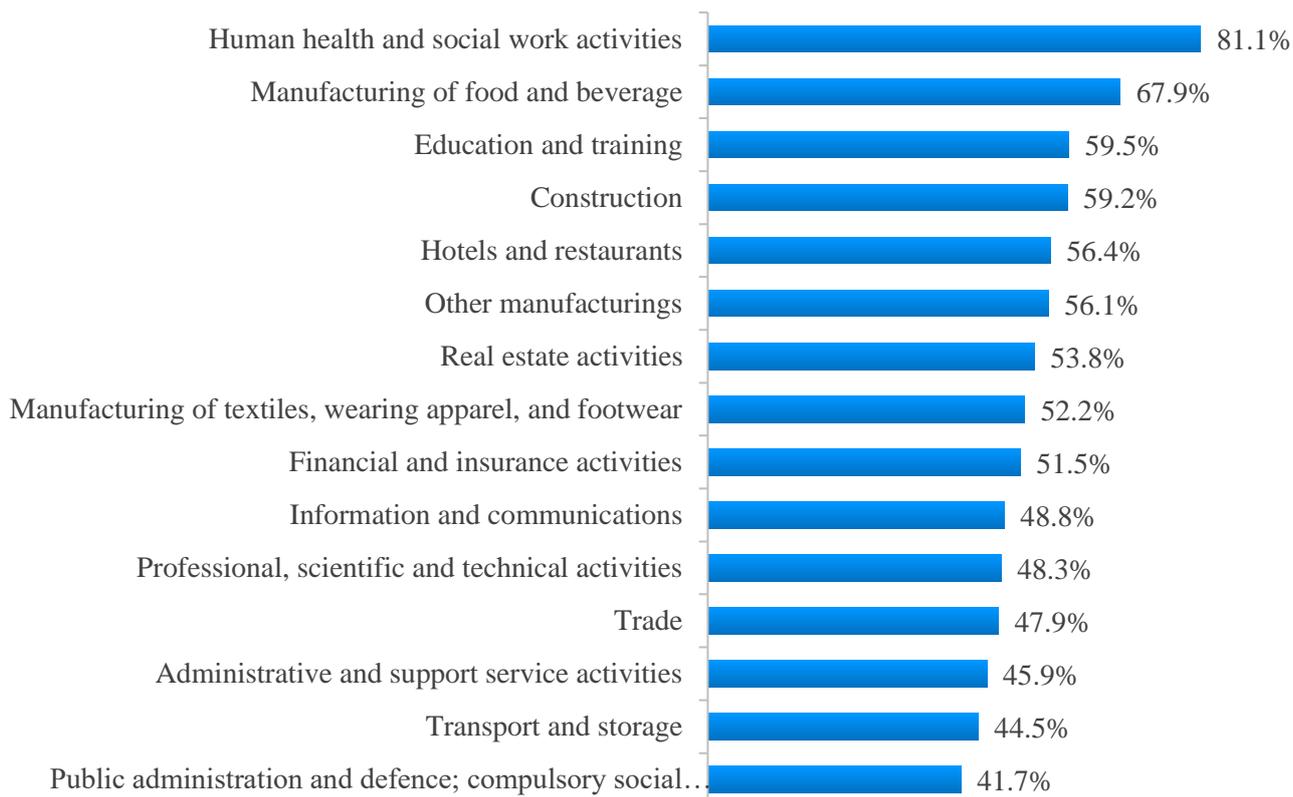
**Figure 3.6. Work-based learning by field of study**



*n=2,418*

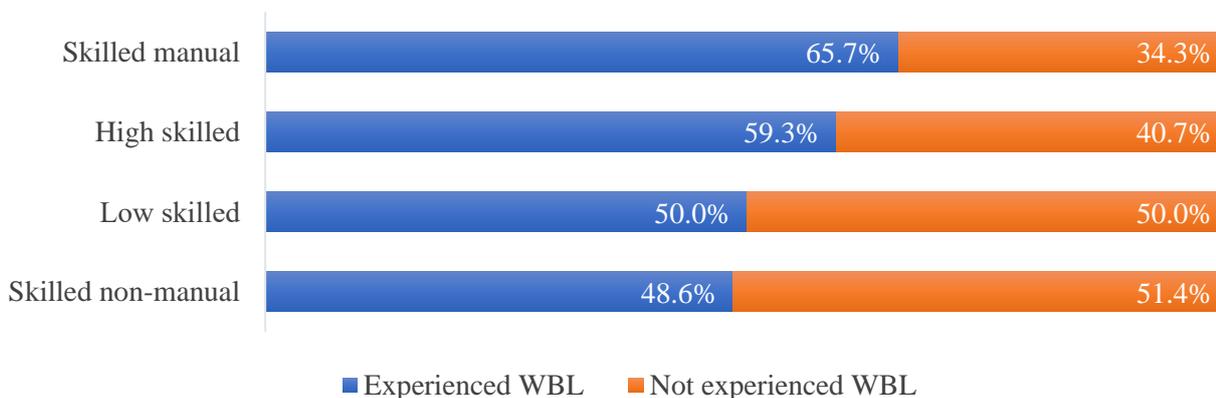
Breaking down by industry, the highest incidence of respondents who encountered work-based learning at the workplace was particularly found among the individuals who worked in human health and social work activities (81%). At the same time, the industry of public administration and defence (complimentary social security, 42%) was the least likely to obtain a graduate who experienced work-based learning in its total employee population (Figure 3.7).

**Figure 3.7. Work-based learning by industry**



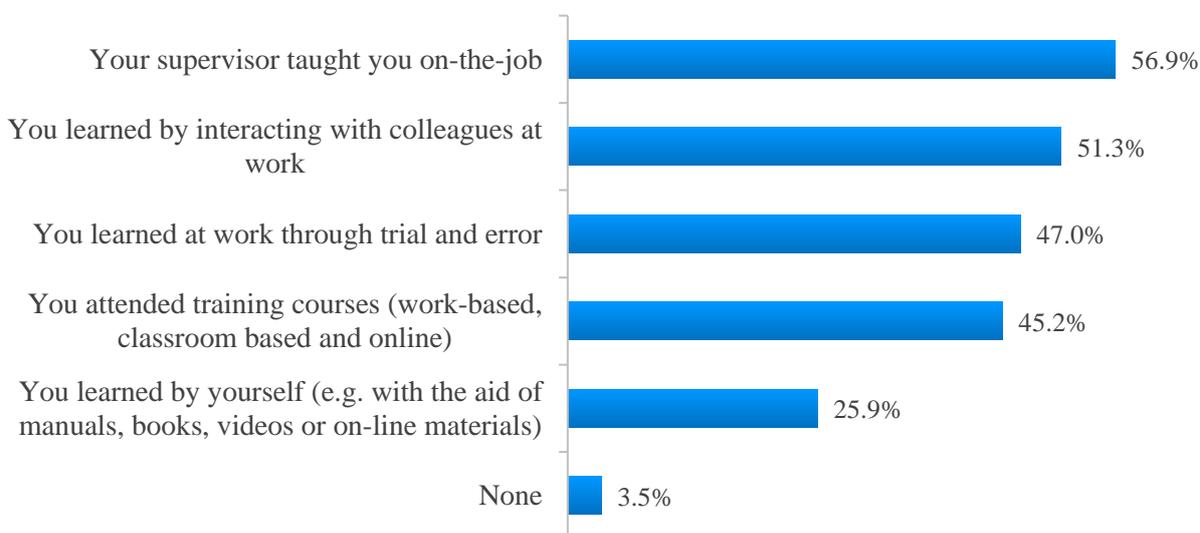
Of the total respondents who experienced work-based learning, it was frequently seen among highly skilled and skilled non-manual employees, which accounted for 66.5% and 28.0%, respectively. Meanwhile, the individuals who worked in skilled manual and low-skilled occupations were less likely to engage in work-based learning. When looking at the ratio of the respondents with a work-based learning experience to the total respondents holding a tertiary degree and technical and vocational certificate (C1, C2, and C3) as their highest educational attainment by broad occupations, Figure 3.8 below indicates that 65.7% of skilled manual employees claimed to have work-based learning or practical experience before they started working in their occupations, followed by the individuals whose jobs associate with high-skilled (59.3%), low-skilled (50.0%), and skilled non-manual (48.6%) occupations.

**Figure 3.8. Work-based learning by broad occupational groups**



It is also important to capture how employees develop their skills in their jobs. The methods commonly used by the interviewed individuals to improve or acquire new skills on the job when they started working for their current jobs were “taught on-the-job by supervisors” and “learned by interacting with colleagues at work” (56.9% and 51.3%, respectively), while other methods were mentioned by less than half of the respondents (Figure 3.9). However, only 3.5% of the individuals reported that they had never improved or acquired new skills since they started their current job. It is worthy noting that "formal training," which refers to attending a training course (work-based, classroom-based, or online), was the least likely to be used among the respondents. On the employer side, only 16.3% of employers had funds or arranged some form of training for their employees; 53.4% thereof had only a training plan, and 28.0% had only a training budget plan, while only 18.6% had both a training and budget plan for training needed in the coming year (NEA, 2018).

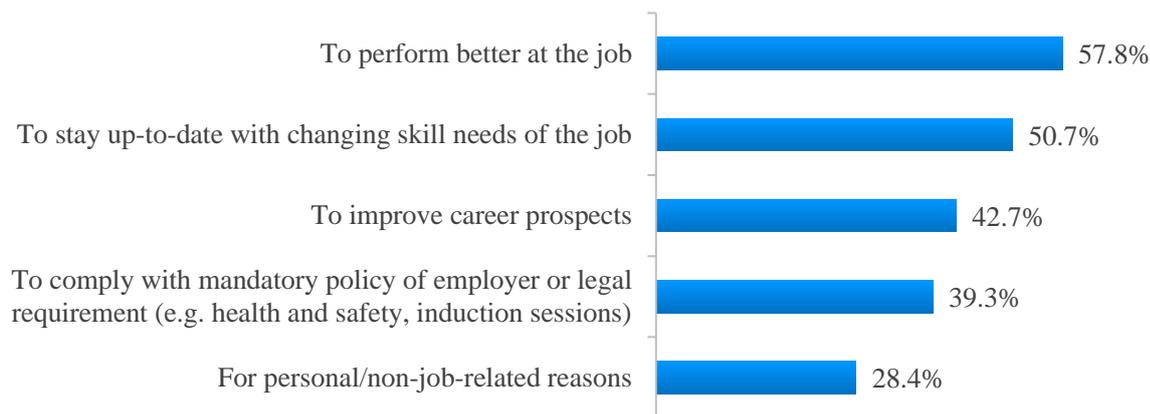
**Figure 3.9. Method of improving/acquiring new skills in jobs**



n = 3,080

Looking at the reason for receiving training, more than half of respondents claimed to perform better at the job (57.8%) as well as to stay up-to-date with changing skill needs of the job (50.7%), followed by those who engaged in training in order to improve career prospects and to comply with the mandatory policy of the employer or legal requirement (e.g., health and safety, induction sessions), with rates of 42.7% and 39.3%, respectively. Meanwhile, the reasons related to “personal or non-job-related reasons” were the least likely to be reported by the respondents (38.7%).

**Figure 3.10. Reasons of receiving training**



n=2,955

### 3.3. Career Guidance and Counselling Experiences

Career guidance and counselling are crucial for young people to find the right career path for their career development. In Cambodia, there is no formal career guidance and counselling service across the country, yet it can be found through different channels or institutions that initiate such programs in different forms with different target groups. In the Education Strategic Plan 2019–2023 of the Ministry of Education, Youth, and Sport, a career counselling and orientation program is provided to students in the general education program. This helps prevent students from dropping out of school. On the other side, when entering the labour market, jobseekers should be aware and informed of the labour market situation. In this regard, the National Employment Agency (NEA), which plays a vital role in providing public employment services and labour market information, also originated the career guidance and counselling service to support young people, especially jobseekers, as well as the public, who aim to find suitable employment and make the best decision for their career path. As a result, this section attempts to reveal the respondents' overall experience with the use of guidance and counselling services.

According to the survey results, the incidence of workers receiving a career guidance service prior to applying for their first job accounts for 19.2% of the total respondents. This means that wider access to career assistance services in the community is still weaker, so it is crucial that the public employment office put more effort into strengthening the organization and delivery of career information, guidance, and counselling to a greater extent. However, this is a great start and recognition of the community's career guidance and counselling services. As shown in Figure 3.11 below, the incidence of employees who received career guidance was most common in skilled non-manual occupations, while low-skilled occupations were least common, accounting for 21.9% and 12.5%, respectively. Skilled manual and high-skilled workers had comparable proportions of 18.1% and 17.8%, respectively. Skilled manual and low-skilled workers normally have a low education level, and career guidance services should also be made available to this group as they could be able to explore their best career options for the growth of their future careers and personal growth, entailing satisfactory labour market outcomes.

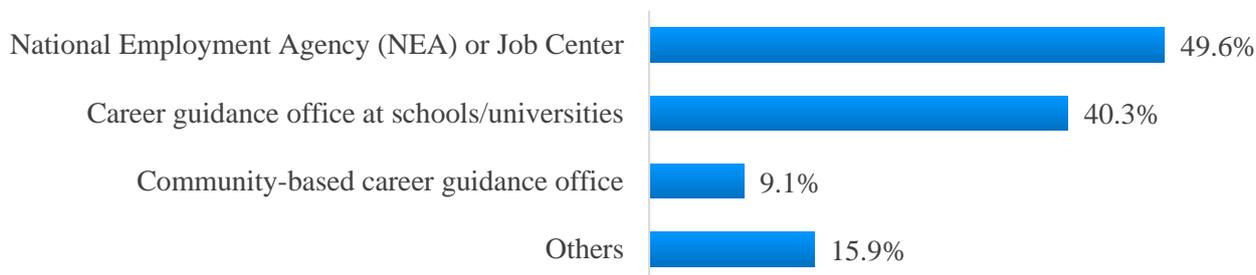
**Figure 3.11. Incidence of workers received a career guidance service prior to applying to the first job by broad occupational groups**



n (total respondents) = 3,139

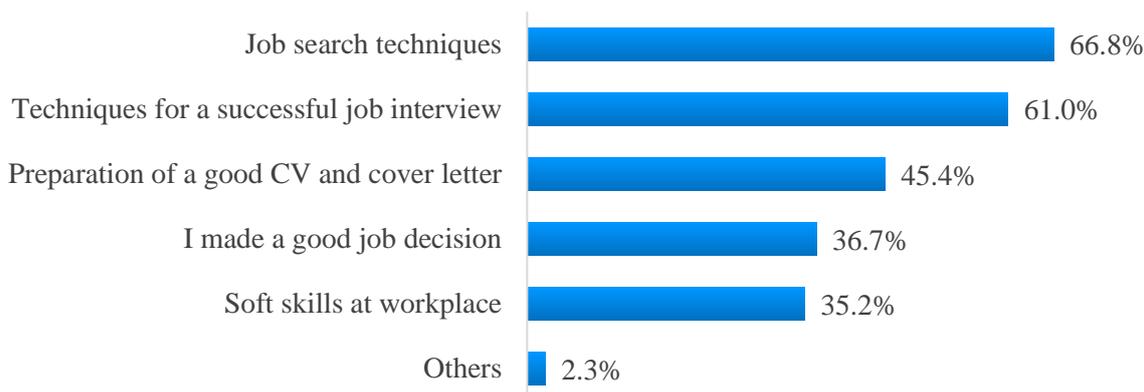
Although there are no formal career guidance services, there are several practices in individual organizations, including public, private, school-based, and even community-based offices, that provide these services. The CSJ data showed that almost half of the employees who received guidance services preferred public employment services from the NEA or Job Center (49.6%), more than one-third from the career guidance office at their school or university (40.3%), and about 9.1% from the community-based career guidance office. This poses a significant role for NEA in providing career guidance. At the same time, student career counselling offices at schools or universities also play a vital role in supporting students' entry into the labour market.

