

Human Resources Development Readiness in ASEAN

Cambodia Country Report







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Foreword

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Developing human resources to empower peoples across the region and to strengthen ASEAN Community has been one of the key purposes of ASEAN as stipulated in the ASEAN Charter, adopted in 2007. The advancement of human resources development (HRD) has become more urgent, particularly with the Fourth Industrial Revolution (4IR) which has transformed businesses and jobs at a speed faster than workers can adapt. This urgency has been further exacerbated by the COVID-19 pandemic.

Cognisant of the urgency of developing future-ready human resources to enable ASEAN to recover and thrive in the face of ever-changing demands of the labour market, ASEAN Leaders reaffirmed their unwavering commitment to build a people-oriented and people-centered ASEAN Community, through the adoption of the ASEAN Declaration on HRD for the Changing World of Work and its Roadmap, championed by Viet Nam during their Chairmanship of ASEAN in 2020.

Carried out in support to the implementation of the ASEAN HRD Declaration and its Roadmap and in collaboration between ASEAN labour and education sectors, we are very pleased to welcome the publication of the ten country reports of the Study on HRD Readiness in ASEAN, which features the state of HRD readiness in each ASEAN Member States (AMS). The study is a joint initiative of Viet Nam's Ministry of Labour, Invalids and Social Affairs (MOLISA) and the ASEAN Secretariat, with the support of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) through the Regional Cooperation Programme for TVET in ASEAN (RECOTVET).

Each country report compiles and synthesises national strategies, policies and programmes on HRD, which were then used as the basis in developing the regional report on HRD Readiness in ASEAN. We acknowledge that while the report demonstrates the significant progress made in the region, we are also aware of the commitments required to ensure that dynamic reforms are carried out going forward. We believe that the ten country reports and regional report will be instrumental in supporting the implementation of the ASEAN HRD Declaration and its Roadmap, particularly through the development of evidence-based policies and initiatives to advance HRD in ASEAN

Lastly, we would also like to commend the efforts and commitment of the national researchers and authors from all AMS in developing the country reports under the guidance of Prof. Dieter Euler, as the Study's lead researcher and author of the regional report. Appreciation also goes to the respondents and resource persons from relevant ministries and institutions from the labour and education sectors for their valuable feedback and contributions during the development and finalisation of the reports.

We would also like to extend our recognition to RECOTVET for their longstanding support in advancing HRD agenda in ASEAN.

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Acknowledgements

The Study on Human Resources Development (HRD) Readiness in ASEAN was initiated by the ASEAN Secretariat together with the Vietnamese Ministry of Labour, Invalids and Social Affairs (MOLISA). The purpose of the Study is to support implementation of the ASEAN Declaration on HRD for the Changing World of Work adopted by the 36th ASEAN Summit in June 2020. The Study was conducted as an initiative under Viet Nam's Chairmanship of ASEAN with the support of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH through the Regional Cooperation Programme in Technical and Vocational Education and Training (RECOTVET).

Terms of Reference and an Inception Report for the Study were endorsed at the ASEAN Senior Labour Officials Meeting (SLOM) and Senior Officials Meeting on Education (SOM-ED) in April 2020 and June 2020, respectively. The research methodology was further deliberated by SLOM and SOM-ED focal points at a Validation Workshop held virtually on 29 June 2020.

The Study, which was conducted at regional level and across ten ASEAN Member States, has achieved its objective of offering comprehensive baseline information and recommendations. This valuable feedback will enable ASEAN policy makers and practitioners to better frame HRD as a priority for policy making.

The Regional Report and ten country reports were produced and endorsed following a series of extensive consultations with SLOM and SOM-ED from September 2020 to April 2021. The reports were launched at the High-Level Launch and Dissemination Forum conducted virtually on 26 April 2021.

The technical contributions of numerous individuals were invaluable to the development and implementation of the Study. We would like to offer our sincere thanks to the following:

- The focal points of ASEAN Member States' labour and education ministries, whom
 there are too many to acknowledge individually, for your invaluable time and
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- To the International Cooperation Department of MOLISA Viet Nam, led by Dr. Ha Thi Minh Duc (Deputy Director General) for leadership and guidance during implementation of the Study, and her team members, particularly Ms. Tran Thanh Minh and Mr. Phan Nhat Minh;

- To the ASEAN Secretariat under the coordination of H.E. Kung Phoak, Deputy Secretary-General for ASEAN Socio-Cultural Community, including Director Rodora T. Babaran; the Labour and Civil Services Division, led by Ms. Mega Irena (Head and Assistant Director); the Education, Youth and Sport Division, led by Ms. Mary Anne Therese Manuson (former Head and Assistant Director); and their team members, in particular Mr. Carl Rookie O. Daquio, Ms. Madyah Rahmi Lukri, Mr. Alvin Pahlevi, Ms. Felicia Clarissa, and Ms. Shinta Permata Sari for their professional coordination and facilitation of consultations and stakeholders, as well as for their feedback to the draft reports;
- To GIZ's RECOTVET team, led by Mr. Ingo Imhoff (Programme Director), in particular Mr. Nguyen Dang Tuan and Ms. Tran Phuong Dung for the financial, technical and administrative support throughout the Study;
- To Prof. Dieter Euler of St. Gallen University as the Study's lead researcher and author of the Regional Report. This Study would not have been possible without his expertise and support;
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- Finally, to Prof. Sir Alan John Tuckett for editing and proofreading the Regional Report, Dr. Daniel Burns for editing the Cambodia, Indonesia, Myanmar and Thailand country reports, and Mr. Steven Christensen for designing the layout of the published reports.

Introduction to the Cambodia country report

Human resources development (HRD) empowers people to actively shape their future in a modern world of work that is characterized by an accelerated pace of change. HRD aims at equipping people with the skills, competencies, values, and attitudes to prepare them for a future that is yet unknown.

Education and training systems are designed to provide people with the capacity and resilience to tackle current and future challenges in both their private and working lives. Governance, infrastructure, content, and teaching and learning processes have to be organized to accomplish this key function effectively and efficiently.

While these basic requirements are not new, the ASEAN regional context has changed considerably over the last decades. Advances in digital technologies, new demands in the area of environmental protection, and increased labour migration are just a few examples of the issues that require rapid responses by governments and the societies they represent. Education and training systems need to adjust to the changing times. The COVID-19 pandemic demonstrates the need for societies to adapt to unprecedented and unpredictable disruptions, and to be better prepared for the future.

Against this background, the Heads of State adopted the Declaration on Human Resources Development for the Changing World of Workⁱ at the 36th ASEAN Summit on 26 June 2020, reaffirming the region's commitment to equip its human resources with the competencies required for the future. A Roadmap to implement the Declaration was subsequently developed and adopted by the ASEAN labour and education ministers

Guided by the aforementioned ASEAN Declaration, the Study on HRD Readiness in the ASEAN region was conducted to provide baseline information on the preparedness of HRD policies and programmes across ASEAN Member States with the aim of enabling their workforces to be relevant, agile and resilient for the future world of work. The Study was initiated by the ASEAN Secretariat to support Viet Nam's Chairmanship of ASEAN in 2020 and in collaboration with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH through RECOTVET.

i https://asean.org/storage/2020/06/ASEAN-Declaration-on-Human-Resources-Development-for-the-Changing-World-of-Work.pdf

This Cambodia Country Report is part of a comprehensive regional study investigating HRD readiness in ASEAN Member States (AMS) from a broader perspective. This report, together with the reports on the other nine AMS, forms part of the Regional Report on HRD Readiness in ASEAN. The ten country reports follow a common conceptual framework for HRD developed in the Inception Report, which was endorsed in June 2020. Together, the Regional Report and aligned country reports offer a wealth of background knowledge and guidance to enable ASEAN policy makers and practitioners to better frame HRD as a priority of future policy-making in the region.

The country reports were designed to focus on three key activities:

- Review relevant country-specific literature, policies, and other practices to identify elements of HRD frameworks and what 'readiness' means in the national context;
- Overview the current situation of national HRD policies and available resources to promote LLL and future skills; and
- Showcase promising strategies and practices to promote LLL and future skills within the respective areas of intervention.

This Cambodia Country Report was written by the national researcher Ms. Sopheara Ek. It describes existing practices and introduces options for future policies as guided by a conceptual framework of investigation introduced in the Regional Report. In particular, it explores approaches currently applied with regard to HRD in reaction to the challenges of a changing world of work. It reveals considerable gaps between the appraisal of importance and desirability of HRD interventions on the one hand, and the extent of their realization and achievement on the other. In response, the report encourages those responsible for designing future strategies and policies to adapt their approaches to ensure the workforce is more resilient to the future world of work.

The ASEAN country reports were developed through extensive consultations between September 2020 and April 2021, at which time they were finalised and endorsed by their respective education and labour ministries. Building upon the findings and analyses in the country reports, the Regional Report was then developed by the senior international researcher, Prof. Dr. Dieter Euler. The Regional Report and country reports were launched at the High-level Launch and Dissemination Forum conducted virtually on 26 April 2021.

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Abbreviations

AMS ASEAN Member States

BMOs Business Membership Organisations

CAMFEBA Cambodian Federation of Employers and Business Associations

CCC Cambodia Chamber of Commerce
CGTI Cambodia Garment Training Institute

CQF Cambodia Qualifications Framework
CSES Cambodia Socio-Economic Survey

CWEA Cambodia Women Entrepreneurs' Association

DPs Development Partners

EPF Entrepreneurship Promotion Fund

ESP Education Strategic Plan

FASMEC Federation of Associations of Small and Medium Enterprises of

Cambodia

GMAC Garment Manufacturing Association in Cambodia

HEIs Higher Education Institutions

HRD Human Resource Development

IDP Industrial Development Policy

JICA Japan International Cooperation Agency

KIIs Key informant interviews

LLL Lifelong learning
MEF Ministry of Finance

MoEYS Ministry of Education, Youth, and Sports

MoSVY Ministry of Social Affairs, Veterans, and Youth Rehabilitation

MoT Ministry of Tourism

MoWA Ministry of Women's Affairs

MLVT Ministry of Labour and Vocational Training

NEA National Employment Agency

NFE Non-formal education

NGOs Non-government Organisations

NISE National Institute of Special Education

NSDP National Strategic Development Plan

NTB National Training Board

PPP Public-private partnership

PwDs Persons with disabilities

R&D Research and Development

RS Rectangular Strategy

SDF Skills Development Fund

SDG Sustainable Development Goal SMEs Small and Medium Enterprises

SSCs Sector Skill Councils

STEM Science, technology, engineering, and mathematics

TVET Technical Vocational Education and Training
YEAC Young Entrepreneurs Association of Cambodia

WDC Women Development Centre

1. Background

The ASEAN Declaration on Human Resources Development for the Changing World of Work was initiated in October 2019 with a first draft developed in Vietnam in January 2020. The development of the Declaration was supported by the ASEAN Member States (AMS) at the 15th Senior Labour Officials Meeting (SLOM) in August 2019 in Thailand. The Declaration calls for the development of concrete strategies and actions.

Following the principles laid out in the Declaration, a consensus was reached for a regional study on "Human Resource Development (HRD) readiness." The study was conducted by each AMS with the support of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, and with the overall supervision and technical guidance of an international expert, Dr. Dieter Euler. The study aims to assess HRD readiness in Cambodia, with the results used as baseline information for Cambodia as well as AMSs to take initial follow-up actions on the ASEAN Declaration and its Roadmap.

1.1. Methodology

1.1.1. Data collection methods

- Primary data
 - Meeting with the international expert to understand the project and scope of work.
 - Online survey of government officials, university rectors, school principals, teachers and lecturers.
 - Key informant interviews with government officials, representatives of business membership organisations (BMOs), and private companies.
 - Feedback and inputs from the international expert and government agencies.
- Secondary data
 - Review of project-related documents.
 - Review of Cambodia's rules and regulations and other relevant documents from government agencies, development partners and other sources.

1.1.2. Data collection tools

Given the large sample size and relatively short 2-week timeframe, data collection was conducted with four sets of self-administered online survey questionnaires: (1) a questionnaire for HRD readiness; (2) a questionnaire for primary and secondary schools; (3) a questionnaire for high education institutions (HEIs); and (4) a questionnaire for Technical and Vocational Education and Training (TVET) institutions. The data was collected using KoBoToolbox.

1.1.3. Study coverage areas

Although the online survey was initially intended for respondents in Phnom Penh, Kandal, and Siem Reap, the study was able to reach out to 17 provinces in total, including Phnom Penh. In addition to respondents from three initially targeted provinces (which made up the majority), respondents from Svay Rieng, Pailin, Prey Veng, Battambang and 10 other provinces were also surveyed.

1.1.4. Sample size and selection criteria

The total sample size was 420 respondents, including 412 survey respondents and 8 key informant interviews (KIIs). The survey was conducted with 80 primary and secondary schools, 11 HEIs, and 21 TVET institutions.

Table 1: Sample size

Respondents	Sample Size
Online survey with government agencies, general education, TVET institutions, and HEIs	412
KIIs with government agencies, BMOs, and the private sector	8
Total	420

Selection Criteria:

- Both public and private HEIs, TVET institutions, and primary and secondary schools.
- Schools targeting students regardless of status and schools targeting vulnerable students.
- Schools located in Phnom Penh and various provinces.
- Primary and secondary schools and TVET institutions were randomly selected with support from the Ministry of Education, Youth, and Sports (MoEYS) and the Ministry of Labour and Vocational Training (MLVT).
- The companies and BMOs were purposely selected based on their engagement in HRD.

1.2. Scope and limitations

- Vulnerable students are defined as those who are poor, disabled, or from minority/ethnic groups.
- Given the time constraints, the study selected and examined 4 of the 6 intervention areas. The selection of intervention areas was based on government priorities and needs, and on discussions with the MoEYS and the MLVT during the validation workshop on the inception report facilitated by the international expert.

Proposed intervention areas	Selected intervention areas
Promote HRD Culture	
Adopt an inclusive approach	Adopt an inclusive approach
Strengthen enabling structures Modernise HRD programs	Strengthen enabling structures
Professionalise development of qualified teaching personal	Modernise HRD programs Promote engagement of the business sector in HRD
Promote engagement of the business sector in HRD	

1.3. Report structure

The report is divided into 6 parts. The introduction in Part 1 is followed by an overview of the education sector in Cambodia in Part 2. Parts 3 and 4 illustrate the assessment of HRD readiness and inclusiveness in HRD and lifelong learning (LLL), respectively. Part 5 highlights enabling structures and Parts 6 and 7 examine the quality and relevance of HRD/LLL and engagement of the private sector. Part 8 concludes the report.

2. Overview of the education sector in Cambodia

The average age of Cambodians was 25.6 years in 2020 and 24.4 years in 2019 (Worldometers, 2021). In 2012, the working age population of youths aged between 15 and 24 was around 3.4 million or around 31% of the total working age population (15 and 64 years old). Approximately 2.07 million (61%) of working age youths were employed, while 80,980 (2%) were unemployed and around 1.26 million (37%) economically inactive (NIS/MoP and ILO, 2013). The employment rate of working aged youths between 15 and 24 increased by 18% from 2.07 million in 2012 to 2.45 million in 2017 (NIS/MoP, 2018). According to Global Economy (2021), the average unemployment rate of youths in Cambodia was 1.41% between 1991 and 2019, 1.08% in 2017, and 1.1% in 2019. The share of youths not in employment, education, and training was low at 0.063% of the total population in 2014, a significant decrease from 12.72% in 2012.

According to Cambodia's Socio-Economic Survey (CSES) (2018), the literacy rate for adults aged 15 and above was around 83% in 2017. The literacy rate for women was lower than for men in both urban and rural areas. The literacy rate was highest among youths aged between 15 and 24, which accounted for 94.6%, an increase of 3.5 percentage points from 2014 (OECD, n.d.). The literacy rate for female youths aged between 15 and 24 was slightly higher than for men, whose rate was, in contrast, higher for the rest of the age groups.

Table 2: Adult literacy rates in 2017

Location	Women	Men	Total
Cambodia	78.1%	87.3%	82.5%
Phnom Penh	91.9%	97.5%	94.5%
Other Urban	84.4%	92.6%	88.2%
Other Rural	74.4%	84.6%	79.3%

Source: CSES (2018).

¹ The population in 2017 was around 15.8 million (NIS/MoP, 2018).

^{2.} In 2017, there was no data on working age population and unemployment for youths aged between 15 and 24 or for those who were economically inactive.

^{3.} ILO, ILOSTAT database.

Table 3: Literacy rates by gender and age in 2017

Age Group	Women	Men	Total
6+	76.7	84.0	80.3
6 - 14	71.0	72.5	71.8
15 - 24	95.7	93.5	94.6
25 - 34	85.7	87.8	86.8
35 - 44	71.2	82.8	76.8
45 - 54	69.3	81.9	75.2
55 - 64	63.6	82.8	71.3
65+	39.0	79.5	55.1

Source: CSES (2018).

In Cambodia, general and higher education falls under the MoEYS, while TVET is under the MLVT. Moreover, the Ministry of Social Affairs, Veterans, and Youth Rehabilitation (MoSVY) and the Ministry of Women's Affairs (MoWA) run TVET centres for people with disabilities and Women Development Centres (WDCs) for women in rural areas, respectively. The Ministry of Tourism (MoT) operates and manages tourism-related TVET. As of July 2020, there were 325 TVET institutions in Cambodia, of which 107 were under the MLVT. Out of 107 TVET institutions under the MLVT, 38 are public institutions, 44 are private institutions, and 25 are run by NGOs.⁴ Among 38 public institutions, 20 have received ISO for quality management systems (ISO 9001:2008 and 9001:2015) (MLVT, 2019a). Additionally, the MoEYS runs technical and vocational education and training at 18 universities and high schools.⁵

Gross enrolment rate at primary education level was the highest, accounting for around 98% in the academic year 2017-2018. There was almost no difference in the enrolment rates for boys and girls. The enrolment rate declined by almost half at lower secondary education and by a further half at upper secondary education. Out of the total enrolments in the academic year 2017-2018, 54,838 were children and youths with disabilities, of which 22,621 (41%) were female (MoEYS, 2018a).

Many students did not enrol into lower secondary education although they successfully completed primary education. Almost half of students who graduated from lower secondary school did not continue their studies at upper secondary school in 2018. Only around 12% of students aged between 18 and 22 enrolled for higher education.

⁴ Interview with the representative from the MLVT.

⁵ Interview with the representative from the MoEYS.

Table 4: Gross enrolment rate

Education levels	Academic year 2017/2018
Early childhood education (up to 5 years old)	35.8
Boys	34.9
Girls	37.0
Primary education	97.8
Boys	97.6
Girls	98.1
Lower secondary education	59.2
Boys	55.2
Girls	63.4
Upper secondary education	28.5
Boys	26.3
Girls	30.9
Higher education (Aged 18-22)	11.6
Male	13.2
Female	11.3

Source: MoEYS (2019a).