**Figure 3.12. Types of career guidance agency**



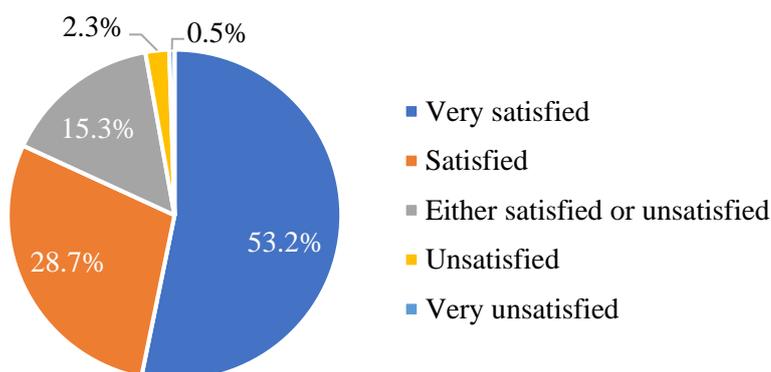
The career guidance service helps jobseekers with career advice, assists in job searches, provides pre-employment training, and so on. The CSJ survey revealed that almost 70% of respondents came to career guidance services for job search techniques and 61% for techniques for a successful job interview. This suggests that jobseekers, whether students or first-time jobseekers are still struggling with how to search for a job or with job interviews, leading them to the career guidance experts to guide them for better preparation. Moreover, normal cases for first-time jobseekers include writing a good CV and cover letter. The survey proved that approximately 45% of the respondents came to the services for the technique of how to prepare a good curriculum vitae and cover letter, implying that young people still find it hard to prepare an attractive CV and cover letter.

**Figure 3.13. Types of services received**



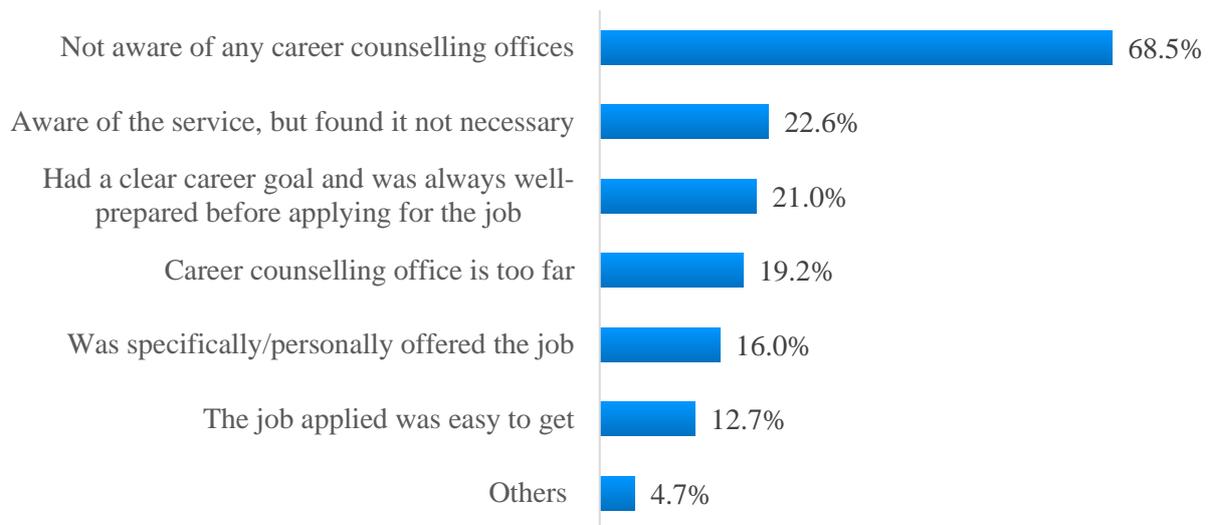
Although, to some extent, the career guidance was not widely available to jobseekers, overall, the majority of those who received career guidance claimed to be very satisfied (53.2% said they were very satisfied, and 28.7% said they were satisfied) with the services received. Thus, it is important for career guidance and counselling services to take more actions and put more efforts into providing the services to reach more job seekers in both the capital city and urban and rural areas.

**Figure 3.14. Career guidance service satisfaction**



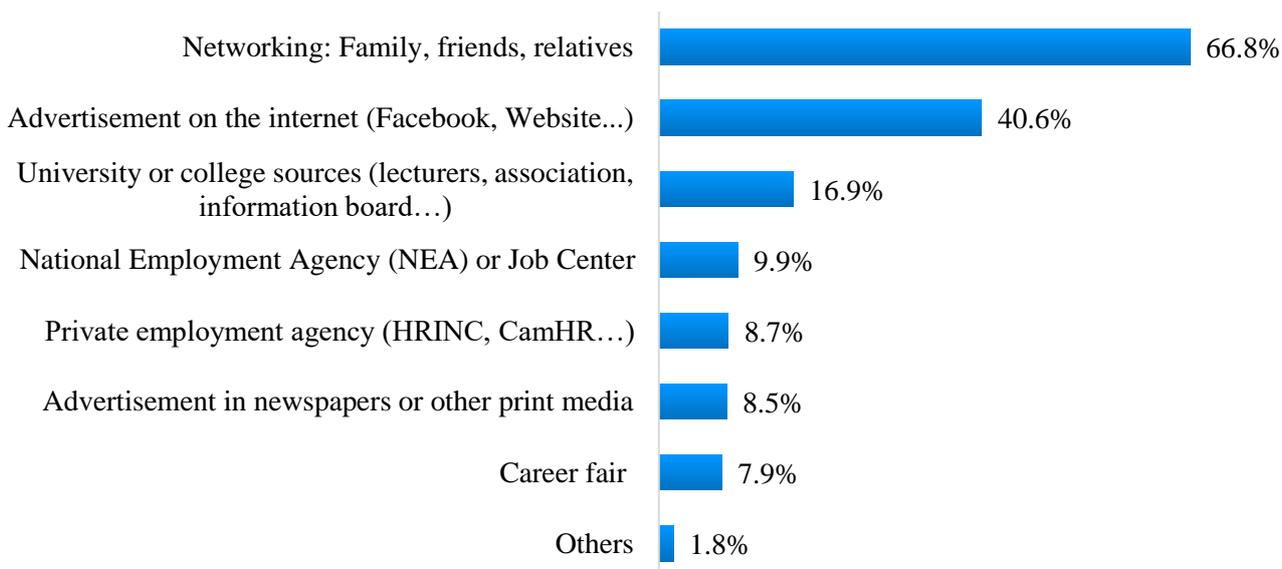
On the flip side, the survey tries to understand why the majority of respondents did not receive career guidance and counselling services. The survey highlighted that there were various reasons that job seekers could not receive any career guidance services, such as not being aware of any career counselling offices and their services (86.5%), while some respondents claimed that they found it not necessary, which is accounted for by 22.6%. Another reason that the career guidance services at the career counselling office were underrepresented was 19.2%. This reflects the fact that more efforts should be made to raise awareness of career guidance services among job seekers near and far.

**Figure 3.15. Reasons for not receiving any career guidance services**



Furthermore, it is also interesting to see through which channel the respondents would look for a job, so the CSJ survey also assessed the question of job search. The method of searching for a job based on the survey results shows that the most used job searching method was networking, followed by family, friends, and relatives. Networking is very important because some job opportunities are not advertised but are speculated about through the internet, such as on Facebook and other websites. Additionally, advertisements on the internet, such as on Facebook, as well as university or college sources (lecturers, associations, information boards), which accounted for 40.6% and 16.9% of total respondents, respectively, indicate that Facebook has become popular among young people in recent years because it allows them to communicate quickly and easily. In this regard, NEA should boost its Facebook page to a greater extent to disseminate job openings and any upcoming events such as an employment forum, a weekly job interview, or soft skill training. The data also revealed that the respondents who used the NEA's or Job Center's channel account for 9.9%. This refers to the uses of NEA's job centers' services, whether job seekers walk-in indirectly into job centers or are contacted by job center officers. It was followed by private employment agencies such as HRINC and CamHR (8.7%) and advertisements in the newspaper or other print media (8.5%). Furthermore, the career fair is also effective among young employees, accounting for 7.9% of total respondents.

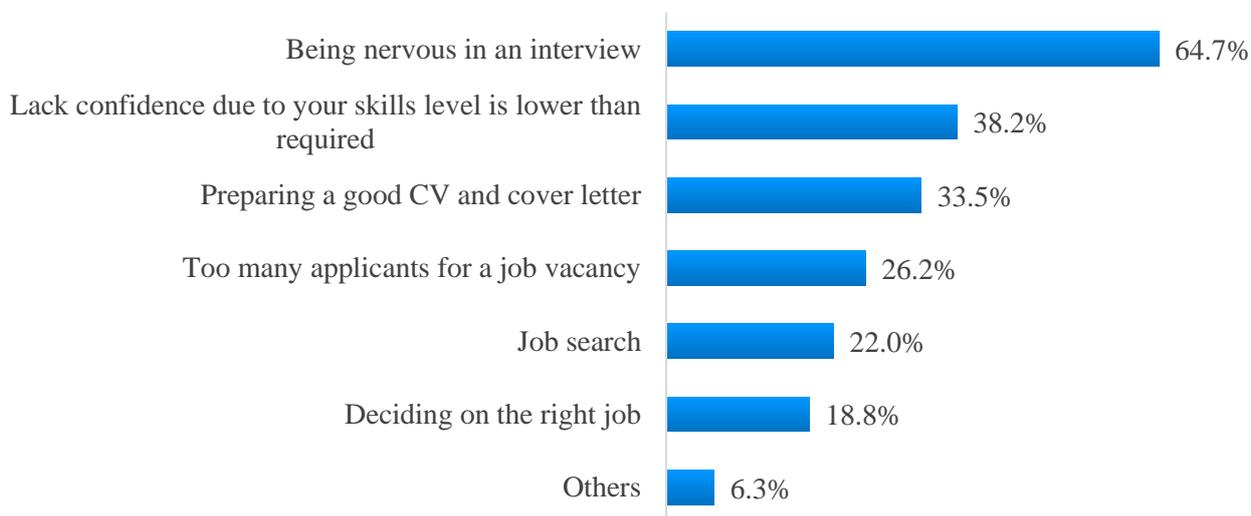
**Figure 3.16. Share of respondents reported their job search channel**



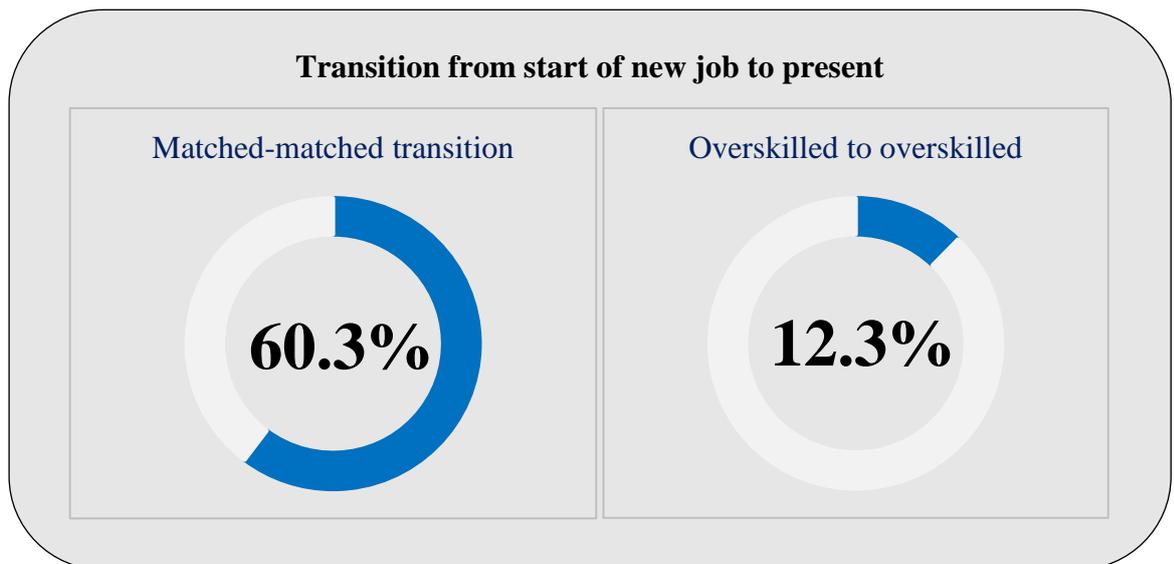
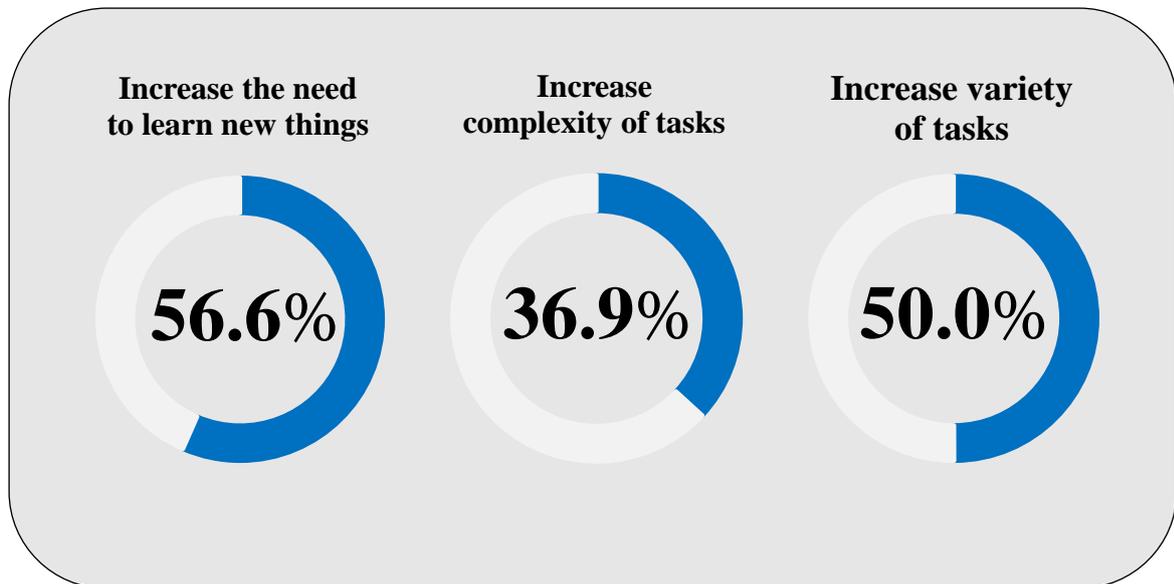
n = 3,139

One of the main challenges that job seekers mostly experience when applying for their first job is being nervous in an interview. The second challenge is a lack of confidence as a result of your lack of skills in comparison to what is required by the jobs. The third and fourth challenges were that they did not know how to prepare a good curriculum vitae (CV) and cover letter, and sometimes the companies required too many supporting documents or complicated applications to fill out.