Table 5: Completion rates in 2018

Education Levels	2018	2019
Primary education	82.7	82.1
Boys	79.1	78.5
Girls	86.4	86.1
Lower secondary education	46.5	45.3
Boys	42.3	40.7
Girls	51.1	50.2
Upper secondary education	23.6	22.2
Boys	-	20.1
Girls	-	24.5

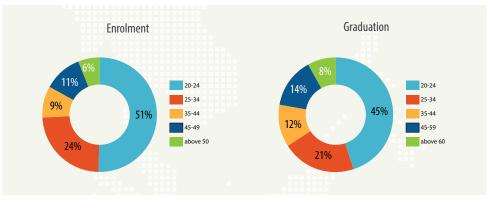
Note: Data is from public institutions only. Source: MoEYS (2019a), MoEYS (2019b). The enrolment for students at TVET institutions under the MLVT significantly increased by 51% from 2017-2018 to 2018-2019. The number of students graduating increased by around 19% from 2017-2018 to 2018-2019 and the share of female students graduating was 45% in 2018-2019, a decrease of 4 percentage points from 2017-2018. The highest enrolment and graduation rates in 2018-2019 were among youths aged between 20 and 24, followed by youths aged between 25 and 34. A small proportion of adults aged above 60 also enrolled in and graduated from TVET institutions.

Table 6: Number of students enrolled in and graduating from TVET institutions of the MLVT

Toma of in atitudion	No. of institutions	2017 - 2018		2018 - 2019	
Type of institution	as of July 2020	Total	Female	Total	Female
	Enrolm	ent			
Public institutions	38	44,806	47%	69,617	40%
Private institutions	44	4,159	92%	8,075	42%
NGOs	25	7,406	56%	7,698	52%
Total enrolment		56,371	51%	85,390	41%
Graduation					
Public institutions	38	40,680	49%	52,807	45%
Private institutions	44	4,254	76%	2,852	26%
NGOs	25	7,318	32%	6,689	54%
Total Graduation		52,252	49%	62,348	45%

Source: MLVT (2019b), MLVT (2020).

Figure 1: Student enrolment and graduation by age in the academic year 2018-2019



Source: MLVT (2020).

According to the MLVT database, there are no data on the enrolment of vulnerable students. However, there is data on completion rates. Among vulnerable students graduating in 2018 and 2019, most were minority students (from ethnic groups or indigenous students) and only a small number were students with disabilities or orphans.

Table 7: Graduation rates of vulnerable students from TVET institutions

	2018		2019		
	Short course	Long course	Short course	Long course	
Total graduation	27,135	17,671	45,688	39,702	
Students with disabilities (%)	2	1	2	1	
Minority students (%)	32	28	32	21	
Orphans (%)	0	1	0	1	

There is no or limited data for the enrolment and graduation of HEIs. According to the interview with the representative of MoEYS, MoEYS' Education Management Information System (EMIS) only captures data for general education.

3. Assessment of human resource development (HRD) readiness

The online survey on HRD Readiness was conducted with 70 respondents from 4 different types of organisations, including ministries, BMOs, TVET institutions, and HEIs. The majority of respondents from TVET institutions and all respondents from universities were rectors, while the respondents from government agencies were officials in charge of general education and TVET at MoEYS and MLVT, respectively.

Table 8: Respondents by institution

Types of institution	Number
Association/Federation	2
Ministries (MoEYS and MLVT)	35
TVET/College/Academy	31
Universities	2
Total	70

This part examines HRD readiness by focusing on 6 intervention areas: (1) promote HRD culture; (2) adopt an inclusive approach; (3) strengthen enabling structures; (4) modernise HRD programs; (5) professionalise development of teaching personnel; and (6) promote engagement of the private sector in HRD. Below are the results of the online survey.

Ministries: Many respondents reported "very high", "high", and "quite high" desirability and achievements across all intervention areas. Only a few respondents reported "quite low" achievements in all intervention areas. Among the intervention areas, engagement of the private sector and the development of qualified personnel gained more attention from the respondents, half of whom scored these two areas "very high"; similarly, achievements in these two areas were both reported at "very high" and "quite high" levels. However, it is worth noting that the majority of government officials reported the level of achievement for enabling structures at "quite high", which is lower than their reported expectation level.

BMOs: The representatives of the two BMOs expressed "very high" and "high" targets for all intervention areas and achieved results between "quite high" and "quite low". Although intervention on an inclusive approach was reported to have "high" desirability, achievement was reported to be "low".

TVET Institutions: Respondents from TVET institutions reported "very high", "high", and "quite high" desirability of all intervention areas, except enabling structures which were reported by a respondent to have "quite low" interest. The reported achievements were mostly between "high" and "quite high". Engagement of the private sector gained more attention from respondents, the majority of whom scored this area "very high"; however, a few respondents assessed the achievements in this area as "quite low" in addition to the majority reporting "quite high" and "high". Also, a few respondents reported the achievement of inclusive approaches as "low".

HEIs: The representatives from the two universities said that all intervention areas are very important and the achievements of each intervention area are at "very high" and "high" levels. Only strengthening enabling structures reported "quite low" achievements in spite of high desirability.

Based on the survey results, HRD readiness in Cambodia was reported to be highly important and desirable. Despite the Royal Government of Cambodia's efforts in promoting HRD readiness, there are lagging achievement levels in all intervention areas. Cambodia should look into this and take concrete action to further promote and strengthen HRD readiness in the country.

Table 9: Assessment of HRD readiness

			mportant	Important/Desirable					Realised/Achieved	Achieved		
	Very high (100%)	High (80%)	Quite high (60%)	Quite low (40%)	Low (20%)	Total	Very high (100%)	High (80%)	Quite high (60%)	Quite low (40%)	Low (20%)	Total
Ministries (n: 35)												
Promote HRD Culture	91	7	ъ	0	0	35	23	12	19	_	0	32
Adopt an inclusive approach	13	7	7	-	0	35	-	71	र्घ	D	0	33
Enabling structures	15	71	9	0	0	35	2	9	20	2	0	33
Modernisation program	13	17	Ŋ	0	0	32	23	13	8	_	0	32
Professionalise development of qualified teaching personnel	18	12	Ŋ	0	0	35	4	71	71	23	0	35
Promote engagement of the private sector	19	12	4	0	0	32	и	71	71	4	0	35
BMOs (n: 2)												
Promote HRD Culture	0	2	0	0	0	7	0	0	0	2	0	7
Adopt an inclusive approach	0	2	0	0	0	7	0	0	0	0	2	2
Enabling structures	0	2	0	0	0	7	0	0	0	2	0	7
Modernisation program	_	-	0	0	0	2	0	0	-	-	0	7
Professionalise development of qualified teaching personnel	2	0	0	0	0	7	0	0	2	0	0	7
Promote engagement of the private sector	7	0	0	0	0	7	0	0	2	0	0	7

			Important	Important/Desirable					Realised/Achieved	Achieved		
	Very high (100%)	High (80%)	Quite high (60%)	Quite low (40%)	Low (20%)	Total	Very high (100%)	High (80%)	Quite high (60%)	Quite low (40%)	Low (20%)	Total
TVET institutions (n: 31)												
Promote HRD Culture	13	16	2	0	0	23	0	91	13	2	0	12
Adopt an inclusive approach	01	18	2	0	0	<u>13</u>	2	∞	91	2	2	12
Enabling structures	E	71	2	_	0	<u>12</u>	0	12	15	4	0	12
Modernisation program	18	10	23	0	0	23	0	71	13	4	0	3
Professionalise development of qualified teaching personnel	18	L	2	0	0	15	_	12	91	2	0	23
Promote engagement of the private sector	20	6	2	0	0	ы	0	ור	91	4	0	13
Universities (n: 2)												
Promote HRD Culture	_	-	0	0	0	7	_	0	-	0	0	7
Adopt an inclusive approach	2	0	0	0	0	7	_	0	-	0	0	2
Enabling structures	_	-	0	0	0	7	-	0	0	-	0	7
Modernisation program	2	0	0	0	0	2	_	_	0	0	0	2
Professionalise development of qualified teaching personnel	2	0	0	0	0	7	_	٦	0	0	0	2
Promote engagement of the private sector	2	0	0	0	0	2	-	1	0	0	0	2
= (

Source: Online survey.

4. Inclusiveness in HRD/LLL approaches

Cambodia's Education Roadmap 2030 is committed to achieving Sustainable Development Goal (SDG) 4 by ensuring "inclusive, equitable, and quality education" and promoting LLL opportunities. The roadmap incorporates 5 priorities, focusing on (1) equal access among boys and girls to free and equitable basic education (up to grade 9); (2) completion of upper secondary education with the same learning results for both boys and girls and increasing youth access to technical education; (3) equal access to affordable and quality technical education and higher education for both men and women; (4) competency in literacy and numeracy skills for youths and adults and an increase in LLL opportunities for all age groups; and (5) improvement of education management and governance at all levels.

In addition, the **Policy on Education for Children with Disabilities (2008)** supports children with disabilities through raising awareness, acceptance of children with disabilities by communities and institutions, providing rehabilitation services, and providing equitable and effective quality education, life skills and vocational training to children and youths with disabilities. Most importantly, the **Policy on Inclusive Education (2018)** outlines a framework for providing education and training to vulnerable students in order to ensure quality, and inclusive and equitable lifelong learning. Inclusive education-related policies were adopted and implemented at all education levels as well as TVET. Inclusive education and TVET are also mentioned as one of the nine strategic directions in the National Disability Strategic Plan (NDSP) 2019-2023, an inter-ministerial policy overseen and facilitated by the Disability Action Council. The potential and importance of education and TVET for persons with disability (PwDs) is reiterated through awareness raising among families, communities and education working groups. It also focuses on identification of PwDs with special needs in enrolment, scholarships and examinations; teaching staff development for special education at all levels; and standards of teaching/ learning materials. Moreover, it strengthens coordination mechanisms; develops a regulatory framework to integrate inclusive and special education into private institutions; modernises TVET programmes for PwDs to meet market demand; allocates the national budget to support PwDs' access to TVET; and incentivises employers and education/TVET institutions to provide opportunities to PwDs.

In addition, the Law on the Protection and Promotion of Rights of Persons with Disabilities (2009) ensures that students with disabilities have the right to enrol at both public and private schools as well as to receive scholarships. Likewise, Sub-decree 108 (2010) sets a 2% and 1% quota for the employment of people with disabilities at public institutions employing at least 50 employees and at private companies with at least 100 employees. Moreover, the Lifelong Learning policy, initiated in mid-2019, puts more focus on drop-out students and disadvantaged groups, including vulnerable people, minorities, migrant workers, and the unemployed in order to address issues regarding inequality and gaps between primary and secondary school enrolment (MoEYS, n.d.).

In order to achieve the inclusive education targets, the government initiated a number of activities to promote inclusive education, including transforming an NGO school specialising in PwDs into a national institution under the MoEYS. For instance, the National Institute for Special Education (NISE), which is a leading institution in providing training to teachers of students with disabilities, conducting research on sign languages, and publishing articles and research. The MoEYS has also developed special education schools for PwDs. There are five special education schools located in Phnom Penh and other three provinces. These schools focus on students with certain types of disabilities including visual impairment, hearing impairment, and muteness. In the academic year 2019-2020, there were more than 700 students with disabilities studying at these schools. In addition to providing knowledge and life skills, these schools also offer dormitories and meals. Students at these schools (from grade 3) are also required to attend public schools on a supplementary basis.⁶ Also pertinent to inclusive education, the MoEYS developed a Multilingual Education National Action Plan and operates 80 integrated multilingual community schools targeting indigenous students. The MoEYS plans to increase the number of indigenous languages taught at these schools from five to six (MoEYS, 2019a). Also, it has piloted a full-day class for primary education by "offering lunch and using community food products" (MoEYS, 2019a, p. 26). It has also collaborated with development partners to develop teaching methodologies for reading and mathematics, and has piloted reading materials in Kompong Thom and Siem Reap provinces (MoEYS, 2019a).

In order to enhance inclusive education, the MoEYS focuses on a number of activities and sets out a number of targets (MoEYS, 2019d), including:

- Providing scholarships to outstanding and poor students as well as students with disabilities.
- Providing support programmes to slow learners.
- Promoting partnerships with the private sector on special education.
- Training 500 teachers per year to understand inclusive education.

^{6.} Interview with the representative of the NISE.

- Training 6 teachers of vulnerable students per year in the context of technology and globalisation.
- Certifying 100 teachers on special education.
- Supporting the provision of technical skills, life skills, and sports to vulnerable girls and women with the target increasing by 15% per year for girls and 10% per year for women.
- Ensuring the enrolment of vulnerable girls and women and their participation in school and social activities (no specific target).
- Providing scholarships for 150 girls and women in 2020, 200 in 2021, 250 in 2022, and 300 in 2023.
- Providing scholarships to students with disabilities studying at public universities, targeting 62 students in 2020, 76 in 2021, 111 in 2022, and 139 in 2023.

In line with the government strategies, HEIs and TVET institutions are also making efforts to promote inclusive education. However, the achievements remain limited. According to the online survey with HEIs, general education schools, and TVET institutions, almost half of respondents from TVET institutions (42% of 134 respondents) and 35% of 37 respondents from HEIs did not indicate or target the enrolment of people with disabilities. Only 8% from HEIs and 27% from TVET institutions had a target while the rest showed no knowledge of the target. TVET respondents reported an average of 40% as the planned enrolment of vulnerable students and 34% as the actual enrolment rate, while the reported rate of planned completion is around 35% and that of actual completion 33%. The high actual enrolment and completion rates result from the outlier figures addressed by respondents from TVET specialising in education for people with disabilities. For HEIs, respondents indicated a target of 5% of enrolment and completion, and reported meeting the target for both actual enrolment and graduation.

The enrolment and completion rates of vulnerable students, including students with disabilities, orphaned students, students from poor families, and students from minority groups have increased at a steady pace. Despite the government's efforts, a number of challenges remain. First, some parents hesitate to send their children to school due to long travel times. Second, teachers have limited skills and methods to teach and guide students with disabilities and encounter language barriers when teaching minority students (MoEYS, 2019a). Third, TVET is not attractive and is not a priority, especially for poor students who prefer working to TVET courses. Other students are more interested in registering at universities as they believe university graduation is more prestigious and will increase their employment opportunities.

^{7.} Interview with the representative of NISE.

^{8.} Ibic

^{9.} Interview with the representative of MLVT.

5. Enabling structures for the promotion HRD/LLL

Education has improved remarkably after efforts by the MoEYS with support from relevant stakeholders. So far, many initiatives, strategies and policies have been put in place to promote HRD and LLL. HRD is a priority of the Rectangular Strategy (RS) IV and the National Strategic Development Plan (NSDP) 2019-2023, a government blueprint and roadmap that includes the target for improving education and vocational skills. The NSDP aims to strengthen the quality of education, science, technology and vocational training by focusing on teachers, school expansions, enhancement of school management inspection, promotion of technical education at upper secondary education level, skills education in response to labour market demand, and the development of comprehensive curricula and textbooks. In addition, the Industrial Development Policy (IDP) 2015-2025 is another key policy promoting industrial development and modernization from a labour-intensive industry to a higher skills base by 2025. It also intends to strengthen competitiveness and enhance the productivity of domestic industries through the development of modern technology and knowledge-based industry. HRD and technical training are among the 4 strategic areas of IDP.

As a medium-term framework, the Education Strategic Plan (ESP) 2019-2023 sets out key strategic directions for all education levels and aims to establish "a robust base for education in 2030 and beyond." Thus, the MoEYS is committed to achieve the Cambodia Sustainable Development Goal (CSDG) by promoting "inclusive and equitable quality" and LLL opportunities for all age groups. The ESP ensures that all children and youths obtain both cognitive and non-cognitive skills that respond to the demands of the labour market and are in line with 21st century/future skills.

The most significant efforts and progress of the MoEYS in supporting LLL include waiving enrolment payments for primary and secondary school students, providing funds to schools in rural areas, and building primary schools across the country. The MoEYS has provided scholarships to poor students to enable them to complete the 9-grade basic education (Corrado & Tungjan, 2020), and career counselling in order to reduce the drop-out rate in secondary education (MoEYS, 2019a). Furthermore, the MoEYS has launched campaigns to empower education and fight against "illiteracy and literacy regressions" (Neak, 2020). As a result, it offered literacy programmes

to 165,000 students from public schools and 25,600 students from non-formal primary schools between 2014 and 2018. As of 2018, 16,850 illiterate students had completed literacy programmes (MoEYS, 2019a).

In order to further promote LLL, the MoEYS has laid out a number of strategies and activities including strengthening non-formal education (NFE)¹⁰, disseminating a National Policy on LLL, developing textbooks and teaching materials, and disseminating literacy programmes to enterprises, factories and prisons. Also, it aims to increase the number of libraries and mobile libraries and celebrate "National Literacy Day" (MoEYS, 2019a). There were 356 community learning centres in 2018, compared to 9 in 2014. Community learning centres offer literacy and life skills training, including agronomy, livestock raising, tailoring, handicrafts, and other skills needed by the community, to people of all ages who are illiterate or who have dropped out of school. The centres are funded by the government budget and, to some extent, by contributions from the community or NGOs.11 As addressed in the ESP 2019-2023, the MoEYS also aims to promote NFE through a number of strategies, including the development of curricula that are equivalent to those of upper secondary education (70% of the contents from the formal education curriculum with the remainder on life skills). As of 2018, 41,245 students completed skills training at NFE schools. Along with the MoEYS, both public and private universities in Cambodia have run LLL programmes ranging from Bachelor to Post Graduate Programmes in order to meet the needs of a wide range of people regardless of age.

The Ministry of Labour and Vocational Training (MLVT), a government body managing TVET institutions, adopted the National Technical Vocational Education and Training (TVET) Policy 2017-2025, which aims at "contributing to the development of the industrial sector, creating decent work and ensuring quality and high productivity of the workforce that is able to better compete with regional countries." The MLVT has made efforts to promote and advance TVET in the country. Given less interest from students in TVET, both the MLVT and TVET institutions have promoted TVET's image through a number of activities. These include the modernisation of TVET institutions, such as infrastructure, equipment/tools, workshops and laboratories in response to labour market demand; and an improvement in the capacity of teachers/instructors. Also, the MLVT has organised an Annual National TVET Day on 15 June, which has been held over the past 3 years, with an online event for the 3rd National TVET Day on 15 June 2020. The event provides career counselling and labour market information. In addition, the MLVT partners with the private sector for internship, apprenticeship, and employment opportunities. In the advent of the fourth industrial revolution and the digital economy, the MLVT encourages TVET

^{10.} NFE is defined as an organised education activity outside the formal education system. It aims to promote literacy to those who have not attended general education schools or who have dropped out of school.