**Figure 3.17. Challenges mostly experienced when applying for the first job**



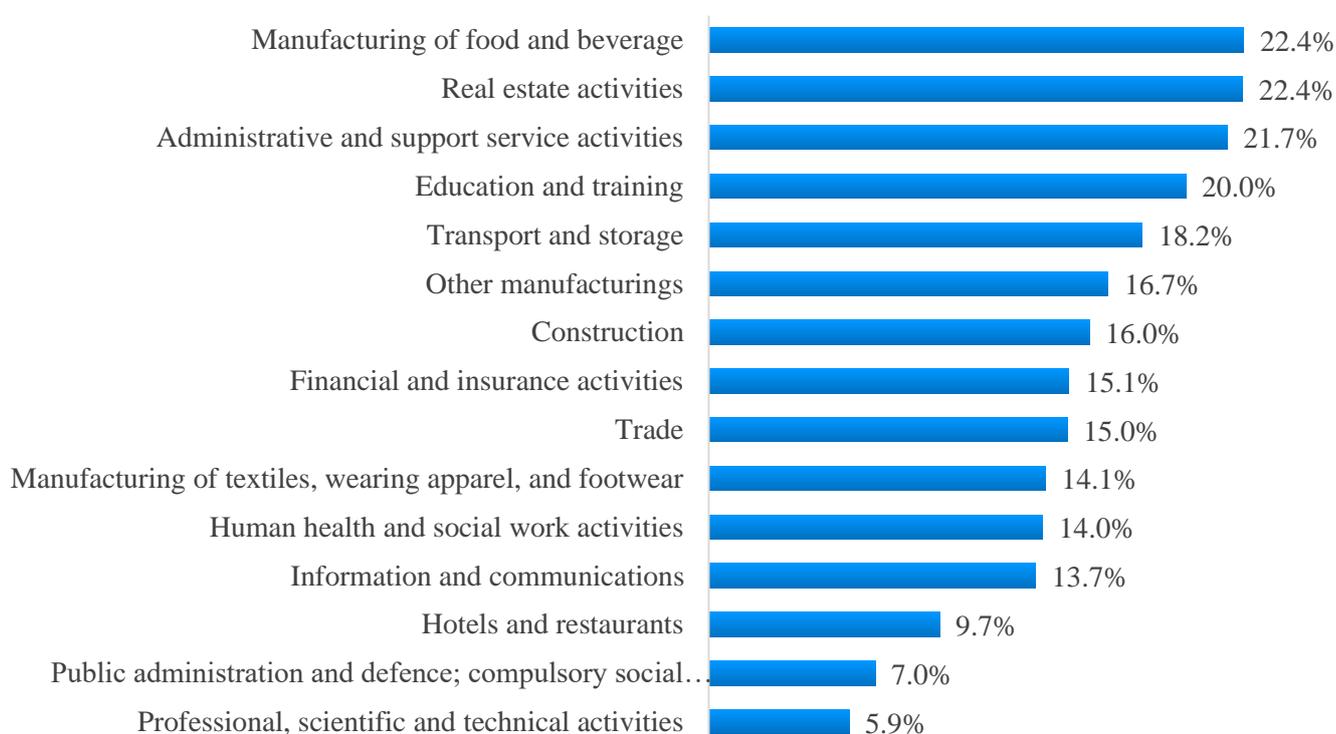
## Key Snapshots



## 4.1. Shifting Skills Need

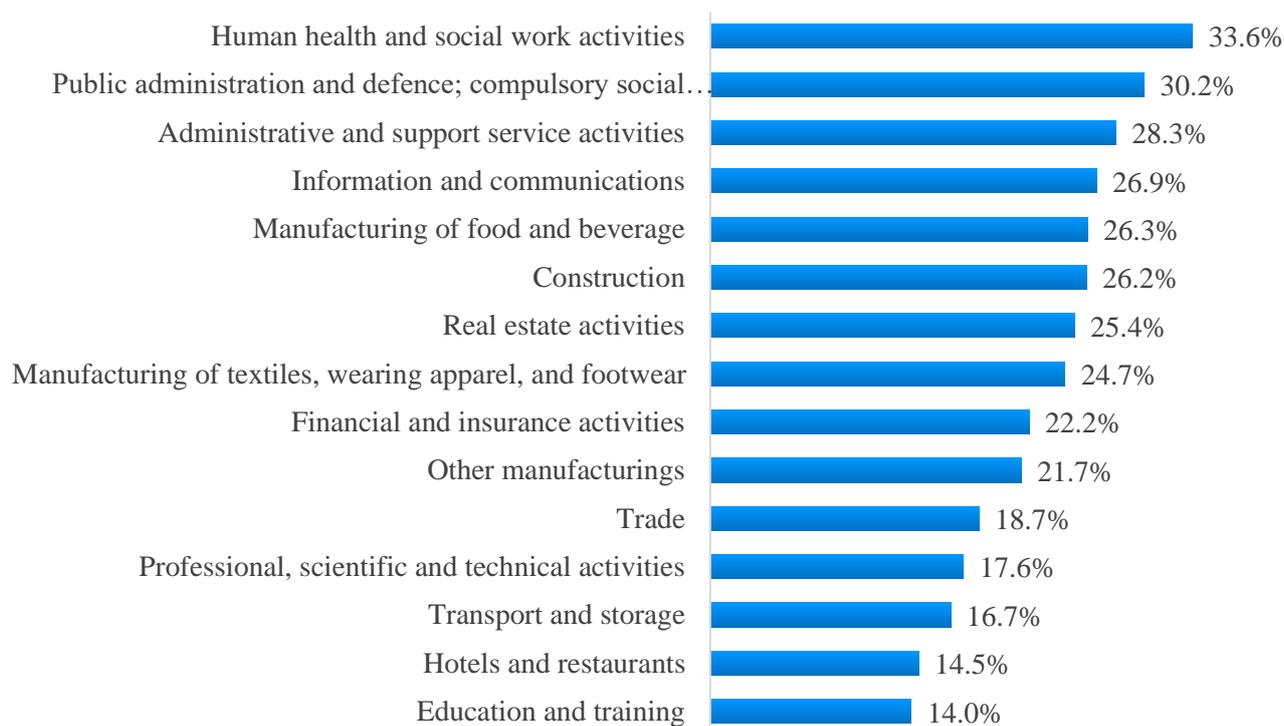
When looking at the employees with tertiary education overall, around 15.4% claimed that some of their skills will become outdated in the next five years. This proportion was particularly large in highly skilled occupations (62.0%). In terms of sectors, the percentage of future-outdated skills concentrated on those who were working within the manufacturing of food and beverage (22.4%), followed by real estate activities (22.4%), administrative and support service activities (21.7%), education and training (20.0%), and transport and storage (18.2%), as shown in Figure 4.1. Meanwhile, the industry of professional, scientific, and technical activities seems to have the lowest proportion of employees with tertiary qualifications (5.9%), suggesting that some of their skills will not be able to meet the demand of the labour market in the next five years.

**Figure 4.1. Share of employees with tertiary level education who think it is very likely that some of their skills will become outdated in the next five years (score  $\geq 6$ )**



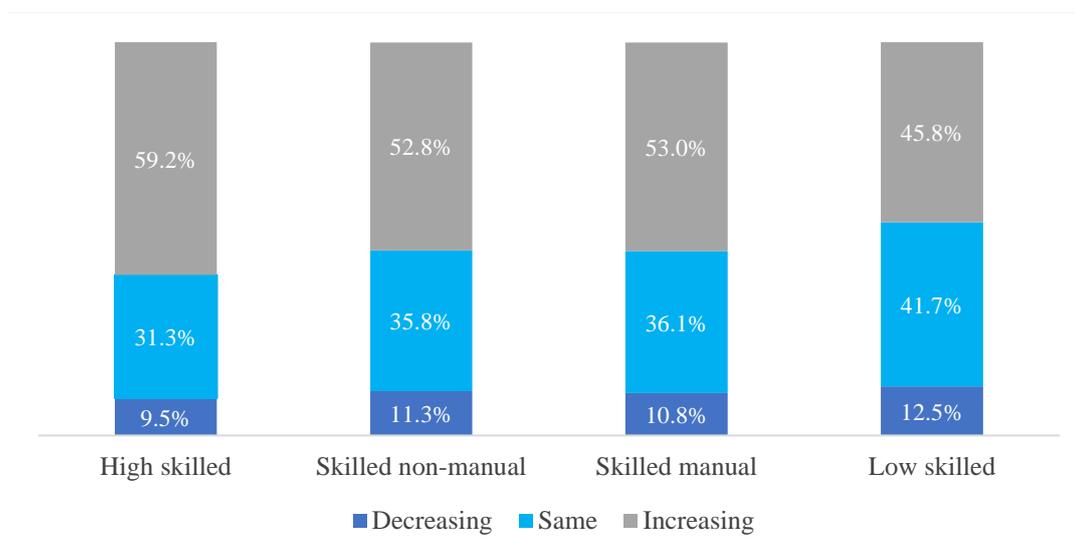
The survey showed a skill-need pattern in Cambodia. Figure 4.2 presents the percentage of the need to learn new things by industry. Human Health and Social Work Activities had the highest proportion of respondents (33.6%) reporting that the need to learn new things has increased since starting their job with the current employer. This was followed by public administration and defense: compulsory social security (30.2%), administrative and support service activities (28.3%). The education and training industry had the lowest share of respondents experiencing a rise in demand for learning new things at work (14.0%).

**Figure 4.2. Share of jobs with significant rise in the need to learn new things by industry (score >=8)**



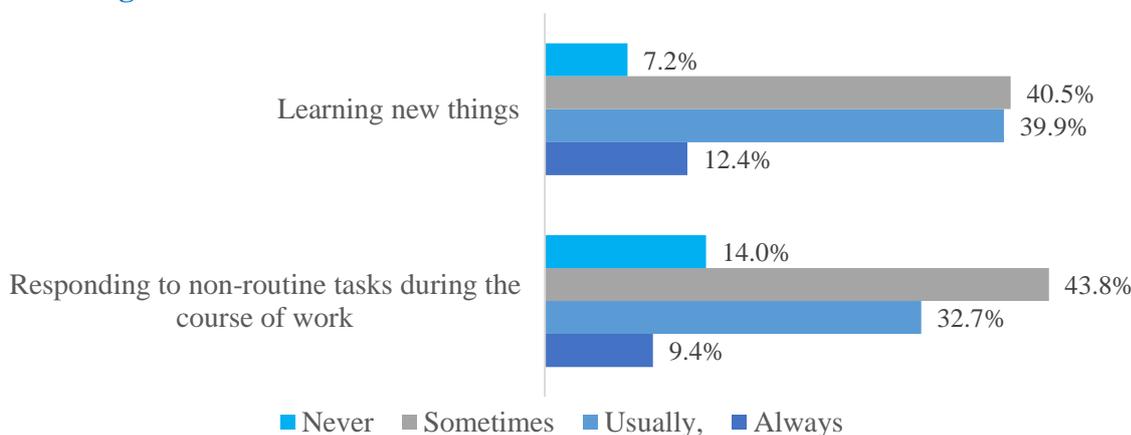
By occupation, more than 50% of respondents in skilled and highly skilled occupations reported an increase in the need to learn new things, as shown in Figure 4.3. On the other hand, nearly half of respondents (45.7%) in unskilled occupations experienced the same thing. A fair proportion of respondents in each category of occupation said that the extent to which continuous learning is required at their workplaces remains fixed: 31.3% for highly skilled, 35.8% for skilled non-manual workers, 36.1% for skilled manual workers, and 41.7% for unskilled. However, the need to learn new things also decreased, with the highest share reported amongst unskilled workers (12.5%), followed by skilled non-manual workers (11.3%), skilled manual workers (10.8%), and high-skilled workers (9.5%).

**Figure 4.3. The needs to learn new things by broad occupational groups**



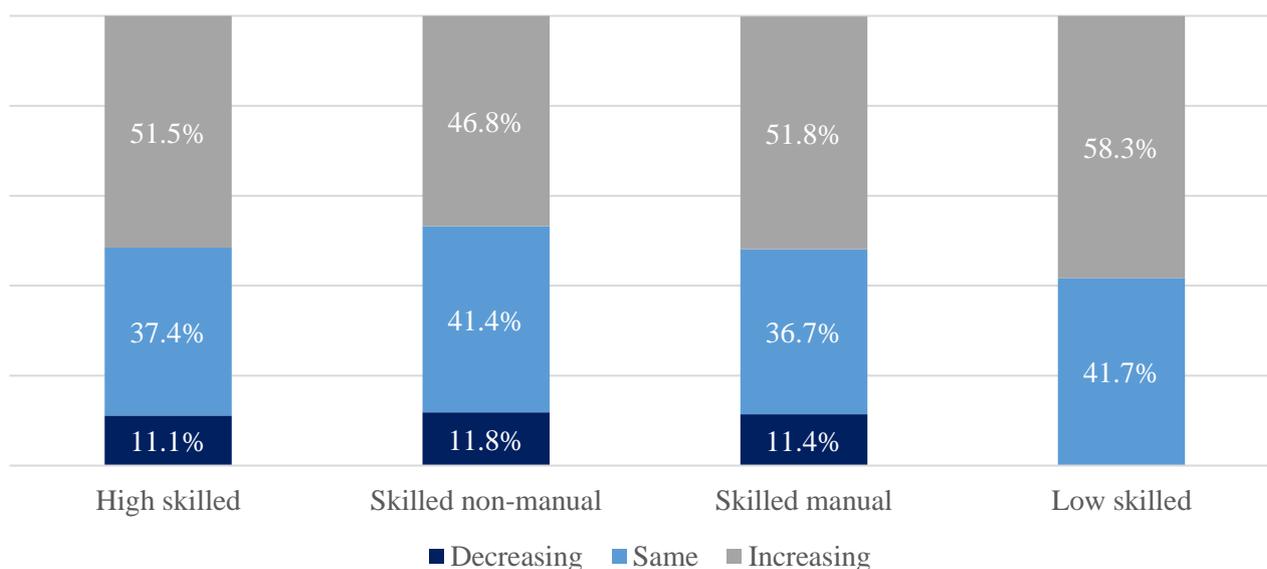
The need for continuous learning can be a result of the surge in the variety and complexity of tasks at work. As illustrated in the following figure (Figure 4.4), a significant share of respondents experienced a high frequency of responding to non-routine tasks during the course of their work and the necessity for constant learning (42.1% and 52.3%, respectively). A small proportion of respondents did not need to respond to non-routine tasks as well as the need to learn new things in their job (14.0% and 7.2%, respectively).

**Figure 4.4. Frequency that respondents need continuous learning and response to non-routine tasks during the course of work**



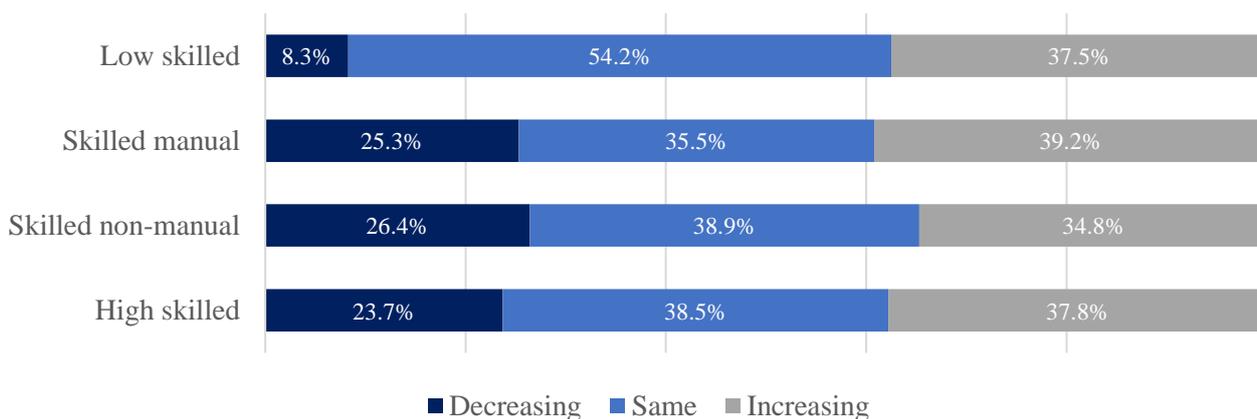
As presented in Figure 4.5, the frequency of task variety has mainly remained the same or increased since starting their current job. A standstill level of task variety was found among respondents in the high-skilled occupations, with a share of 37.4%, skilled non-manual occupations for 46.8%, skilled manual occupations for 51.8%, and low-skilled occupations for 41.7%. On the other hand, the rise in variety was experienced by 51.5%, 46.8%, 51.8%, and 58.3% of respondents in high-skilled occupations, skilled non-manual occupations, skilled manual occupations, and low-skilled occupations, respectively. The variety of tasks was found to be decreasing by around 11% for all occupation categories except the low-skilled group.