^{11.} Interview with the representative of the MoEYS.

institutions to conduct research and apply technology and innovation. A few TVET institutions have developed research and innovation centres for both students and teachers. However, implementation is not fully in place due to the limited capacity of teachers and a lack of equipment. In 2019, only a few institutions received research grants to develop technological equipment.¹²

Moreover, the MLVT chairs the National Training Board (NTB), which serves as a TVET Council in Cambodia. The NTB comprises 42 committee members who are the representatives of relevant line ministries, BMOs, employee and employer federations, training service providers, and development partners. It consists of 3 committees: (1) National Competency Standard and Testing; (2) Accreditation of Program, Course and TVET institutions; and (3) Labour Market Information. The main roles of the NTB are to develop the policy and national strategic plan for TVET; coordinate and guide TVET to support socio-economic development; and propose reform of the TVET system to raise quality and efficiency to meet the needs of industry, crafts, trade, agriculture and services incorporated with the priorities of national development and the links between the work place and training providers.¹³ Another role of the NTB is as an accreditation body for training service providers (National Training Board, n.d.). However, the NTB is currently not fully functional and has only carried out tasks to a limited extent.¹⁴

To tackle the skills gap, the Sector Skills Council (SSC) was developed as a platform for skills development. The SSC is responsible for developing and assessing skills standards, informing training institutions on skills needed by the labour market, facilitating the return to industry programmes for instructors, and facilitating internship programs. Due to limited resources, the SSC has not been functioning properly. As a result, the MLVT signed a memorandum of understanding (MoU) with the Cambodian Federation of Employers and Business Associations (CAMFEBA) in 2018 on CAMFEBA's support for the development of the SSC. Four SSCs have been developed specifically in the fields of light manufacturing, electricity, auto mechanics and construction, which are all priority sectors for Cambodia.

In addition, the National Employment Agency (NEA) under the MLVT takes a lead role in sharing labour market information and conducting surveys with employers from 10 important industries every two years in order to identify skills gaps (NEA, 2018). The skills gaps identified by employers are related to technical and soft skills; however, the survey did not identify the skills needed to become skilled labourers in specific occupations, which is an indicator for LLL policy development, especially in inclusive education.

^{12.} Interview with the representative of the MLVT.

^{13.} Ibid.

^{14.} Interview with the representative of BMOs.

^{15.} Interview with the representative of BMOs.

To enable HRD and LLL, the MoEYS and the MLVT have collaborated with many development partners, academic and research institutions, as well as the private sector. At the country level, development partners including the World Bank, the Asian Development Bank (ADB), Swiss Development Cooperation (SDC), GIZ, Japan International Cooperation Agency (JICA), the International Labour Organisation (ILO), UN agencies and other stakeholders have supported the government in strengthening and enhancing general education and higher education as well as the TVET ecosystem. At the regional and international level, the government has collaborated with the ASEAN Secretariat and member states in knowledge sharing and scholarship opportunities as well as experience sharing. As addressed in the ESP 2019-2023, the MoEYS plans to improve teaching, learning and research in higher education through partnering with universities inside and outside the country to "establish graduate programmes to be internationally accredited" and to partner with industrial partners as well as universities to develop various research projects (MoEYS, 2019a, p. 42).

Quality and relevance of HRD/ LLL provisions

6.1. Current activities, support, and strategies of the government

The Royal Government of Cambodia aims to develop a "quality, equitable and inclusive education system by focusing on science and technology, labour market orientation, and physical education" (MOEYS, 2019a, p. 20). Up to now, the government's key achievements include high enrolment rates in primary schools and modernisation of the education system.

The modernisation of the education system includes the integration of science, technology, engineering, and mathematics (STEM) into curricula and the main textbooks, and the promotion of good study environments and new generation schools. Also, it focuses on strengthening education sector inspection, reforming higher education, and developing and implementing a master plan for technical education in both general and technical education high schools, especially in the fields of electricity, electronics, mechanics, animal raising and agronomy. So far, STEM has been incorporated not only into general education, higher education, and TVET, but also in informal education, such as incubators and accelerators, and a series of seminars and workshops. In 2018, students in higher education enrolled in STEM accounted for 27.1% of HEI students, with enrolment rates for male and female students in STEM at 36.7% and 17.4%, respectively (MoEYS, 2019a). Additionally, the MoEYS developed a Policy and Strategy on Information and Communication Technology (ICT) in Education (2018) in order to integrate ICT into learning, teaching and knowledge-sharing processes in the education sector, so that students are equipped with knowledge and skills in response to the "21st century world of work" (p. 2). The policy addresses 5 priority strategies: (1) infrastructure connection and equipment; (2) ICT support for teaching and learning; (3) governance and management; (4) human resources development; and (5) financing for ICT in education. Under the second priority, curricula are modernised by including ICT and 21st century skills/future skills and knowledge. Moreover, e-learning is used to "support the delivery of education services to all sub-sectors in education for students and for institutional human capacity development and lifelong learning" (p. 3).

Furthermore, the MoEYS has operationalised a new system called New Generation School (NGS) for Basic Education, aiming to spur innovation in curricula, improve learning outcomes, and strengthen students' capacity to join the 21st century

workforce. The NGS provides flexibility for schools to invest in equipment and adopt technology and STEM in their curricula. The new system allows schools to have full authority with a new structure, set of standards and modernised learning environment. The NGS emphasises the importance of cognitive competencies and is required to introduce ICT, STEM, innovation, and critical thinking into its curricula. However, the schools face challenges of high investment and resistance in some schools to adopting a new structure because of the effort and resources required. Moreover, the capacity of teachers is also limited.¹⁶

As addressed in the ESP 2019-2023, in order to improve the quality of learning and teaching in line with "future skills", the MOEYS plans to establish an education and science centre and focuses on a number of strategies, including:

- Adapting STEM approaches in teaching methodology through the use of workshops, computers and laboratories.
- Developing an e-education system, mobile applications, open educational resources and digital content to promote lifelong learning.

Specifically, for higher education, the MoEYS plans to develop a curriculum framework by integrating STEM and social science in accordance with the national qualification framework and regional and international standards. It also aims to strengthen mechanisms for qualification accreditation, increase investment in higher education, enhance resources and capacity to support learning, teaching and research, establish research funds, and provide incentives (MoEYS, 2019a).

Moreover, the government, through the MLVT-adapted Strategic Action Plan for Modernisation of Technical and Vocational Education and Training 2019-2023 (MLVT, 2019a), intends to modernise TVET in response to labour market demand and improved living standards. The policy prioritises 5 areas, including: strengthening TVET quality; expanding TVET in support of socio-economic development; strengthening public-private partnerships and cooperation with other partners to ensure TVET sustainability; strengthening TVET system governance; and promoting research, innovation, and applied technology in TVET.

6.2. Results from the survey with education service providers

The online survey was conducted with 342 teachers and rectors from general education schools, TVET institutions and HEIs in different provinces (see Table in Annex A1).

^{16.} Interview with the representative of the MoEYS.

6.2.1. Incorporation of "future skills" in curricula

Nearly 13% of the total respondents showed that they had not incorporated at least one of the stated future skills. The main reasons include a lack of resources (48%) and a lack of skills (45%), followed by a few responses indicating that the skills are not necessary (14%) and that there is no labour market demand (9%). Despite this, a majority (68%) expressed an intention to incorporate such skills in their curricula in the future (see Table in Annex A1).

- Literacy and numeracy are mostly reported to be "quite high" by at least 50% of each type of respondent. Respondents from secondary education reported combined results of "quite high", "high" and "very high" while most HEIs and primary education respondents reported it as "high" and "quite high". TVET respondents indicated a "quite "high" and "quite low" level of incorporation. Nonetheless, a few respondents from each education level reported that their schools/institutions do not offer training in such skills.
- High-order cognitive skills were reported with little difference among general education, TVET, and HEIs. Most respondents, at least 70% of each type of respondent, reported to have high (mostly "quite high" and "high") levels of such skills in the curricula. HEIs showed more focus on these skills than general education and TVET. Except respondents from secondary education, other respondents (around 2% for TVET, 3% for HEIs and 17% for primary schools) claimed to have no such skills in the curricula.
- ICT skills were reported as "quite high" by many respondents from all education levels, ranging from 26 to 35% of each type. More than half of primary school respondents reported it as "quite low", "low" and zero incorporation (around 20%). Around 40% of secondary school respondents reported "quite low" and "low" ICT skills at their schools. Responses of "quite low", "low" and no such skills were stated by 31% of TVET institutions and 38% of HEIs. TVET institutions and HEIs reported a higher proportion of ICT skills incorporation than general education.
- STEM showed little difference between different types of respondents. "Quite high" and "quite low" were indicated by many respondents. STEM was reported to be more integrated in HEI and TVET curricula than general education (especially in the case of primary education).
- Social skills are more integrated in HEI and TVET curricula than general education. Most respondents, at least 60% of each respondent type, reported high incorporation. TVET ranks first in terms of offering such skills to students as almost half of TVET respondents reported "high", followed by 32% "quite high" and 11% "very high".

- Learnability was reported by most respondents (at least 70% of each respondent type) as high, mostly at the level of "quite high" and "high". Learnability is more integrated in TVET and HEI curricula than in general education schools.
- Character qualities were reported by most respondents (at least 70% of each respondent type) as high, mostly at the levels of "quite high" and "high". Secondary schools reported high on character qualities.
- Problem solving is reported as "quite high" and "high" by each respondent type.
 However, a number of respondents also reported it as "quite low". Problem solving is highly integrated in HEI.

6.2.2. Teaching and learning resources for promoting "future skills"

General education schools, TVET institutions, and HEIs are mainly using textbooks and online resources during the COVID-19 pandemic. However, online resources were not widely used by primary and secondary schools before COVID-19 while HEIs and TVET institutions apply them at "quite high" and "high" levels. HEIs offer e-library and e-journals, publications, study guides, practice tools, mentoring and coaching. TVET also offers similar resources while general schools indicated internship programs, mentoring and tutoring, and social media as mechanisms for teaching students.