**Figure 4.5. Shares of jobs rising variety of tasks by broad occupational groups**



Overall, more than a quarter of respondents reported an increase in the complexity or difficulty of tasks at work, likely indicating the need for higher skill levels among young workers in Cambodia. As depicted in Figure 4.6, 37.8% of high-skilled occupations, 34.8% of skilled non-manual occupations, 39.2% of skilled manual occupations, and 37.5% of low-skilled occupations also reported an increase in task complexity since the start of the current job. Having a similar proportion, 38.5% of respondents in a highly skilled occupation, 38.9% in a skilled non-manual occupation, 35.5% in a skilled manual occupation, and 54.2% in a lowly skilled occupation reported the same level of task complexity. The decrease, however, was most prominent in higher-skilled groups: 26.4% for skilled non-manual, 25.3% for skilled manual, and 23.7% for highly skilled.

**Figure 4.6. Shares of jobs rising complexity of tasks by broad occupational groups**



With the rise of technology, particularly in information and communication technology (ICT), it seems from the survey that respondents at all levels of occupation express the need to employ ICT in their jobs. From Figure 4.7, high-skilled jobs had the biggest share of respondents (87%) indicating that their work requires moderate or high ICT knowledge. A comparable proportion, 81.9%, of respondents in skilled non-manual occupations also reported the need for a considerable level of ICT. More than half of respondents in skilled manual and low-skilled jobs address the need for ICT in their work as well, although one might perceive it as requiring a minor level of ICT.

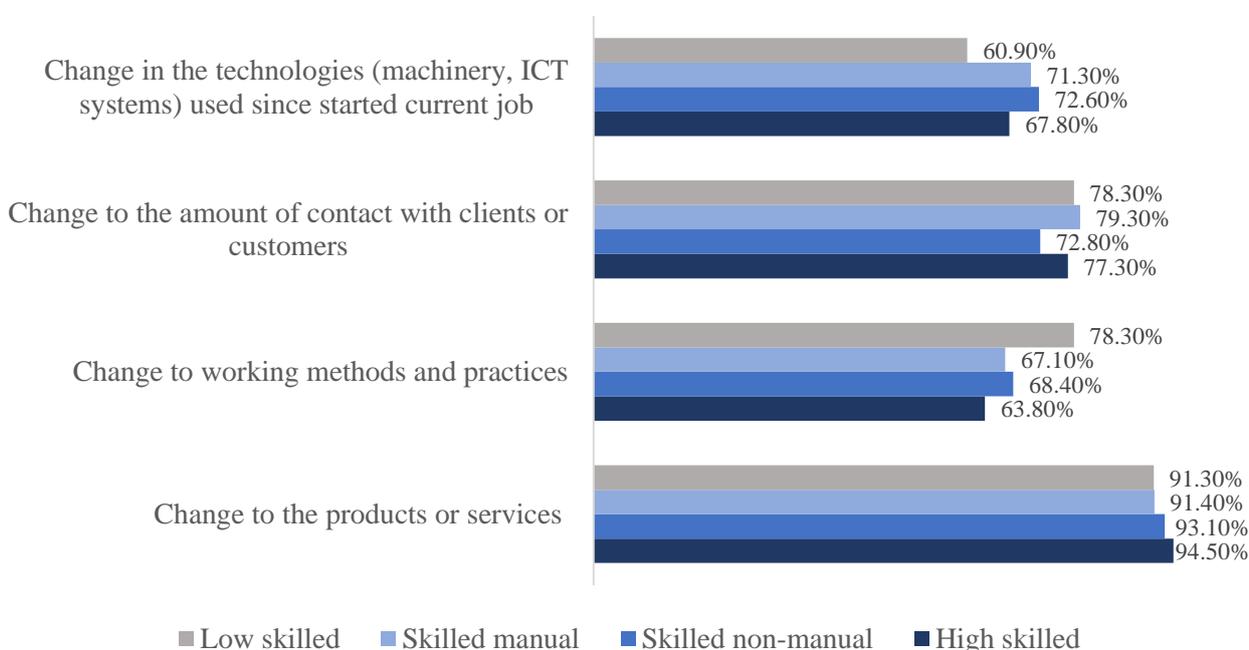
**Figure 4.7. Shares of jobs required moderate or high ICT knowledge by broad occupational groups**



## 4.2. Training for the Change

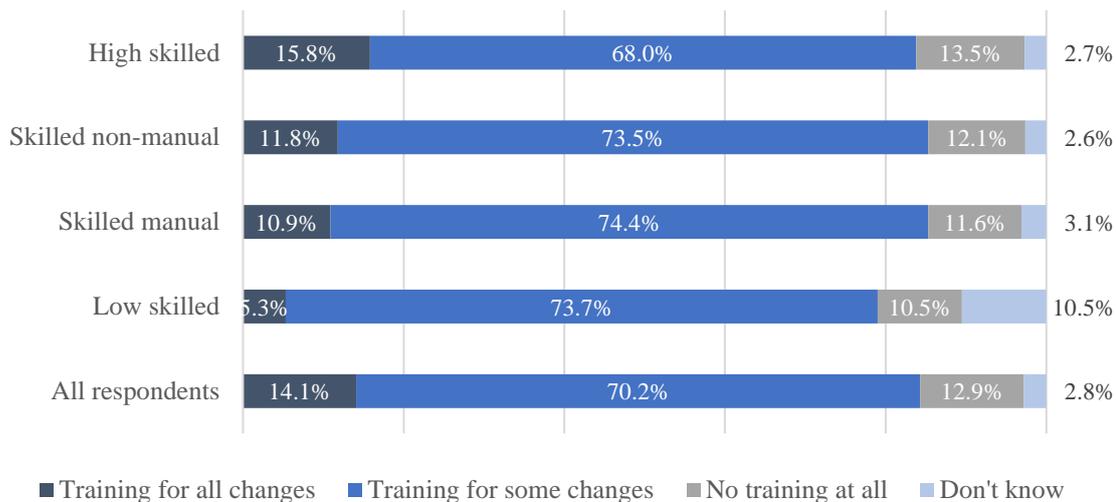
Figure 4.8 describes important changes in the workplace that had been experienced by respondents by occupation, which explain the increase in the variety of tasks, task complexity, and the need to learn new things. From the figure, change to the products or services was reported by a great proportion of respondents—94.5% of respondents in high skilled jobs, 93.1% of skilled non-manual, 91.4% of skilled manual, and 91.3% of unskilled; change to working methods and practices was experienced by 63.8% of respondents in high skilled jobs, 68.4% from skilled non-manual, 67.1% from skilled manual, and 78.3% of unskilled; while the change to the amount of contact with clients or customers was addressed by 77.3% of respondents in high skilled jobs, 72.8% from skilled non-manual, 79.3% from skilled manual, and 78.3% from unskilled. Similarly, 68.7% of respondents in high skilled occupations revealed that their workplace had a change in the technologies used; at the same time, 72.6%, 71.3% and 60.9% of skilled non-manual, skilled manual and unskilled occupations respectively reported so.

**Figure 4.8. Workplace changes by occupations**



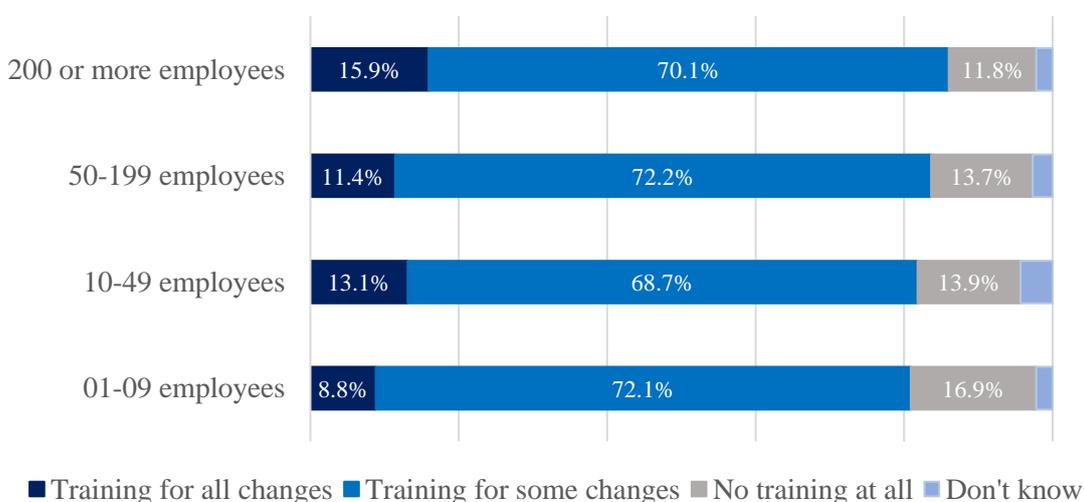
In response to workplace changes, employers offered training so that employees could acquire important skills to perform assigned tasks. Figure 4.9 highlights the incidents of training received by respondents. The figure shows that a majority (70.2%) of respondents who experienced workplace change received training for not all but some of the changes, while 14.1% received training for all the changes, and 12.9% did not receive any training at all. By occupation, the figure reveals that 15.8% of respondents in high-skilled occupations, 11.8% in skilled non-manual occupations, 10.9% in skilled manual occupations, and 5.3% in low-skilled occupations received training for all the changes. A comparatively greater share of respondents in each occupation (68.0%, 73.5%, 74.4%, and 73.7% of high-skilled, skilled non-manual, skilled manual, and low-skilled, respectively) received training for some changes. A little more than 10% of each category of occupation reported that they did not receive any training at all to correspond to workplace changes.

**Figure 4.9. Workplace changes supported with training activities by employers by broad occupational groups**



The survey provides an interesting finding on incidents of training for workplace changes across all employer sizes. Figure 4.10 shows that there was no large variation in training incidents across the four categories of employers. To give an example, the majority of respondents received training for some changes across all employer sizes: 72.1%, 68.7%, 72.2%, and 70.1% for employers with 1-99 employees, 10-49 employees, 50-199 employees, and 200 or more employees, respectively. Nevertheless, the highest share of respondents receiving training for all the changes at the workplace—nearly 16%—is found among firms with 250 or more employees. This was followed by firms with 10 to 49 employees (13.1%), 50 to 199 employees (11.4%), and 2009 employees (8.8%). While only nearly 10% of respondents working in firms in the smallest size group received training for all the changes, 16.9% of them did not receive any training at all for workplace changes, the largest proportion if compared to 13.9%, 13.7%, and 11.8% of respondents from firms with 10 to 49, 50 to 199, and more than 200 employees, respectively.

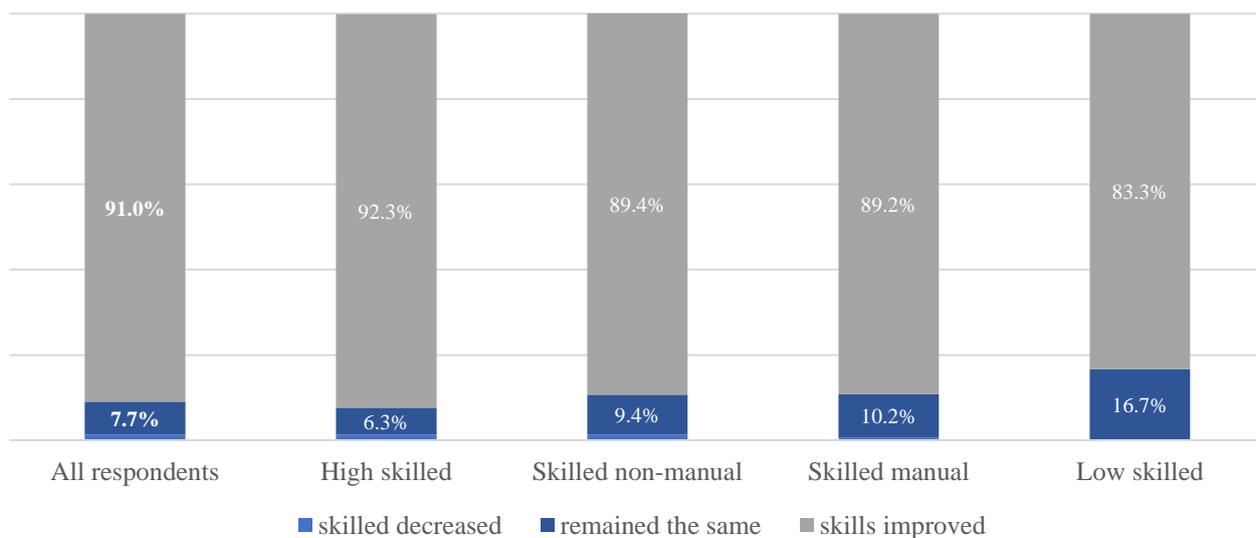
**Figure 4.10. Workplace changes supported with training activities by employers by firm size**



Another fascinating result from the survey is the incidence of skill improvement among respondents, which can be due to changes in the nature of work (for instance, task variety and the need

to learn new things) and employers' reactions to these changes. To illustrate, 91% of respondents reported that their skills improved since the start of their current job, while only 7.7% and 1.3% reported that their skills remained the same or decreased, respectively. All occupations showed success in skill development, with respondents in high-skilled jobs having the highest rate of development at 92.3%, followed by 89.4%, 89.2%, and 83.3% for skilled non-manual, skilled manual, and skilled and low-skilled jobs, respectively. Failure to improve skills is most common among respondents in unskilled jobs, with a rate of 16.7%, followed by skilled manual jobs, skilled non-manual jobs, and high-skilled jobs, with rates of 10.2%, 9.4%, and 6.3%, respectively. In contrast, the rate at which skills deteriorate is marginal in all categories, ranging from 0.6% to 1.3%.

**Figure 4.11. Improvement in skills within jobs by broad occupational groups**



### 4.3. Helping Labour Market Transitions Tackle Skill Mismatch

The survey provides an understanding of skill mismatch transitions. Table 4.1 showed that approximately 70% of respondents remained in the same skill mismatch status between jobs, for which 11.2%, 55.5%, and 2.5% are allocated to skill underutilization, matched skills, and underskilling, respectively. Some respondents (10.8%) had moved from having lower skills than required and/or matched skills in their previous job to overskilling in the current one, indicating less chance for skills improvement in the future. Put differently, these respondents shifted to jobs that are least likely to demand further skill development and/or worsen their skills through underutilization. Conversely, one out of ten respondents (9.7%) made a transition from higher skills than required and/or matched to jobs where they perceived themselves as having a lower skill level than required. This may demonstrate that these respondents either had a greater opportunity to enhance their skills or failed to perform the jobs effectively. Another 5.7% and 4.2% of respondents shifted from jobs that required a lower and higher skill level, respectively, to jobs that match their skill level.

**Table 4.1. Skill mismatch transitions: previous job and start of current job**

Start of current job	Previous job		
	Skills are higher than needed	Skills are matched	Some of the skills are lower than needed
Skills are higher than needed	11.2%	9.0%	1.8%
Skills are matched	5.7%	55.5%	4.2%
Some of the skills are lower than needed	1.7%	8.0%	2.5%

\*number of observations = 2,295 (those who answered that their current job is not their first job)

The following table (Table 4.2) presents two types of mismatch transition amongst respondents: (1) transition from the previous job to the start of a new job, and (2) transition from the start of the current job to the present. Concerning the first transition group (Column 1), 70.7% of respondents whose current job was not their first job said that they did not experience any change of mismatch status from the previous job to the start of their current job, of which around 55% is attributed to matched-matched transition, 11.6% to overskilled-overskilled transition, and 3.9% to underskilled-underskilled transition. The transition from skill underutilization and underskilling to matching skilling was 8.7% and 6.1%, respectively, contributing to a total of 70% of respondents in this group who were successful at starting a new job that matched their skill level. When considering the proportion of each mismatched group, it can be seen that four out of ten (40%) and five out of ten (50%) of respondents who had overskilling and underskilling, respectively, in their previous jobs were able to move to matched status at the start of the current job. Transitioning from matched and overskilled to underskilled accounts for around 7% of all respondents who had previous job experience, while a similar proportion is accounted for by those who transitioned from matched and underskilled to overskilled.