6.2.3. Future skills assessments

Overall, future skills are reported as "quite high" for general education, TVET institutions, and HEIs. Table 10 below illustrates the levels reported by each type of education institution

Table 10: Assessment of future skills as reported by respondents

	General Education	TVET	HEIs
Numeracy and literacy skills	Between quite high (mainly) and quite low	Quite high (mainly)	Quite high (mainly)
High-order cognitive skills	Between quite high (mainly) and high	Mainly quite high, followed by quite low and high	Between quite high (mainly) and high
ICT skills	Between quite low and quite high (equal weight	Mainly quite high, followed by quite low and high	Between quite high (mainly) and high
STEM skills	Between quite high (mainly) and quite low	Between quite high (mainly) and quite low	Between quite high (mainly) and quite low
Social skills	Mainly quite high, followed by quite low and high	Mainly quite high, followed by quite low and high	Between high (mainly) and quite high

	General Education	TVET	HEIs
Learnability	Mainly quite high followed by high and quite low (the same weight)	Mainly quite high, followed by high and quite low (the same weight)	Between quite high (mainly) and high
Character qualities	Between quite high (mainly) and high	Between quite high (mainly) and high	Between quite high (mainly) and high
Problem solving	Between quite high (mainly) and quite low	Between quite high (mainly) and quite low	Between quite high (mainly) and high

6.2.4. Adoption of technology and innovation in learning and teaching

Both HEIs and TVET institutions adopted blended teaching and learning programmes at a "quite high" level; however, general education reported combined results of "quite low" and "quite high". In terms of e-learning, HEIs mostly reported a "high" level, followed by a combination of "quite high" and "quite low". The reporting of a "quite high" level of blended learning and e-learning may result from school closures due to the COVID-19 pandemic and the requirements for e-learning at all levels of education in Cambodia. However, a few secondary schools in Siem Reap and Prey Veng have offered a blended programme for English language under the support of the Asia Foundation prior to the pandemic.

The majority of each respondent type expressed an interest in continuing either blended learning and teaching even during the post-COVID outbreak period; meanwhile, others could not decide. Around 20%, 14% and 16% of respondents from general education, TVET, and HEIs, respectively, are not interested in adopting such programs. Some of the common reasons were a lack of supporting devices and the limited affordability of rural households in purchasing devices, poor internet connection, and lack of appropriate teaching tools and methodology for e-learning platforms. Other reasons include the perception that online classes are less effective in comparison to in-person classes, and lack active/full participation and attendance from students. Another difficulty addressed by the primary school respondents is the limited capacity of students in catching up with e-learning and adapting to ICT skills.

6.2.5. Service provision in secondary education

Table 11 below shows the extent of services provided in secondary education. Career counselling, vocational orientation and internships are reported to be "quite high" by around 30% of respondents from secondary education. However, entrepreneurship courses are least reported by the respondents.

Table 11: Service provision in secondary education

n=128	None	Low	Quite low	Quite high	High	Very high	Total
Career guidance counselling	8%	16%	20%	30%	22%	5%	100%
Vocational orientation	5%	11%	18%	34%	27%	5%	100%
Work experience/internships	9%	18%	23%	29%	17%	3%	100%
Entrepreneurship courses	17%	23%	28%	17%	13%	2%	100%
Others	17%	19%	25%	19%	19%	0%	100%

Note: The darker the shading, the higher the extent of service provision.

6.3. Permeability regulations between TVET and higher education

There is an inter-ministerial committee set up the MLVT and the MoEYS to promote TVET and higher education. Also, the MoEYS is also an executive member of the NTB. The Cambodia Qualifications Framework (CQF) addresses the link between TVET and higher education. The CQF aims to ensure the equivalency of Cambodian qualifications standards to regional standards and focuses on 4 elements, including: levels; credits; learning outcomes; and study pathway which provides "the basis for recognition of prior learning including credit transfer, experience and current competency" (MLVT, 2014, p.2). Study pathways help students to move easily from technical and vocational education and training to higher education and from academia to the labour market. "CQF's study pathway makes lifelong learning a reality as these give opportunities to individuals with knowledge and skills acquired from experience and self-learning, to be assessed and given the opportunity to attain higher qualifications although they do not have basic qualifications" (MLVT, 2014, p.7). The CQF allows accreditation for prior leaning acquired from formal, non-formal and informal learning. Moreover, the CQF also addresses eight levels of qualifications with levels 5 to 8 equivalent to higher education.

Engagement of the private sector in HRD

Engagement of the private sector is one of the government's priorities in promoting HRD and LLL as addressed in many policies and strategies. As a result, the MoEYS and the MLVT encourage schools to expand their partnerships with the private sector on skills requirements and development (MoEYS, 2019a). So far, a number of companies have worked with TVET institutions and universities by offering them equipment (machinery or laboratories) and technical assistance. Some companies, for instance RMA Group, Smart Axiata, and GGear have their own workshops or innovation labs inside TVET institutions and/or university campuses, or provide equipment to universities and/or TVET institutions. Also, universities and TVET institutions have worked closely with private companies on internships, apprenticeships, and employment opportunities as well as on feedback on student competencies and required skills. In addition, some companies have training centres or in-company service training for their employees as well as students (through internship programs).¹⁷ A few companies support their staff to teach at universities, especially companies which require high technical skills; for instance aviation.¹⁸ Although there is engagement from the private sector, the partnerships have not yet achieved fruitful results due to limited facilitation mechanisms from the government.19 Moreover, the partnership scope is limited to employment, equipment provision, and feedback on skills demand. However, there is limited collaboration on curriculum development, research, examination and assessment.

In Cambodia, there is no specific policy for corporate learning and development. However, Cambodia's Labour Law requires a company that employs more than 60 employees to implement an apprenticeship scheme; otherwise they have to pay a levy. So far, this penalty has not been enforced.

To promote corporate learning and development, the government, through the Ministry of Economy and Finance (MEF), has implemented a pilot programme called the Skills Development Fund (SDF). With an initial budget of USD 5 million (potentially increasing in subsequent years), the SDF aims at upgrading skills for small and medium enterprises (SMEs) and building a skilled workforce in response to

^{17.} Interviews with representatives of private companies and BDtruS (2019).

^{18.} In practice, most companies do not send or encourage their staff to teach at TVET institutions or universities. However, some professionals have contributed their time to teach at universities in order to share their experience and know-how to younger generations or to generate more income.

^{19.} Interview with the representative of the MLVT.

labour market demand. Under this scheme, the government provides co-financing to selected companies which cooperate with TVET or other training institutions in providing skills training to current and potential employees. In return, the selected companies are obliged to increase salaries for trained employees. Priority sectors for the SDF include manufacturing, construction, ICT, electronics, and tourism.²⁰

In addition to the SDF, the MEF channels funds to the private sector, mainly SMEs, through the Entrepreneurship Promotion Fund (EPF) with a budget of USD 5 million. The EPF (currently implemented by Khmer Enterprise) is committed to scaling up SMEs and startups through the provision of capacity building, enterprise support partnerships, social digital marketing, networking, and funding (grant and co-investment) (BDtruS, 2020). To further encourage the private sector to become involved in corporate learning and development, in October 2018, the government issued a Prakas (regulation) on tax incentives for companies which support staff training, use IT-based accounting software, purchase technology to increase productivity, use at least 60% of local materials, and are located in special economic zones (RGC, 2018a). Despite various forms of support offered by the government, the private sector has not yet obtained full information; therefore, there is limited access to the incentives and support provided by the government.

Additionally, business membership organisations (BMOs) have played an active role in supporting HRD. Some work closely with the MoEYS and the MLVT in promoting and enhancing HRD programmes and also with the private sector to promote investment in HRD. In addition, they work with universities on internships, apprenticeships, and employment opportunities and skill requirements; however, there are still limitations in terms of research collaboration. There are many BMOs in Cambodia that include industry-specific associations/federations and general business associations/federations. Almost all BMOs provide training to their members. This study selected a number of BMOs that are actively supporting HRD as well as representing most of the business sectors in Cambodia; except the Cambodia Chamber of Commerce (CCC), which does not offer training but represents the private sector in the country and in ASEAN. These BMOs finance their training activities through membership fees, financial support from development partners and NGOs, sponsorships from companies, and training fees.

^{20.} Interview with the representative of the MEF.

Table 12: Involvement of BMOs in HRD/LLL

вмо	Profile	HRD-related activities
Cambodia Chamber of Commerce (CCC)	Established in 1995, the CCC aims to represent and enhance the interests of the private sector to contribute to the economic growth of the country. The CCC has 12 provincial chapters and around 5,000 members.	 Representative of Cambodia for ASEAN Business Advisory Council (ASEAN-BAC) and the Greater Mekong Sub-Region (GMS) Business Council Plan to organise training programmes for its members
CAMFEBA	Established in 2000, CAMFEBA is a federation "representing, promoting and safeguarding the rights and interests of employers in Cambodia." As of January 2019, its members consisted of 9 business associations, 263 companies and 31 non- profit organisations.	 Engaging in youth skills development: Inputs to government agencies on the development of TVET related programmes and policies Skills development programme sponsored by Swiss Development Cooperation (SDC) Developing a white paper on apprenticeships Facilitating the development and implementation of SSCs Providing training to members and non-members
Young Entrepreneurs' Association of Cambodia (YEAC)	Established in 2009, the YEAC aims to support businesses of young entrepreneurs through a platform for networking, sharing and learning, and business opportunities. Currently, its head office is in Phnom Penh with 4 provincial chapters. It has more than 250 members.	 Providing in-company training to members and Master Training of Trainers using RECOTVET's in-company standards to both members and non-members Providing other business training (rather than in-company training) to business owners and employees Partnership with universities in promoting entrepreneurship, sharing experience, providing employment opportunities, and organising youth forums Organising youth skills development - training youths on business and soft skills, and internship opportunities to university students to work on YEAC projects Working with the MoEYS and the MLVT to promote youth entrepreneurship and providing inputs for policy development
Federation of Education Services in Cambodia	Established in 2020, the federation aims to enhance education quality, promote HRD, and improve productivity.	 Working with the MoEYS on the plan for school reopening during the COVID-19 pandemic. The federation mandates are expected to: Coordinate relevant stakeholders and advocate on education related policies Closely work with the MoEYS and the MLVT to promote HRD and education quality Promote research and PPP in the education sector

ВМО	Profile	HRD-related activities
Cambodia Women Entrepreneurs' Association (CWEA)	Established in 2011, the CWEA aims to support women entrepreneurs in Cambodia. The CWEA has around 500 women entrepreneur members.	 Providing training and mentoring to its members Study tours and networking opportunities for women entrepreneurs to learn from each other
Garment Manufacturing Association in Cambodia (GMAC)	Established in 1996, the GMAC's objectives are to represent, promote and safeguard the interests of its members. There are more than 500 members who are representatives from garment, footwear, and travel goods producing factories.	 Engaging in youth skills development through participating in NEA's productivity conference and providing scholarships to trainees of the Cambodia Garment Training Institute (CGTI) Managing in and supporting the CGTI as a private entity providing specific technical skills training to both GMAC members and the general public
EuroCham Cambodia	Established in 2011, EuroCham aims to promote, support and represent its members. It has more than 350 members and 6 chapters.	 Working with universities in organising career/job fairs Providing training to its members
Federation of Associations of Small and Medium Enterprises of Cambodia (FASMEC)	Established in 2010, FASMEC's vision is to support SME promotion and development in Cambodia. It has more than 300 members.	Providing training to business owners, staff, and students
Association of Banks in Cambodia (ABC)	Established in 1994, the ABC aims to "promote constructive dialogue amongst member banks, and to serve as an industry voice to the public and the government." It has more than 60 members who are banks and Microfinance Associations.	 Lobbying and advocacy Setting up the Institute of Banking and Finance which provides training to bank employees

Source: BDtruS (2019); interviews and BMO websites

Priority Sectors of the Royal Government of Cambodia:

- Skills Development Fund (SDF): manufacturing, construction, ICT, electronics, tourism, and other high-in-demand skills.
- Industrial Development Policy (IDP) 2015-2025:
 - New industries or manufacturing: machinery assembly, mechanic/electronics/ electrical equipment assembly, means of transport assembly, and natural resource processing.
 - SMEs: drugs and medical equipment production, construction materials, packaging equipment for export, furniture manufacturing and industrial equipment.
 - Agro-industrial production: industries supporting agriculture, tourism and textile/garment sectors; and industries serving the regional production line.
- Sector Skill Councils (SSCs): light manufacturing, electricity, auto mechanics and construction.

In the advent of the fourth industrial revolution and digital era, the government is committed to developing a digital economy. Many initiatives have been introduced, and technology, innovation, and technology R&D have been mainstreamed into various policies and strategies, including those in the education sector. However, technology and innovation have not yet been explicitly addressed in the priority sectors (except the SDF) stated above.

8. Conclusion

The MoEYS and the MLVT have been the key actors and catalysts in promoting HRD and LLL in Cambodia. The government's key achievements include high enrolment rates in primary schools, improvement of education quality, and modernisation of education and the TVET system by integrating future skills in curricula and assessments. The government also promotes good study environments and implements New Generation Schools and Special Education Schools. Most importantly, HRD, LLL, inclusive education, and the promotion of technology and innovation have been addressed in many policies and strategies. There is also the study pathway initiative, which allows and helps students to move easily from technical and vocational education and training to higher education and from academia to the labour market. Secondary education, TVET, and HEIs offer (though not yet widely) career counselling, internship opportunities, vocational orientation, and entrepreneurship courses. The engagement of the private sector in promoting HRD and LLL is moderate. To enhance private sector engagement, the government has supported the private sector to invest in corporate learning and development through tax incentives and a support programme managed by the SDF and Khmer Enterprise. In spite of such achievements and progress, challenges remain:

- R&D, technology and innovation in the education sector are limited despite the existence of research grants and related government initiatives.
- Information on incentives and support programmes have not been widely disseminated or the private sector has not yet obtained full information.
- Integration of STEM, entrepreneurship, ICT and other future skills in curricula is still limited due to limited human resources and teaching tools/methodologies.
- Targets set in various policies and strategies have not been fully achieved.
- Limited involvement of communities and parents is one of the main barriers to promoting inclusive education, especially for persons with disabilities.
- TVET is less attractive to students, who prefer working to taking TVET courses.
 Studying at university is also more attractive than TVET as students believe university graduation is more prestigious and will increase their employment opportunities.

- Implementation and functioning of the NTB and SSCs has been limited.
- Partnerships between the private sector and TVET institutions and universities remain limited in curriculum development, research, and assessment.
- The facilitation mechanism for promoting engagement from the private sector in HRD and LLL development is limited.
- The MoEYS' Education Management Information System (EMIS) does not capture data for higher education.

References

BDtruS. (2020). Design and Develop a Project Proposal to Establish the National MSME Information Center.

BDtruS. (2019). Mapping Stakeholder for UN Joint Program.

Corrado, R. & Tungjan, P. (2020). How Digital Tech Can Help Fix Cambodia's Broken Education and Healthcare Systems. Retrieved from https://www.kas.de/en/web/kambodscha/single-title/-/content/how-digital-tech-can-help-fix-cambodia-s-broken-education-and-healthcare-systems

MoEYS. (2019a). Education Strategic Plan 2019-2023.

MoEYS. (2019b). Public education statistics and indicators 2018-2019.

MoEYS. (2019c). Education Roadmap 2030.

MoEYS. (2019d). Action Plan for Inclusive Education 2019-2023.

MoEYS. (2019e). Strategic Action Plan for Modernization of Technical and Vocational Education and Training 2019 - 2023.

MoEYS. (2018a). Policy on Inclusive Education.

MoEYS. (2018b). Policy and Strategy on Information and Communication Technology (ICT) in Education.

MoEYS. (2015). Master Plan for Technical Education at Upper Secondary Level 2015-2019.

MoEYS. (2014). Policy on High Education Vision 2030.

MoEYS. (2008). Policy on Education for Children with Disabilities.

MoEYS. (2007). Education Law.

MoEYS. (n.d.). Cambodia launches Lifelong Learning Policy. Retrieved from http://www.moeys.gov.kh/index.php/en/leadership/3261.html#.Xy4dwi2cYyA

MLVT. (2020). Technical and Vocational Education and Training Statistics: Academic Year 2018-2019.

MLVT. (2019a). Strategic Action Plan for Modernization of Technical and Vocational Education and Training 2019-2023.

MLVT. (2019b). Technical and Vocational Education and Training Statistics: Academic Year 2017-2018.

MLVT. (2017). National Technical Vocational Education and Training (TVET) Policy 2017-2025.

MLVT. (2014). Cambodia Qualifications Framework.

MoWA. (2014). Five-Year Strategic Plan 2014-2018: Neary Rattanak IV.

National Employment Agency (NEA). (2018). Skills Shortages and Gaps in the Cambodian Labour Market: Evidence from Employer Survey 2017.

National Training Board (n.d.). NTB: Profile & History. Retrieved from http://www.ntb.gov.kh/profile.htm

NIS/MoP. (2018). Cambodia Socio-Economic Survey.

NIS/MoP and ILO. (2013). Cambodia Labor Force and Child Labor Survey 2012: Labor Force Report. Phnom Penh.

OECD. (n.d.) Key issues affecting youth in Cambodia. Retrieved from https://www.oecd.org/countries/cambodia/youth-issues-in-cambodia.htm

Neak, P. (2020). Lifelong Learning Must Be Promoted in Cambodia to Materialize its Vision. Retrieved from https://cambodianess.com/article/lifelong-learning-must-be-promoted-in-cambodia-to-materialize-its-vision

RGC [Royal Government of Cambodia]. (2019a). *National Strategy Development Plan 2019-2023*.

RGC. (2019b). National Disabilities Strategic Plan 2019-2023.

RGC. (2018a). Prakas on Tax Incentives for SMEs in the Priority Sectors.

RGC. (2018b). Rectangular Strategy IV. Phnom Penh.

RGC. (2015a). Industrial Development Policy 2015 - 2025. Phnom Penh.

RGC. (2015b). National Employment Policy 2015-2025.

RGC. (2010). Sub-Decree on Quota and Procedures for Employing Persons with Disabilities.

RGC. (2009). Law on the Protection and the Promotion of the Rights of Persons with Disabilities.

RGC. (1997). Labor Law, Royal Kram No. CS/RKM/0397/01.

RGC. (1993). Cambodia Constitution.

The Global Economy. (2020). Cambodia: Youth unemployment. Retrieved from https://www.theglobaleconomy.com/Cambodia/youth_unemployment/

Worldometers. (2021). Cambodia population (Live). Retrieved from https://www.worldometers.info/world-population/cambodia-population/

Annex

A1. Profile of respondents and graph results for the HRD modernisation programme

The total sample responding to the online survey questionnaire is 342, of which 39% is from TVET, 37% from secondary education, 13% from primary education and 11% from higher education institutions (HEIs). The majority of respondents are teachers (79%) while the remaining are school rectors (21%). Most respondents are from public institutions (92%) with only a small number from private institutions (8%). There are 112 schools and institutions participating in the survey, resulting in an average of 3 respondents per school or institution. The detailed survey sample composition is outlined in the table below.