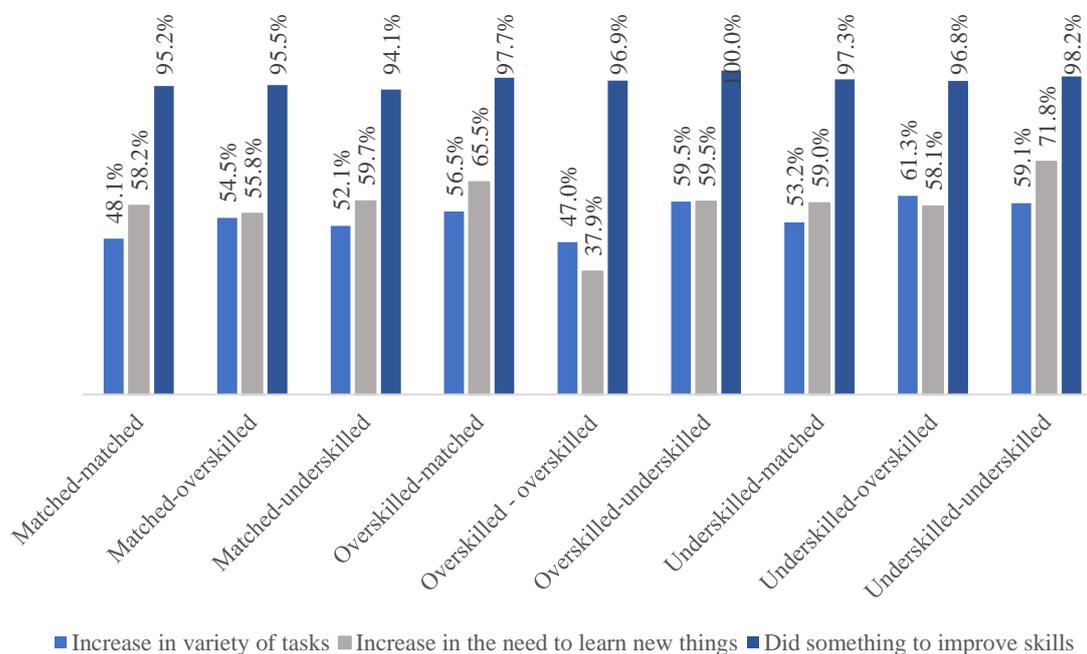
**Table 4.2. Distribution of adult workforce according to skill mismatch transitions between previous job – start of current job – present job**

Skill Mismatch Transition	Transition from previous job to start of a new job*	Transition from start of new job to present
	(1)	(2)
Matched - matched	55.2%	60.3%
Matched - overskilled	5.3%	5.0%
Matched - underskilled	5.5%	3.8%
Overskilled - matched	8.7%	5.7%
Overskilled - overskilled	11.6%	12.3%
Overskilled - underskilled	1.7%	1.3%
Underskilled - matched	6.1%	7.1%
Underskilled - overskilled	2.1%	1.0%
Underskilled - underskilled	3.9%	3.5%

\* number of observations = 2,295 (those who answered that their current job is not their first job)

Column 2 of Table 4.2 indicates the mismatch in transition status within jobs. Similar to the transition trend of the early described group, matched-matched transition attributes explained a significant share of all respondents (60.3%), overskilled to overskilled for 12.3%, and underskilled to unskilled for marginally 3.5%. The shift from having skill mismatch (overskilled or underskilled) to match and from having skill match (overskilling) to skill mismatch (underskilling) may be considered a positive sign that skills are being fully utilized and that opportunity for skill development is much more possible for these groups. In contrast, transitioning from mismatched to matched status may have two pragmatic explanations: (1) they are assigned to tasks that match their skill level and/or (2) they are exposed to changing work environments that require continuous skill improvements. As shown in Table 4.2, 5.7% of all respondents, equivalent to 30% of those experiencing overskilling when starting their current job, and 7.1% of all respondents, equivalent to 61% of those experiencing underskilling when starting their current job, transitioned to having matched their skill level to that required by the job. The convergence between one's skill level and what is required by the job can probably be attributed, on the one hand, to various types of training that took place in or out of the workplace and, on the other hand, to changing work environments and requirements. To illustrate, more than half of respondents in these two groups experienced both an increasing variety of tasks and the need to learn new things, while more than 90% of respondents in each group did something to improve their skill level, as shown in Figure 4.12. Transitions from being matched and overskilled to being underskilled are, however, minimal (3.8% and 1.3%, respectively). This is also the case for the underskilled-overskilled group (1%), and match-overskilled (5%).

**Figure 4.12. Share of respondents who experienced variety of tasks, the need to learn new things and did something to improve their skills since starting the current job by skill mismatch status**



## CHAPTER 5: Conclusion

In light of the megatrends in socioeconomic change, the Royal Government of Cambodia (RGC) has been putting more emphasis on creating jobs and promoting decent work as outlined in numerous national policies by addressing skill shortages from the supply side. The global community concurred that the composition of the labour force significantly affects economic growth (ILO, 2010), stating that attention should be paid to the need to increase both the quantity and quality of people with training and skills.

### *Imperfect qualification supply and demand in the labour market*

Higher education and technical and vocational education and training (C1, C2, C3) are the most in-demand skills in Cambodia's changing labour market. Nearly 74% of the 3,139 respondents indicated that their current jobs required the aforementioned qualification level. The CSJ found that education and training positively affect labour market outcomes. As demonstrated by the CSJ result, the average wage of employees increased with increasing levels of education, from between \$258 and \$281 per month for grade 12 graduates to between \$417 and 440 per month for tertiary education graduates. The majority of respondents, ranging from 79.1% to 90.5%, were satisfied with their current jobs.

### *Qualifications mismatches*

In Cambodia's labour market, qualification mismatches were not a significant issue, as only 30% of respondents reported under or over qualification in their current positions (22.7% were overqualified, and 12.3% were underqualified). About 27% of tertiary graduates indicated that they were overqualified, with 81.4% of overqualified respondents holding bachelor's degrees. In contrast, approximately 47% of high school graduates or less reported being underqualified for their current positions. Respondents with degrees in arts and humanities appear to have the highest rate of overqualification, while those with degrees in agriculture, forestry, fisheries, and veterinary have the lowest rate. On another side, a high proportion of high-skilled and skilled non-manual employees, such as technicians and associate professionals, and clerical support workers reported being underqualified. These groups accounted for 50.8% and 39.9%, respectively. This may be the result of gaining some work experience, being interested in the job's nature, and achieving career development or advancement.

### *Skills mismatch and skills deficits*

About 26.8% of respondents reported skill mismatches, indicating that their skills are underutilized in their current positions. The majority of employees with mismatched skills were tertiary graduates, who accounted for 25.8% of the total. Similar to qualification mismatches, respondents with degrees in business administration and law had the highest rate of skill mismatches. The majority of employees with mismatched skills had prior experience in one or more institutions before moving to their current positions, which negatively affected the job transitions in the labour market.

The term "skill gaps" refers to a situation in which the skills and abilities of the labour force fall short of the skills required by the jobs. About 26.8% of respondents reported skill mismatches, indicating that their skills are underutilized in their current positions. The majority of employees with mismatched skills were tertiary graduates, who accounted for 25.8% of the total. Similar to qualification mismatches, respondents with degrees in business administration and law had the highest rate of skill mismatches. The majority of employees with mismatched skills had prior experience in one or more institutions before moving to their current positions, which negatively affected the job transitions in the labour market.

The term "skill deficits" refers to a situation in which the skills and abilities of the labour force fall short of the skills required by the jobs. CSJ found that overall, there was an average skill deficit of 33.4%. Upper secondary and post-secondary education reported the highest skill deficit of 35.6%. By occupational groups, the highest rate of skill deficit was for skilled non-manual (34.3%) followed by high skilled employees (33.0%). This reflected the need for secondary graduates to be well-prepared and for skill development in both schools and the workplace.

### *Mismatches Laid Economic and Social Costs*

Qualifications and skills mismatches had impacts on monthly wages, job security, and job satisfaction. The average monthly wages of respondents with matched qualifications were higher than those of respondents who were overqualified or underqualified. In addition, the job satisfaction and job security of respondents with matched qualifications and skills were greater than those of respondents from other groups. This demonstrates the need for increased efforts to match qualifications, skills, and jobs in the emerging labour market. Work-based learning would also be an effective strategy, even though less than 50% of skilled non-manual, skilled manual, and unskilled workers currently receive work-based learning.

### *The Needs for Career Guidance and Counselling Services*

Most first-time job seekers encountered difficulties during the pre-employment phase, as the majority of them did not receive adequate career guidance and counselling. Almost 67% of respondents cited networking, family, friend, and relatives as their primary source of employment opportunities. Before applying for a job, they did not receive adequate career guidance and counselling through these channels. This resulted in encountering various obstacles, such as being nervous during an interview (64.7%), lacking confidence (38.2%), and preparing a good resume and cover letter (33.5%), etc. Those who received career guidance and counselling from the NEA were pleased with the services, but the majority of respondents were unaware of these public employment services or career counselling offices.

### *Improving Functional and Workable Skills*

The large majority of jobs in the labour market require at least moderate or advanced literacy, numeracy, and information and communication technology (ICT) skills. With these foundational skills, employees should be able to adapt and acquire new practical skills on the job. Nearly 84% of all respondents, regardless of skill level, indicated that their current jobs required at least a moderate level of ICT skills. In addition, approximately 91% and 87% of all respondents indicated that their current positions require at least moderate literacy and numeracy skills, respectively. Work-related skills sometimes referred to as soft skills, are also necessary for the performance of current jobs. Communication skills (92.0%), teamwork skills (89.2%), and problem-solving skills (88.1%) are the top three work-related skills rated as most important.

### *Stimulating Labour Market Qualifications and Skills Matches*

The world of work has changed. Thus, the labour market needs up-to-date skills and qualifications to match the requirements of current jobs. This leads to skill development, which may benefit productivity in particular and economic growth in general. Employees at all skill levels and in the majority of economic activities must learn new skills, particularly in human health and social work (33.2%), public administration (30.2%), and information and communication (26.9%). Except for unskilled workers, more than half of respondents in other skill levels said they needed to learn new skills. This demonstrated the variety of new tasks they must complete completing their jobs and task complexity is also increasing, particularly for skilled manual and highly skilled employees.

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## Appendix A: List of priority statistics

**Table A.1. Top three reasons for choosing a field of study by each field of study**

Field of study	Top three reasons
Agriculture, forestry, fisheries and veterinary	Favour in the field, availability of the job, and scholarship
Arts and humanities	Favour in the field, availability of the job, and scholarship
Business administration and law	Favour in the field, availability of the job, and advice from parents/relatives
Engineering, manufacturing and construction	Favour in the field, availability of the job, and advice from parents/relatives
Health and Welfare	Favour in the field, availability of the job, and advice from parents/relatives
Information and Communication Technology	Favour in the field, availability of the job, and scholarship or advice from parents/relatives (the last two reasons shared the same percentage)
Natural sciences, mathematics and statistics	Favour in the field, availability of the job, and advice from parents/relatives
Services	Favour in the field, availability of the job, and advice from parents/relatives
Social sciences, journalism and information	Favour in the field, availability of the job, and scholarship

**Table A.2. Qualification mismatches by education level**

Education level	Overqualification	Matched qualification	Underqualification	Total
Lower secondary education	4	8	164	<b>176</b>
Upper secondary education	39	304	149	<b>492</b>
TVET graduates (C1, C2, C3)	8	8	5	<b>21</b>
Tertiary education-Associate degree/High diploma	36	103	39	<b>178</b>
Tertiary education-Bachelor	579	1,596	29	<b>2,204</b>
Tertiary education-Post-graduate	45	23	0	<b>68</b>
<b>Total</b>	<b>711</b>	<b>2042</b>	<b>386</b>	<b>3,139</b>
<b>Row percentage</b>				
Lower secondary education	2.3%	4.5%	93.2%	<b>100.0%</b>
Upper secondary education	7.9%	61.8%	30.3%	<b>100.0%</b>
TVET graduates (C1, C2, C3)	38.1%	38.1%	23.8%	<b>100.0%</b>
Tertiary education-Associate degree/High diploma	20.2%	57.9%	21.9%	<b>100.0%</b>
Tertiary education-Bachelor	26.3%	72.4%	1.3%	<b>100.0%</b>
Tertiary education-Post-graduate	66.2%	33.8%	0.0%	<b>100.0%</b>
<b>Total</b>	<b>22.7%</b>	<b>65.1%</b>	<b>12.3%</b>	<b>100.0%</b>
<b>Column percentage</b>				
Lower secondary education	0.6%	0.4%	42.5%	5.6%
Upper secondary education	5.5%	14.9%	38.6%	15.7%

TVET graduates (C1, C2, C3)	1.1%	0.4%	1.3%	0.7%
Tertiary education-Associate degree/High diploma	5.1%	5.0%	10.1%	5.7%
Tertiary education-Bachelor	81.4%	78.2%	7.5%	70.2%
Tertiary education-Post-graduate	6.3%	1.1%	0.0%	2.2%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

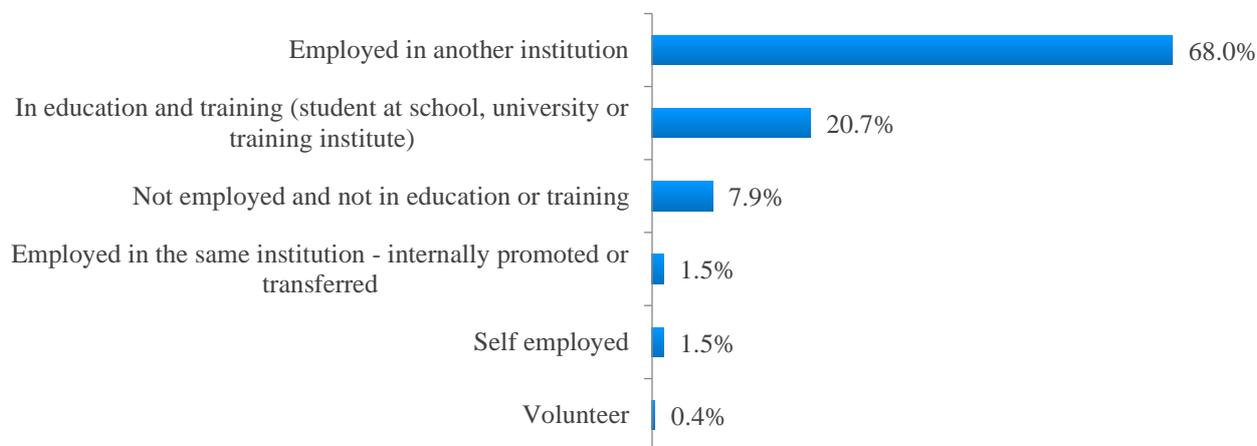
**Table A.3. Qualification mismatches by major occupations**

Major occupation	Overqualification	Matched qualification	Underqualification	Total
Managers	38	122	20	<b>180</b>
Professionals	167	643	71	<b>881</b>
Technicians and associate professionals	154	507	105	<b>766</b>
Clerical support workers	182	437	95	<b>714</b>
Service and sales workers	119	227	59	<b>405</b>
Skilled agricultural, forestry and fishery workers	0	7	0	<b>7</b>
Craft and related trades workers	39	67	26	<b>132</b>
Plant and machine operators, and assemblers	8	14	5	<b>27</b>
Elementary occupations	4	16	4	<b>24</b>
<b>Total</b>	<b>711</b>	<b>2,040</b>	<b>385</b>	<b>3,136</b>
<b>Row percentage</b>				
Managers	21.1%	67.8%	11.1%	100.0%
Professionals	19.0%	73.0%	8.1%	100.0%
Technicians and associate professionals	20.1%	66.2%	13.7%	100.0%
Clerical support workers	25.5%	61.2%	13.3%	100.0%
Service and sales workers	29.4%	56.0%	14.6%	100.0%
Skilled agricultural, forestry and fishery workers	0.0%	100.0%	0.0%	100.0%
Craft and related trades workers	29.5%	50.8%	19.7%	100.0%
Plant and machine operators, and assemblers	29.6%	51.9%	18.5%	100.0%
Elementary occupations	16.7%	66.7%	16.7%	100.0%
<b>Total</b>	<b>22.7%</b>	<b>65.1%</b>	<b>12.3%</b>	<b>100.0%</b>
<b>Column percentage</b>				
Managers	5.3%	6.0%	5.2%	5.7%
Professionals	23.5%	31.5%	18.4%	28.1%
Technicians and associate professionals	21.7%	24.8%	27.2%	24.4%
Clerical support workers	25.6%	21.4%	24.6%	22.7%
Service and sales workers	16.7%	11.1%	15.3%	12.9%
Skilled agricultural, forestry and fishery workers	0.0%	0.3%	0.0%	0.2%
Craft and related trades workers	5.5%	3.3%	6.7%	4.2%
Plant and machine operators, and assemblers	1.1%	0.7%	1.3%	0.9%
Elementary occupations	0.6%	0.8%	1.0%	0.8%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

**Table A.4. Qualification mismatches by broad occupational groups**

Broad occupational group	Overqualification	Matched qualification	Underqualification	Total
High skilled	359	1,272	196	1827
Skilled non-manual	301	664	154	1119
Skilled manual	47	88	31	166
Low skilled	4	16	4	24
<b>Total</b>	<b>711</b>	<b>2040</b>	<b>385</b>	<b>3136</b>
Row percentage				
High skilled	19.6%	69.6%	10.7%	100.0%
Skilled non-manual	26.9%	59.3%	13.8%	100.0%
Skilled manual	28.3%	53.0%	18.7%	100.0%
Low skilled	16.7%	66.7%	16.7%	100.0%
<b>Total</b>	<b>22.7%</b>	<b>65.1%</b>	<b>12.3%</b>	<b>100.0%</b>
Column percentage				
High skilled	50.5%	62.3%	50.8%	58.2%
Skilled non-manual	42.3%	32.5%	39.9%	35.6%
Skilled manual	6.6%	4.3%	8.0%	5.3%
Low skilled	0.6%	0.8%	1.0%	0.8%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

**Figure A.1. Distribution of underskilled employees by previous labour market status**



n (Total respondents reported underskilling) = 266

**Table A.5. Numeracy skill need of STEM graduates by broad occupation groups**

Broad occupation groups	Distribution	Levels of numeracy skill need			
		Basic	Moderate	Advanced	Not applicable
High skilled	79.0%	6.4%	50.0%	42.6%	1.0%
Skilled non-manual	8.6%	6.8%	68.2%	22.7%	2.3%
Skilled manual	12.1%	12.9%	56.5%	27.4%	3.2%
Low skilled	0.4%	0.0%	50.0%	50.0%	0.0%

n (total STEM graduate) = 514

**Table A.6. STEM graduates by type of skill mismatch/deficit and qualification mismatch**

<b>Skill deficit</b>	Below average skill deficit	67.5%
	Above average skill deficit	32.5%
<b>Current skill mismatch</b>	Overskilled	18.2%
	Matched	72.7%
	Underskilled	8.6%
	Don't know	0.4%
<b>Qualification mismatch</b>	Overqualification	22.7%
	Matched qualification	65.0%
	Underqualification	12.3%

## Appendix B: List of occupational profile

The CSJ survey tries to assess the potential occupations by looking at three key indicators: job satisfaction and job insecurity. A list of occupations was produced by measuring the highest frequency and score of the level of job satisfaction (score >3) and job security (score ≤6).

**Table B.1. List of occupations with high level of job satisfaction (score > 3)**

No.	ISCO Code	Occupation title (ISCO 4 digit)
1	1212	Human resource managers
2	1221	Sales and marketing managers
3	1323	Construction managers
4	1412	Restaurant managers
5	2142	Civil engineers
6	2144	Mechanical engineers
7	2151	Electrical engineers
8	2161	Building architects
9	2166	Graphic and multimedia designers
10	2211	Generalist medical practitioners
11	2221	Nursing professionals
12	2222	Midwifery professionals
13	2240	Paramedical practitioners
14	2250	Veterinarians
15	2262	Pharmacists
16	2411	Accountants
17	2421	Management and organization analysts
18	2423	Personnel and careers professionals
19	2431	Advertising and marketing professionals
20	2432	Public relations professionals
21	2434	Information and communications technology sales professionals
22	2514	Applications programmers
23	2522	Systems administrators
24	2523	Computer network professionals
25	2643	Translators, interpreters and other linguists
26	3112	Civil engineering technicians
27	3113	Electrical engineering technicians
28	3122	Manufacturing supervisors
29	3123	Construction supervisors
30	3212	Medical and pathology laboratory technicians
31	3221	Nursing associate professionals
32	3312	Credit and loans officers
33	3313	Accounting associate professionals
34	3322	Commercial sales representatives
35	3323	Buyers
36	3331	Clearing and forwarding agents
37	3334	Real estate agents and property managers
38	3341	Office supervisors
39	3343	Administrative and executive secretaries

40	3512	Information and communications technology user support technicians
41	4110	General office clerks
42	4120	Secretaries (general)
43	4211	Bank tellers and related clerks
44	4221	Travel consultants and clerks
45	4222	Contact centre information clerks
46	4224	Hotel receptionists
47	4225	Enquiry clerks
48	4226	Receptionists (general)
49	4311	Accounting and bookkeeping clerks
50	4313	Payroll clerks
51	4321	Stock clerks
52	4415	Filing and copying clerks
53	4416	Personnel clerks
54	5111	Travel attendants and travel stewards
55	5132	Bartenders
56	5211	Stall and market salespersons
57	5221	Shopkeepers
58	5222	Shop supervisors
59	5223	Shop sales assistants
60	5230	Cashiers and ticket clerks

**Table B.2. List of occupations with job security (score <=6)**

No.	ISCO Code	Occupation title (ISCO 4 digit)
1	1212	Human resource managers
2	1221	Sales and marketing managers
3	1321	Manufacturing managers
4	1323	Construction managers
5	1412	Restaurant managers
6	2141	Industrial and production engineers
7	2142	Civil engineers
8	2144	Mechanical engineers
9	2151	Electrical engineers
10	2152	Electronics engineers
11	2161	Building architects
12	2166	Graphic and multimedia designers
13	2211	Generalist medical practitioners
14	2212	Specialist medical practitioners
15	2221	Nursing professionals
16	2222	Midwifery professionals
17	2240	Paramedical practitioners
18	2250	Veterinarians
19	2262	Pharmacists
20	2411	Accountants
21	2421	Management and organization analysts
22	2423	Personnel and careers professionals

23	2431	Advertising and marketing professionals
24	2432	Public relations professionals
25	2434	Information and communications technology sales professionals
26	2512	Software developers
27	2514	Applications programmers
28	2522	Systems administrators
29	2523	Computer network professionals
30	2643	Translators, interpreters and other linguists
31	3112	Civil engineering technicians
32	3113	Electrical engineering technicians
33	3122	Manufacturing supervisors
34	3123	Construction supervisors
35	3212	Medical and pathology laboratory technicians
36	3221	Nursing associate professionals
37	3312	Credit and loans officers
38	3313	Accounting associate professionals
39	3322	Commercial sales representatives
40	3331	Clearing and forwarding agents
41	3334	Real estate agents and property managers
42	3341	Office supervisors
43	3343	Administrative and executive secretaries
44	3434	Chefs
45	3512	Information and communications technology user support technicians
46	4120	Secretaries (general)
47	4132	Data entry clerks
48	4211	Bank tellers and related clerks
49	4221	Travel consultants and clerks
50	4222	Contact centre information clerks
51	4224	Hotel receptionists
52	4225	Enquiry clerks
53	4226	Receptionists (general)
54	4311	Accounting and bookkeeping clerks
55	4312	Statistical, finance and insurance clerks
56	4313	Payroll clerks
57	4321	Stock clerks
58	4322	Production clerks
59	4323	Transport clerks
60	4415	Filing and copying clerks
61	4416	Personnel clerks
62	5111	Travel attendants and travel stewards
63	5131	Waiters
64	5132	Bartenders
65	5211	Stall and market salespersons
66	5221	Shopkeepers
67	5222	Shop supervisors
68	5223	Shop sales assistants
69	5230	Cashiers and ticket clerks
70	5244	Contact centre salespersons

## Appendix C: International Standard Classification of Occupations (ISCO)

The ISCO is one of the main international classifications, and was developed by the ILO. ISCO is a tool for organizing jobs into a clearly defined set of groups according to the tasks and duties undertaken in the job. Its main aims are to provide: a basis for the international reporting, comparison, and exchange of statistical and administrative data about occupations; a model for the development of national and regional classifications of occupations; and a system that can be used directly in countries that have not developed their own national classifications. Definitions of each of the four ISCO skill levels are given below. These definitions do not change the boundaries between the skills levels used in ISCO-88. They serve to clarify these boundaries and to deal with cases where formal educational requirements may not be the most suitable method of measuring the skill level of a particular occupation. Each definition provides examples of the typical or characteristic tasks performed at each skill level, the types of skill required (in broad terms), and the typical occupations classified at that skill level.

**Skill Level 1:** Occupations at Skill Level 1 typically require the performance of simple and routine physical or manual tasks. They may require the use of hand-held tools such as shovels, or of simple electrical equipment such as vacuum cleaners. They involve tasks such as cleaning, digging, lifting and carrying materials by hand, sorting, storing or assembling goods by hand (sometimes in the context of mechanized operations), operating non-motorized vehicles, and picking fruit and vegetables. Many occupations at Skill Level 1 may require physical strength and/or endurance. For some jobs, basic skills in literacy and numeracy may be required. If required, these skills would not form a major part of the job. For competent performance in some occupations at Skill Level 1, completion of primary education or the first stage of basic education (International Standard Classification of Education Level 1 [ISCED]) may be required. A short period of on-the-job training may be required for some jobs. Occupations classified at Skill Level 1 include office cleaners, freight handlers, garden labourers, and kitchen assistants.

**Skill Level 2:** Occupations at Skill Level 2 typically involve the performance of tasks such as operating machinery and electronic equipment; driving vehicles; maintenance and repair of electrical and mechanical equipment; and manipulation, ordering, and storage of information. For almost all occupations at Skill Level 2, the ability to read information such as safety instructions, to make written records of work completed, and to accurately perform simple arithmetical calculations is essential. Many occupations at this skill level require relatively advanced literacy and numeracy skills, and good interpersonal communication skills. In some occupations, these skills are required for a major part of the work. Many occupations at this skill level require a high level of manual dexterity. The knowledge and skills required for competent performance in all occupations at Skill Level 2 are generally obtained through completion of the first stage of secondary education (ISCED Level 2). Some occupations require the completion of the second stage of secondary education (ISCED Level 3), which may include a significant component of specialized vocational education and on-the-job training. Some occupations require completion of vocation-specific education undertaken after completion of secondary education (ISCED Level 4). In some cases, experience and on-the-job training may substitute for the formal education. Occupations classified at Skill Level 2 include butchers, bus-drivers, secretaries, accounts clerks, sewing-machinists, dressmakers, shop sales assistants, police officers, hairdressers, building electricians, and motor vehicle mechanics.

**Skill Level 3:** Occupations at Skill Level 3 typically involve the performance of complex technical and practical tasks that require an extensive body of factual, technical, and procedural knowledge in a specialized field. Occupations at this skill level generally require a high level of literacy and numeracy,

and well-developed interpersonal communication skills. These skills may include the ability to understand complex written material, prepare factual reports, and communicate with people who are distressed. The knowledge and skills required at Skill Level 3 are usually obtained as the result of study at a higher educational institution following completion of secondary education for a period of one to three years (ISCED Level 5b). In some cases, extensive relevant work experience and prolonged on-the-job training may substitute for the formal education. Occupations classified at Skill Level 3 include shop managers, medical laboratory technicians, legal secretaries, commercial sales representatives, computer support technicians, and broadcasting and recording technicians.

**Skill Level 4:** Occupations at Skill Level 4 typically involve the performance of tasks that require complex problem solving and decision-making based on an extensive body of theoretical and factual knowledge in a specialized field. The tasks performed typically include analysis and research to extend the body of human knowledge in a particular field; diagnosis and treatment of disease; imparting knowledge to others; design of structures or machinery; and of processes for construction and production. Occupations at this skill level generally require extended levels of literacy and numeracy, sometimes at a very high level, and excellent interpersonal communication skills. These skills generally include the ability to understand complex written material and communicate complex ideas in media such as books, reports, and oral presentations. The knowledge and skills required at Skill Level 4 are usually obtained as the result of study at a higher educational institution for a period of three to six years leading to the award of a first degree or higher qualification (ISCED Level 5a or higher). In some cases, experience and on-the-job training may substitute for the formal education. In many cases, appropriate formal qualifications are an essential requirement for entry to the occupation. Occupations classified at Skill Level 4 include sales and marketing managers, civil engineers, secondary school teachers, medical practitioners, operating theatre nurses, and computer systems analysts.

The relationship between the first digit of ISCO-08 and the four ISCO-08 skill levels is summarized below:

ISCO-08 major groups	Skill level
1-Managers, senior officials, and legislators	3 + 4
2-Professionals	4
3-Technicians and associated professionals	3
4-Clerks	
5-Service and sales workers	
6-Skilled agricultural and fishery workers	2
7-Craft and related trades workers	
8-Plant and machine operators, and assemblers	
9-Elementary occupations	1

*Note: A significant problem regarding the application of the concept of “skill level” in ISCO-88 relates to occupations with similar tasks and duties (or content) but with a different (higher or lower) “skill level” requirement, as measured in particular countries. This is because, given realistic differences in national education systems, the same occupation (with the same set of tasks and duties) can be undertaken by individuals with different educational levels without affecting the level of skill required for competent performance of the tasks. This is the case for some elementary, craft, and technical occupations, which in many countries require higher education levels than those assigned in ISCO-88. Source: (ILO, 2012)*

However, this survey uses International Standard Classification of Education 2011 (ISCED-11). Formal education and training requirement are used as part of the measurement of the skill level of an occupation and these requirements are defined in terms of ISCED. The use of ISCED categories to assist in defining the four-skill level does not imply that the skills necessary to perform the tasks and duties of a given job can be acquired only through formal education. The skills may be, and often are, acquired through informal training and experience. In addition, it should be emphasized that the focus in ISCO-08

is on the skills required to carry out the tasks and duties of an occupation and not on whether a worker employed in a particular occupation is more or less skilled than another worker in the same occupation. A mapping of levels of education in ISCED-11 is provided in table below:

<b>Broad ISCED level</b>	<b>ISCED level (2011)</b>
Low education	ISCED 0: Early childhood education ('less than primary' for educational attainment)
	ISCED 1: Primary education
	ISCED 2: Lower secondary education
Medium education	ISCED 3: Upper secondary education
	ISCED 4: Post-secondary non-tertiary education
High education	ISCED 5: Short-cycle tertiary education
	ISCED 6: Bachelor's or equivalent level
	ISCED 7: Master's or equivalent level
	ISCED 8: Doctoral or equivalent level

*Source: ISCED 2011 Operational Manual*

## Appendix D: International Standard Industrial Classification (ISIC)

The table below shows the 7 sectors covered by the survey and their corresponding ISIC (revision 4) definitions.

Code	Description	Code	Description
<b>Agriculture, forestry and fishery</b>		<b>Trade (Con't)</b>	
0141	Raising of cattle and buffaloes	4763	Retail sale of sporting equipment in specialized stores
0145	Raising of swine/pigs	4764	Retail sale of games and toys in specialized stores
0146	Raising of poultry	4771	Retail sale of clothing, footwear and leather articles in specialized stores
0149	Raising of other animals	4772	Retail sale of pharmaceutical and medical goods, cosmetic and toilet articles in specialized stores
0161	Support activities for crop production	4773	Other retail sale of new goods in specialized stores
<b>Manufacturing of food and beverage</b>		4774	Retail sale of second-hand goods
1010	Processing and preserving of meat	4781	Retail sale via stalls and markets of food, beverages and tobacco products
1050	Manufacture of dairy products	4782	Retail sale via stalls and markets of textiles, clothing and footwear
1071	Manufacture of bakery products	4789	Retail sale via stalls and markets of other goods
1072	Manufacture of sugar	4791	Retail sale via mail order houses or via Internet
1073	Manufacture of cocoa, chocolate & sugar confectionery	4799	Other retail sale not in stores, stalls or markets
1074	Manufacture of macaroni, noodles, couscous and similar farinaceous products	<b>Transport and storage</b>	
1075	Manufacture of prepared meals and dishes	4911	Passenger rail transport, interurban
1079	Manufacture of other food products n.e.c.	4912	Freight rail transport
1080	Manufacture of prepared animal feeds	4921	Urban and suburban passenger land transport
1102	Manufacture of wines	4922	Other passenger land transport
1104	Manufacture of soft drinks; production of mineral waters and other bottled waters	4923	Freight transport by road
<b>Manufacturing of textiles, wearing apparel, and footwear</b>		5012	Sea and coastal freight water transport
1312	Weaving of textiles	5110	Passenger air transport
1313	Finishing of textiles	5120	Freight air transport
1391	Manufacture of knitted and crocheted fabrics	5210	Warehousing and storage
1392	Manufacture of made-up textile articles, except apparel	5229	Other transportation support activities
1393	Manufacture of carpets and rugs	5310	Postal activities
1399	Manufacture of other textiles n.e.c.	5320	Courier activities
1410	Manufacture of wearing apparel, except fur apparel	<b>Hotels and restaurants</b>	
1430	Manufacture of knitted and crocheted apparel	5510	Short term accommodation activities
1512	Manufacture of luggage, handbags and the like, saddlery and harness	5520	Camping grounds, recreational vehicle parks and trailer parks

1520	Manufacture of footwear	5590	Other accommodation
<b>Other manufacturing</b>		5610	Restaurants and mobile food service activities
1811	Printing	5621	Event catering
1812	Service activities related to printing	5629	Other food service activities
2021	Manufacture of pesticides and other agrochemical products	5630	Beverage serving activities
2022	Manufacture of paints, varnishes and similar coatings, printing ink and mastics	<b>Information and communications technology</b>	
2023	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations	5811	Book publishing
2029	Manufacture of other chemical products n.e.c.	5813	Publishing of newspapers, journals and periodicals
2100	Manufacture of pharmaceuticals, medicinal chemical and botanical products	5819	Other publishing activities
2219	Manufacture of other rubber products	5820	Software publishing
2392	Manufacture of clay building materials	5911	Motion picture, video and television programme production activities
2394	Manufacture of cement, lime and plaster	5913	Motion picture, video and television programme distribution activities
2395	Manufacture of articles of concrete, cement and plaster	6020	Television programming and broadcasting activities
2410	Manufacture of basic iron and steel	6110	Wired telecommunications activities
2420	Manufacture of basic precious and other non-ferrous metals	6120	Wireless telecommunications activities
2512	Manufacture of tanks, reservoirs and containers of metal	6130	Satellite telecommunications activities
2610	Manufacture of electronic components and boards	6190	Other telecommunications activities
2620	Manufacture of computers and peripheral equipment	6201	Computer programming activities
2630	Manufacture of communication equipment	6202	Computer consultancy and computer facilities management activities
2640	Manufacture of consumer electronics	6209	Other information technology and computer service activities
2652	Manufacture of watches and clocks	6311	Data processing, hosting and related activities
2710	Manufacture of electric motors, generators, transformers and electricity distribution and control apparatus	6312	Web portals
2732	Manufacture of other electronic and electric wires and cables	6391	News agency activities
2733	Manufacture of wiring devices	6399	Other information service activities n.e.c.
2740	Manufacture of electric lighting equipment	<b>Financial and insurance activities</b>	
2750	Manufacture of domestic appliances	6411	Central banking
2790	Manufacture of other electrical equipment	6419	Other monetary intermediation
2811	Manufacture of engines and turbines, except aircraft, vehicle and cycle engines	6491	Financial leasing
2813	Manufacture of other pumps, compressors, taps and valves	6492	Other credit granting

2816	Manufacture of lifting and handling equipment	6499	Other financial service activities, except insurance and pension funding activities, n.e.c.
2819	Manufacture of other general-purpose machinery	6511	Life insurance
2824	Manufacture of machinery for mining, quarrying and construction	6512	Non-life insurance
2825	Manufacture of machinery for food, beverage and tobacco processing	6611	Administration of financial markets
2910	Manufacture of motor vehicles	6612	Security and commodity contracts brokerage
3091	Manufacture of motorcycles	6619	Other activities auxiliary to financial service activities
3100	Manufacture of furniture	6622	Activities of insurance agents and brokers
3230	Manufacture of sports goods	6629	Other activities auxiliary to insurance and pension funding
3240	Manufacture of games and toys	<b>Real estate activities</b>	
3250	Manufacture of medical and dental instruments and supplies	6810	Real estate activities with own or leased property
3290	Other manufacturing n.e.c.	6820	Real estate activities on a fee or contract basis
3312	Repair of machinery	<b>Professional, scientific and technical activities</b>	
3313	Repair of electronic and optical equipment	6910	Legal activities
3314	Repair of electrical equipment	6920	Accounting, bookkeeping and auditing activities; tax consultancy
3315	Repair of transport equipment, except motor vehicles	7020	Management consultancy activities
3320	Installation of industrial machinery and equipment	7110	Architectural and engineering activities and related technical consultancy
<b>Electricity and water supply</b>		7310	Advertising
3510	Electric power generation, transmission and distribution	7320	Market research and public opinion polling
3600	Water collection, treatment and supply	7410	Specialized design activities
3900	Remediation activities and other waste management services	7500	Veterinary activities
<b>Construction</b>		<b>Administrative and support service activities</b>	
4100	Construction of buildings	7729	Renting and leasing of other personal and household goods
4210	Construction of roads and railways	7810	Activities of employment placement agencies
4220	Construction of utility projects	7911	Travel agency activities
4290	Construction of other civil engineering projects	7912	Tour operator activities
4312	Site preparation	7990	Other reservation service and related activities
4321	Electrical installation	8010	Private security activities
4322	Plumbing, heat and air-conditioning installation	8020	Security systems service activities
4329	Other construction installation	8130	Landscape care and maintenance service activities
4330	Building completion and finishing	8211	Combined office administrative service activities
4390	Other specialized construction activities	8220	Activities of call centres

<b>Trade</b>		<b>Public administration and defense; compulsory social security</b>	
4510	Sale of motor vehicles	8411	General public administration activities
4520	Maintenance and repair of motor vehicles	8412	Regulation of the activities of providing health care, education, cultural services and other social services, excluding social security
4530	Sale of motor vehicle parts and accessories	8413	Regulation of and contribution to more efficient operation of businesses
4540	Sale, maintenance and repair of motorcycles and related parts and accessories	8421	Foreign affairs
4610	Wholesale on a fee or contract basis	8422	Defense activities
4620	Wholesale of agricultural raw materials and live animals	8423	Public order and safety activities
4630	Wholesale of food, beverages and tobacco	<b>Education and training</b>	
4641	Wholesale of textiles, clothing and footwear	8510	Pre-primary and primary education
4649	Wholesale of other household goods	8521	General secondary education
4651	Wholesale of computers, computer peripheral equipment and software	8522	Technical and vocational secondary education
4652	Wholesale of electronic and telecommunications equipment and parts	8530	Higher education
4659	Wholesale of other machinery and equipment	8541	Sports and recreation education
4661	Wholesale of solid, liquid and gaseous fuels and related products	8549	Other education n.e.c.
4663	Wholesale of construction materials, hardware, plumbing and heating equipment and supplies	8550	Educational support activities
4669	Wholesale of waste and scrap and other products n.e.c.	<b>Human health and social work activities</b>	
4690	Non-specialized wholesale trade	8610	Hospital activities
4711	Retail sale in non-specialized stores with food, beverages or tobacco predominating	8620	Medical and dental practice activities
4719	Other retail sale in non-specialized stores	8690	Other human health activities
4721	Retail sale of food in specialized stores	8710	Residential nursing care facilities
4722	Retail sale of beverages in specialized stores	<b>Entertainment, other service activities, and NGOs</b>	
4723	Retail sale of tobacco products in specialized stores	9200	Gambling and betting activities
4730	Retail sale of automotive fuel in specialized stores	9312	Activities of sports clubs
4741	Retail sale of computers, peripheral units, software and telecommunications equipment in specialized stores	9319	Other sports activities
4742	Retail sale of audio and video equipment in specialized stores	9329	Other amusement and recreation activities n.e.c.
4751	Retail sale of textiles in specialized stores	9523	Repair of footwear and leather goods
4752	Retail sale of hardware, paints and glass in specialized stores	9602	Hairdressing and other beauty treatment
4753	Retail sale of carpets, rugs, wall and floor coverings in specialized stores	9609	Other personal service activities n.e.c.
4759	Retail sale of electrical household appliances, furniture, lighting equipment and other household articles in specialized stores	9900	Activities of extraterritorial organizations and bodies
4761	Retail sale of books, newspapers and stationary in specialized stores		

## Appendix E: Questionnaire

### CAMBODIA SKILLS AND JOBS SEURVEY 2020

<b>Questionnaire ID:</b> .....				
	<b>Interviewee</b>	<b>Interviewer</b>	<b>Supervisor</b>	<b>Data entry</b>
<b>Name</b>				
<b>Telephone</b>				
<b>Date</b>				
<b>Signature</b>				

### SECTION A: Current Employment

#### A.1. Please kindly fill out this table regarding your current job as detail as possible.

1. Full title of your occupation or position: (e.g.: Software engineer)	.....	
2. Your main tasks or duties in your job: (e.g.: Software engineer for ICT company)	.....	
3. Level of your position within the company/establishment	<input type="radio"/> 1. Executive or Senior Manager <input type="radio"/> 3. Team leader or Supervisor <input type="radio"/> 5. Senior or Experienced Staff	<input type="radio"/> 2. Manager <input type="radio"/> 4. Specialist <input type="radio"/> 6. Entry level or Junior
4. Type of employer	<input type="radio"/> 1. Public/Government <input type="radio"/> 3. NGO	<input type="radio"/> 2. Private <input type="radio"/> 4. Others
5. Your employer's main business activities: (e.g.: Advertisement agency)	.....	
6. Location (Capital city/Province)	.....	
7. Nationality of owner or major shareholder	<input type="radio"/> 1. Foreigner (Specify.....) <input type="radio"/> 3. Don't know	<input type="radio"/> 2. Cambodian
8. Current total number of people working in your workplace as full-time equivalent	<input type="radio"/> 1. <b>Total staff:</b> ..... (Full time equivalent) <input type="radio"/> 2. Don't know	
9. In the last 12 months, has the number of employments increased, decreased, or remained at the same level?	<input type="radio"/> 1. Increased <input type="radio"/> 3. The same level	<input type="radio"/> 2. Decreased <input type="radio"/> 4. Don't know
10. Tell us your employment form?	<input type="radio"/> 1. Permanent/Regular <input type="radio"/> 3. Temporarily/Floating	<input type="radio"/> 2. Apprenticeship
11. Tell us your type of employment contract?	<input type="radio"/> 1. Written contract	<input type="radio"/> 2. Oral contract
12. Tell us your terms of employment contract:	<input type="radio"/> 1. Undetermined duration contract <input type="radio"/> 2. Don't know	<input type="radio"/> 2. Determined duration contract
13. Tell us your employment type:	<input type="radio"/> 1. Part time (less than 8 hours per day) <input type="radio"/> 2. Full time	
14. Average working hours per week	.....(hour/week)	
15. How long have you been working with this current employer?	.....(Month)	
16. Your latest total gross monthly salary (excludes other benefits and allowance)	In USD (\$):.....	
17. Other Benefits and allowance	<input type="radio"/> 1. NSSF members benefit <input type="radio"/> 3. Private insurance <input type="radio"/> 5. Fuel and transportation allowance <input type="radio"/> 7. Food allowance <input type="radio"/> 9. Accommodation allowance <input type="radio"/> 11. Other.....	<input type="radio"/> 2. Sale commission <input type="radio"/> 4. Mobile allowance <input type="radio"/> 6. Seniority indemnity payment <input type="radio"/> 8. Service charge allowance <input type="radio"/> 10. Annual bonus/13 <sup>th</sup> month salary <input type="radio"/> 12. None
18. Your latest total gross monthly salary (includes other benefits and allowance)	In USD (\$):.....	

#### A.2. What are reasons for accepting current job? Please use a scale of 0 to 10 where 0 corresponds to 'not at all important', 5 'moderately important' and 10 'essential'

1. Proximity to home	.....
2. Employer reputation	.....

3. Interesting nature of job	.....
4. Good pay and benefits (e.g. health insurance, bonuses, company car etc)	.....
5. Good work-life balance	.....
6. Good career development/progress	.....
7. Gain some work experiences	.....
8. Job suited qualification and skills	.....
9. Job provide security	.....

<b>A.3. How often, if at all, does your current job involve the following? Please select one option per row</b>					
	1. Always	2. Usually	3. Sometimes	4 Never	99. Don't Know
1. Responding to non-routine tasks during the course of work	1	2	3	4	99
2. Learning new things	1	2	3	4	99
3. Choosing yourself the way in which you do your work	1	2	3	4	99
4. Working as part of a team	1	2	3	4	99

<b>A.4. How useful are the <u>knowledge and skills</u> you acquired during study when utilized in your current job? Please give your answer on a scale of 1 to 5 where 1 means “not at all” and 5 means “very useful”.</b>	_____
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<b>A.5. How would you best describe your skills in relation to what is required to do your current job? Please select one option only</b>		
My skills were higher than required by my current job	1	Go to A.7
My skills were matched to what was required by my current job	2	Go to A.8
Some of my skills were lower than what was required by my current job and needed to be further developed	3	Go to A.6
Don't know	99	Go to A.8

<b>A.6. To what extent would you say that your skills were lower than required to do your job at that time? Please give your answer on a scale of 1 to 5 where 1 means your skills were a little lower than required and 5 means your skills were a lot lower than required.</b>	_____
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<b>A.7. to what extent would you say that your skills were higher than required to do the job at that time? Please use a scale of 1 to 5 where 1 means your skills were a little higher than required and 5 means your skills were a lot higher than required.</b>	_____
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<b>A.8. Have the following increased, decreased or remained the same since you started your job with your current employer? Please use a scale of 0 to 10, where 0 means it has decreased a lot, 5 means it has stayed the same, and 10 means it has increased a lot [99= don't know]</b>	
1. The variety of tasks	
2. The difficulty of tasks	
3. The needs to learn new things	

<b>A.9. How many jobs have you changed excluding the current one you are doing?</b>	Number of jobs changed: _____
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<b>A.10. Overall, to what extent are you satisfied with your current job situation? Please give your answer on a scale of 1 to 5 where 1 means “not at all” and 5 means “very satisfied”.</b>	_____
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## SECTION B: Situation of First Start Current Employment

<b>B.1. Before you started your current job, would you describe your status? Please select only one that apply</b>		
Self employed	1	Go to B.2
Not employed and not in education or training	2	Go to B.2
In education and training (student at school university or training institute)	3	Go to B.2
Employed in another institution	4	Go to B.3
Employed in the same institution-internally promoted or transferred	5	Go to B.3
Volunteer	6	Go to B.3

<b>B.2. For how long were you [B.1 Code] before finding your current job? Please select one option only</b>	
Less than 6 months	1
More than 6 months and less than 1 year	2
Between 1-2 years	3

More than 2 years	4
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<b>B.3. When you started your job with your current employer, overall, how would you best describe your skills in relation to what was required to do the job at that time? Please select one option only</b>		
My skills were higher than required by my current job	1	Go to B.5
My skills were matched to what was required by my current job	2	Go to B.6
Some of my skills were lower than what was required by my current job and needed to be further developed	3	Go to B.4

<b>B.4. When you started your job with your current employer, to what extent would you say that your skills were lower than required to do your job at that time?</b> Please give your answer on a scale of 1 to 5 where 1 means your skills were a little lower than required and 5 means your skills were a lot lower than required.	_____
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<b>B.5 When you started your job with your current employer, to what extent would you say that your skills were higher than required to do the job at that time?</b> Please use a scale of 1 to 5 where 1 means your skills were a little higher than required and 5 means your skills were a lot higher than required.	_____
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<b>B.6. Is this current job your first paid job?</b>	Yes	1	Go to B.11
	No	2	Go to B.7

<b>B.7. When working in your previous job, overall, how would you best describe your skills in relation to what was required to do the job at that time? Please select one option only</b>		
My skills were higher than required by my previous job	1	Go to B.9
My skills were matched to what was required by my previous job	2	Go to B.10
Some of my skills were lower than what was required by my previous job and needed to be further developed	3	Go to B.8

<b>B.8. To what extent would you say that your skills are lower than required to do your previous job?</b> Please give your answer on a scale of 1 to 5 where 1 means your skills are a little lower than required and 5 means your skills are a lot lower than required.	_____
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<b>B.9. To what extent would you say that your skills are higher than required to do your previous job?</b> Please use a scale of 1 to 5 where 1 means your skills are a little higher than required and 5 means your skills are a lot higher than required to do you previous job.	_____
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<b>B.10. Were you working in the same occupation in your previous job as in your current job? Please select one option only</b>	Exactly the same	1
	Similar	2
	Different	3

<b>B.11. What is the situation that you experienced to get the first job? Please select one option only</b>	School to first job	1
	School to unemployment to first job	2
	School to self-employed to first job	3
	School to unpaid family work to first job	4
	School to inactive to first job	5

<b>B.12. How did you search for job vacancies for your first job?</b>	National Employment Agency (NEA) or Job Center	1
	Career fair	2
	Advertisement in newspapers or other print media	3
	Advertisement on the internet (Facebook, Website...)	4
	University or college sources (lecturers, association, information board...)	5
	Networking: Family, friends, relatives	6
	Private employment agency (HRINC, CamHR...)	7
	Others (Please specify:.....)	8

<b>B.13. Did you receive a career guidance service prior to applying for the first job?</b>	Yes	1	Go to B.14
	No	2	Go to B.17

<b>B.14. If yes (B.13), where did you get this career guidance service? Please select all that</b>	National Employment Agency (NEA) or Job Center	1
	Career guidance office at schools/universities	2

apply	Community-based career guidance office	3
	Others (Please specify:.....)	4

<b>B.15. What kind of benefits/advice did you get from the service? Please select all that apply</b>	Preparation of a good CV and cover letter	1
	Techniques for a successful job interview	2
	Job search techniques	3
	Soft skills at workplace	4
	I made a good job decision	5
	Others (Please specify:.....)	6

<b>B.16. Overall, to what extent were you satisfied with the career guidance service at that time? Please give your answer on a scale of 1 to 5 where 1 means “not at all” and 5 means “very satisfied”</b>	_____	Go to B.18
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<b>B.17. IF YOU DID NOT RECEIVE any career guidance before applying for the first job, please tell us why. Please select all that apply</b>	I was not aware of any career counselling offices in the neighborhood/town/city	1
	I was aware of the service, but found it helpless	2
	Career counselling office is too far from where I live	3
	The job I was applying for is easy to get (anyone is able to do the job)	4
	I had a clear career goal and was always well-prepared before applying for the job	5
	I was specifically/personally offered the job	6
	Others (Please specify.....)	7

<b>B.18. Please tell us, according to your experience, the challenges you mostly faced when applying for the first job.</b>	Preparing a good CV and cover letter	1
	Being nervous in an interview	2
	Deciding on the right job	3
	Job search	4
	Lack confidence due to your skills level is lower than required	5
	Too many applicants for a job vacancy	6
	Others (Please specify.....)	7

<b>B.19. Did you experience some learning in a workplace (e.g. through apprenticeships, internships or other forms of work-based learning) for your first job?</b>	Yes	1
	No	2

## SECTION C: Skills Development and Skill Needs

<b>C.1. Think about the level of skills needed to do your job as well as possible. How would you rate your own level of skills? Please answer on a scale of 0 to 100, where 0 means you need to develop all of your skills and 100 means you have all the skills you need</b>	From 0 to 100
	_____

<b>C.2. What are the educational qualifications, if any, which someone actually needs to get your job today?</b>	
No completed education	1
Primary education	2
Lower secondary education	3
Upper secondary education	4
Vocational Certificate 1,2,3	5
Tertiary education – Associate Degree/High Diploma	6
Tertiary education – Undergraduates	7
Tertiary education – Post-graduate	8

<b>C.3. Which of the following best describes the highest level of literacy skills required for doing your job?</b>	Basic literacy (e.g. Reading manuals, procedures, letters or memos)	1
	Moderate literacy (e.g. writing short documents such as short reports, memos, letter, procedure or instruction)	2
	Advanced literacy (e.g. Writing long documents such as long reports, handbooks, articles, manuals or books)	3

	Not applicable/literacy skills are not required	88
	Don't know	99

<b>C.4. Which of the following best describes the highest level of numeracy skills required for doing your job?</b>	Basic numeracy (e.g. Calculations using decimals, percentages or fractions, understanding tables and graphs)	1
	Moderate numeracy (e.g. Calculation using simple mathematical and statistics such as mean, median, ratio, distribution; and able to understand and interpret table and graphs)	2
	Advanced numeracy (e.g. Calculations using advanced mathematical or statistical procedures)	3
	Not applicable/numeracy skills are not required	88
	Don't know	99

<b>C.5. Which of the following best describes the highest level of Information Technology (ICT) skills required for doing your job?</b>	Basic ICT (e.g. Using a PC, tablet or mobile device for email, internet browsing)	1
	Moderate ICT (e.g. Word-processing, using or creating documents and/or spreadsheets)	2
	Advanced ICT (e.g. Developing software, applications or programming; use computer syntax or statistical analysis packages)	3
	Not applicable/ICT skills are not required	88
	Don't know	99

<b>C.6. Please use a scale of 0 to 10 where 0 means your level of skill is a lot lower than required, 5 means your level of skill is matched to what is required and 10 means your level of skill is a lot higher than required.</b>	
1. Literacy skills	_____
2. Numeracy skills	_____
3. Information communication technology skills (ICT)	_____

<b>C7. Please answer the following questions about the level of importance of the following skills in doing your job and your level of the following skills relative to the level required for your job. Please use the scale from 0 to 10, where: 0 means not at all important, 5 means moderately important and 10 means essential [Using 88 for “skills do not apply” and 99 for “Don't Know” 0 means your level of skill is a lot lower than required, 5 means your level of skill is matched to what is required and 10 means your level of skill is a lot higher than required</b>	<b>Level of importance of skill: From 0 to 10</b>	<b>Level of skills relative to what is required: From 0 to 10</b>
Technical skills (e.g. Specialist knowledge needed to perform job duties; Knowledge of particular products or services; Ability of operating specialized technical equipment)		
Communication skills (e.g. Sharing information with co-workers/clients; Teaching and instructing people; Making speeches or presentations)		
Team-working skills (e.g. Cooperating and interacting with co-workers; dealing and negotiating with people)		
Foreign language skills (e.g. Using a language other than your mother tongue to perform job duties)		
Customer handling skills (e.g. Selling a product/service; Dealing with people; Counselling, advising or caring for customers or clients)		
Problem solving skills (e.g. Thinking of solutions to problems; Spotting and working out the cause of problems)		
Learning skills (e.g. Learning and applying new methods and techniques in your job; adapting to new technology, equipment or materials; Engaging in own learning)		
Planning and organisation skills (e.g. Setting up plans and managing duties according to plans; Planning the activities of others; Delegating tasks; Organising own or other's work time)		

<b>C.8. Compared to when you started your job with your current employer, would you say your skills have now improved, worsened or stayed the same? Please use a scale of 0 to 10 where 0 means your skills have worsened a lot, 5 means they have stayed the same, and 10 means they have</b>	<b>From 0 to 10</b>

improved a lot. [Using “88” for the skills I have now cannot be compared to those I had when I started my job and 99 for Don’t know	
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<b>C.9. Since you started your job with your current employer, have you done any of the following to improve or acquire new skills? Please select all that apply</b>	
You attended training courses (work-based, classroom based and online)	1
Your supervisor taught you on-the-job	2
You learned by interacting with colleagues at work	3
You learned at work through trial and error	4
You learned by yourself (e.g. with the aid of manuals, books, videos or on-line materials)	5
No	88

<b>C.10. In the last 12 months or since you started your job if less than 12 months in current position, have you undergone any of the following types of training for your current job? Please select all that apply</b>		
Training courses attended mostly or only during work hours	1	Go to C.11
Training courses attended mostly or only outside of work hours	2	Go to C.11
Training whilst performing your regular job (e.g. instruction by a supervisor/coworker using your normal tools of work; job rotation; peer support, participation in learning or quality circles)	3	Go to C.11
I have not undergone any training	4	Go to C.13

<b>C.11. Who paid for this training (e.g. tuition, registration, fees)? If you have been on more than one training course, please select all that apply</b>	You paid (with or without help from family/friends)	1
	Your employer paid (or you paid and you were fully reimbursed by your employer)	2
	Your employer paid part of the cost	3
	The government or other public sector organisation paid	4
	Someone else/another organisation paid	5
	Don’t know	99

<b>C.12. What were your main reasons for doing this training? Please select all that apply</b>	To stay up-to-date with changing skill needs of the job	1
	To comply with mandatory policy of employer or legal requirement (e.g. health and safety, induction sessions)	2
	To perform better at the job	3
	To improve career prospects	4
	For personal/non-job-related reasons	5
	Don’t know	99

<b>C.13. Since you started working for your current employer, have any of the following changes in your role or at your workplace taken place? Please select all that apply</b>	
Have experienced changes in the technologies (machinery, ICT systems) used since you started your current job?	1
Have been promoted to a higher-level position	2
Have moved to a different unit/department	3
Have not been promoted or moved to other departments, but the nature of my tasks and responsibilities have changed	4
Have experienced a lower level position than when I started	5
Have experienced a change to the products or services you help to produce	6
Have experienced a change to your working methods and practices	7
Have changed to the amount of contact you have with clients or customers	8
No changes, my role has remained the same	9
Have experienced adoption of green management/culture at workplace (recycle papers, limit the use of plastic materials,...)	10
Have experienced adoption of new/more green technologies for production process or service provision (renewable source of energy, water recycling technologies,...)	11
The employer has introduced green products or services in the business	12

<b>C.14. Were any of these changes supported by training activities paid for by your employer? Please select</b>	I received training for all of the changes	1
	I received training for some of the changes	2
	I did not receive any trainings	3

<b>C.15. On a scale from 0 to 10, where 0 is strongly disagree and 10 strongly agree, please indicate to what extent do you agree or disagree with the following statements.</b>	
1. I enjoy learning for its own sake	
2. I try to relate learning to practical issues	
3. I prefer to have others plan my learning	
4. I prefer problems to which there is only one solution	

<b>C.16. How likely or unlikely do you think it is that each of the following may happen? Please use a scale from 0 to 10, where 0 means very unlikely and 10 very likely.</b>	
1. I will lose my job in the next year	
2. Several of my skills will become outdated in the next five years	
3. There will exist new types of jobs in the next one or two years	

<b>C.17. What are specific skills that you think you need for fulfilling your current work tasks? Please select all that apply</b>	
Basic computer literacy / using IT skills	1
Advanced IT or software skills	2
Oral communication skills	3
Written communication skills	4
Customer handling skills	5
Team working skills	6
Foreign language skills	7
Problem solving skills	8
Planning and organization skills	9
Strategic Management skills	10
Office administrative skills	11
Technical or practical skills	12
Occupational health and safety	13
Human Resource Management	14
Other skills, (Please specify.....)	15
Other skills, (Please specify.....)	16
Other skills, (Please specify.....)	17

<b>C.18. In the near future, how likely are you to consider looking for a new job? Please give your answer on a scale of 1 to 5 where 1 means "not at all" and 5 means "very likely".</b>	_____
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## SECTION D: Educational Information

**D.1. Please kindly fill out the highest level of education or training that you have completed as detail as possible.**

1. What was your highest educational attainment? (e.g.: Bachelor)	.....
2. What was the full title of the qualification (s) you completed at your institution? (e.g.: Bachelor of Engineer)	.....
3. What was your study major? (e.g.: Civil Engineer)	.....
4. When did you graduate or achieve your highest level of education? (YYYY)	_ _ _ _
5. Location	.....
6. Why did you choose this major field of education? (No more than 3 answers)	<input type="radio"/> 1. Scholarship <input type="radio"/> 2. Advice from parents/relatives <input type="radio"/> 3. Reputation of institution <input type="radio"/> 4. Practice-oriented study programs <input type="radio"/> 5. Availability of jobs (easy to get a job) <input type="radio"/> 6. Follow friend's decision <input type="radio"/> 7. I like this major <input type="radio"/> 8. Other (please specify):.....

<b>7. Did you do internship during your course of studies?</b> (Do not include your team projects, practical courses etc.)	<input type="radio"/> 1. Yes, but it is required by school <input type="radio"/> 2. Yes, but it is not required by school <input type="radio"/> 3. No
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<b>D.2. What foreign languages do you know? (Able to read, write, and speak) Please select all that apply</b>	English	1
	Chinese	2
	French	3
	Japanese	4
	Korean	5
	Others (Specify:.....)	6
	None	99

<b>D.3. Overall, how do you rate the usefulness of your study course in the following elements?</b> Please give your answer on a scale of 1 to 5 where 1 means “not at all” and 5 means “very useful”.	
Preparation for first job	
Support for employment growth	

<b>D.4. In retrospect, to what extent are you satisfied with your studies in general?</b> Please give your answer on a scale of 1 to 5 where 1 means “not at all” and 5 means “very satisfied”.	_____
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**SECTION E: Additional Information**

**E.1. Date of birth (YYYY):** \_\_\_\_\_ **E.2. Nationality:** \_\_\_\_\_

**E.3. Gender:**  Male  Female

**E.4. Material status:**  Single  Married  Divorced  Widow(er)  Other; specify: \_\_\_\_\_

**E.5. Would you describe yourself as having a disability?**  No  Yes; specify: \_\_\_\_\_

**E.6. Number of household members:** \_\_\_\_\_ **E.7. Number of employed members:** \_\_\_\_\_

**E.8. Members aged under 15:** \_\_\_\_\_ **E.9. Members aged above 64:** \_\_\_\_\_

**E.10. Are you a household head?**  Yes (Go to E.12)  No

<b>E.11. What is the highest educational level of household head?</b>	
No completed education	1
Primary education	2
Lower secondary education	3
Upper secondary education	4
Vocational Certificate 1,2,3	5
Tertiary education – Associate Degree/High Diploma	6
Tertiary education – Undergraduates	7
Tertiary education – Post-graduate	8

**E.12. Current address:** District/City/Khan \_\_\_\_\_ Municipality/Province: \_\_\_\_\_

**Thank you for your participation in this survey!**

## **National Employment Agency**

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