Table 13: Composition of the survey sample

	Total s	ample	Pos	ition	Public /	Number		
Education level	Number	Percent	Rectors	Teachers	Public Private		of schools	
Primary	43	13%	44%	56%	95%	5%	33	
Secondary	128	37%	27%	73%	95%	5%	47	
TVET	134	39%	10%	90%	98%	2%	21	
HEI	37	11%	8%	92%	54%	46%	11	
Total	342	100%	21%	79 %	92%	8%	112	

Source: Online survey.

The respondents are mainly from three target provinces - Siem Reap (30%), Kandal (23%) and Phnom Penh (17%). A number are also from Svay Rieng, Pailin, Prey Veng, Battambang and 10 other provinces.

Sample by Locations (n=342)

Siem Reap
Kandal
Phnom Penh
Svay Rieng
Pailin
Prey veng
Battambang
Others

Source: Online survey

Table 14: The extent that future skills are incorporated into curricula

	None	Low	Quite low	Quite high	High	Very high	Total
			Numerac	y and lite	racy skills		
Primary (n=43)	16%	2%	7%	30%	30%	14%	100%
Secondary (n=128)	4%	6%	11%	29%	29%	21%	100%
TVET (n=134)	7%	15%	22%	40%	12%	4%	100%
HEI (n=37)	5%	5%	16%	30%	35%	8%	100%
Total (n=342)	7 %	9%	15%	33%	23%	12%	100%
			High-ord	der cognit	ive skills		
Primary (n=43)	16%	5%	7%	33%	33%	7%	100%
Secondary (n=128)	0%	4%	16%	37%	26%	17%	100%
TVET (n=134)	2%	4%	23%	37%	29%	4%	100%
HEI (n=37)	3%	5%	8%	41%	32%	11%	100%
Total (n=342)	3%	4%	17%	37 %	29%	10%	100%
			ICT-skil	ls/digital	literacy		
Primary (n=43)	19%	12%	21%	26%	12%	12%	100%
Secondary (n=128)	2%	21%	18%	31%	16%	11%	100%
TVET (n=134)	5%	5%	20%	34%	25%	10%	100%
HEI (n=37)	3%	14%	22%	35%	16%	11%	100%
Total (n=342)	6%	13%	20%	32 %	19%	11%	100%
				STEM skill	s		
Primary (n=43)	23%	9%	23%	30%	12%	2%	100%
Secondary (n=128)	2%	17%	27%	27%	20%	7%	100%
TVET (n=134)	6%	11%	22%	37%	21%	3%	100%
HEI (n=37)	8%	14%	19%	41%	8%	11%	100%
Total (n=342)	7 %	13%	24%	33%	18%	5%	100%
			S	Social skill	s		
Primary (n=43)	9%	14%	14%	37%	19%	7%	100%
Secondary (n=128)	1%	13%	22%	23%	32%	10%	100%
TVET (n=134)	1%	10%	22%	42%	19%	4%	100%
HEI (n=37)	3%	3%	5%	32%	46%	11%	100%
Total (n=342)	2%	11%	19%	33%	27 %	8%	100%

	None	Low	Quite low	Quite high	High	Very high	Total
			Le	earnabilit	ty		
Primary (n=43)	7%	7%	16%	33%	26%	12%	100%
Secondary (n=128)	1%	8%	16%	28%	30%	16%	100%
TVET (n=134)	2%	3%	20%	37%	31%	6%	100%
HEI (n=37)	3%	5%	14%	41%	22%	16%	100%
Total (n=342)	2 %	6%	18%	34%	29%	12%	100%
			Chara	acter qua	lities		
Primary (n=43)	7%	7%	14%	37%	26%	9%	100%
Secondary (n=128)	0%	2%	9%	35%	36%	18%	100%
TVET (n=134)	1%	6%	10%	40%	38%	5%	100%
HEI (n=37)	3%	0%	22%	30%	30%	16%	100%
Total (n=342)	1%	4%	11%	37 %	35%	12%	100%
			Prol	olem-solv	/ing		
Primary (n=43)	16%	14%	21%	28%	16%	5%	100%
Secondary (n=128)	3%	18%	20%	30%	22%	6%	100%
TVET (n=134)	1%	11%	22%	43%	22%	2%	100%
HEI (n=37)	3%	5%	14%	41%	27%	11%	100%
Total (n=342)	4%	13%	20%	36%	22%	5%	100%

Note: The darker the shading, the higher extent of incorporation of future skills.

Table 15: The extent that teaching and learning resources support the promotion of "future skills"

	None	Low	Quite low	Quite high	High	Very high	Total
				Books			
Primary (n=43)	9%	0%	12%	28%	40%	12%	100%
Secondary (n=128)	1%	5%	13%	27%	34%	20%	100%
TVET (n=134)		8%	22%	37%	32%	1%	100%
HEI (n=37)		11%	16%	35%	32%	5%	100%
Total (n=342)	1%	6%	17%	32%	34%	10%	100%

	None	Low	Quite low	Quite high	High	Very high	Total			
		Online resources								
Primary (n=43)	16%	14%	19%	21%	14%	16%	100%			
Secondary (n=128)	1%	15%	19%	27%	20%	18%	100%			
TVET (n=134)	7%	6%	30%	31%	24%	2%	100%			
HEI (n=37)		5%	11%	43%	32%	8%	100%			
Total (n=342)	5%	10%	22%	30%	22%	11%	100%			
				Others						
Primary (n=43)	9%	9%	27%	9%	9%	36%	100%			
Secondary (n=128)	5%	19%	16%	30%	16%	14%	100%			
TVET (n=134)	5%	12%	21%	30%	26%	7%	100%			
HEI (n=37)			18%	73%	9%	0%	100%			
Total (n=342)	5%	13%	20%	32 %	19%	12%	100%			

Note: The darker the shading, the higher extent of incorporation of teaching and learning resources.

Table 16: The extent that "future skills" are addressed in assessment

n=128	None	Low	Quite low	Quite high	High	Very high	Total		
	Numeracy and literacy skills								
Primary (n=43)	14%	9%	2%	40%	19%	16%	100%		
Secondary (n=128)	5%	5%	18%	30%	26%	16%	100%		
TVET (n=134)	9%	15%	28%	40%	7%	1%	100%		
HEI (n=37)	8%	3%	24%	43%	19%	3%	100%		
Total (n=342)	8%	9%	20%	36%	17%	9%	100%		
			High-ord	er cognit	ive skills				
Primary (n=43)	14%	5%	16%	40%	21%	5%	100%		
Secondary (n=128)	1%	10%	17%	32%	27%	13%	100%		
TVET (n=134)	2%	11%	27%	40%	20%	0%	100%		
HEI (n=37)	3%	3%	5%	51%	32%	5%	100%		
Total (n=342)	3%	9%	20%	38%	24%	6%	100%		

n=128	None	Low	Quite low	Quite high	High	Very high	Total
			ICT-skill	s/digita	literacy		
Primary (n=43)	23%	19%	23%	23%	7%	5%	100%
Secondary (n=128)	5%	21%	24%	26%	13%	11%	100%
TVET (n=134)	4%	7%	28%	31%	27%	3%	100%
HEI (n=37)	5%	14%	16%	32%	27%	5%	100%
Total (n=342)	7 %	14%	25%	28%	19%	6%	100%
			S	TEM skil	ls		
Primary (n=43)	23%	16%	21%	28%	9%	2%	100%
Secondary (n=128)	4%	18%	23%	28%	16%	10%	100%
TVET (n=134)	6%	12%	25%	39%	16%	2%	100%
HEI (n=37)	5%	11%	32%	38%	8%	5%	100%
Total (n=342)	7 %	15%	25%	33%	15%	6%	100%
			S	ocial skil	ls		
Primary (n=43)	9%	16%	14%	40%	16%	5%	100%
Secondary (n=128)	3%	10%	24%	30%	20%	12%	100%
TVET (n=134)	2%	7%	31%	34%	25%	1%	100%
HEI (n=37)	3%	11%	3%	35%	41%	8%	100%
Total (n=342)	4%	10%	23%	34%	24%	6%	100%
			L	earnabili	ty		
Primary (n=43)	5%	5%	23%	42%	14%	12%	100%
Secondary (n=128)	2%	9%	17%	39%	25%	8%	100%
TVET (n=134)	2%	5%	25%	40%	25%	3%	100%
HEI (n=37)	3%	3%	14%	46%	24%	11%	100%
Total (n=342)	3%	6%	21%	40%	23%	7 %	100%
			Char	acter qua	lities		
Primary (n=43)	9%	2%	14%	44%	21%	9%	100%
Secondary (n=128)	1%	5%	12%	39%	25%	18%	100%
TVET (n=134)	1%	5%	21%	40%	28%	4%	100%
HEI (n=37)	3%	3%	11%	46%	27%	11%	100%
Total (n=342)	2%	5%	15%	41%	26%	11%	100%

n=128	None	Low	Quite low	Quite high	High	Very high	Total
			Prol	blem-sol	ving		
Primary (n=43)	19%	14%	16%	42%	7%	2%	100%
Secondary (n=128)	5%	15%	30%	26%	19%	6%	100%
TVET (n=134)	4%	10%	22%	46%	16%	2%	100%
HEI (n=37)	3%	8%	14%	38%	27%	11%	100%
Total (n=342)	6%	12%	23%	37 %	17 %	5%	100%

Note: The darker the shading, the higher extent of assessment of "future skills".

Table 17: The extent that digital technologies are part of teaching and learning concepts

n=128	None	Low	Quite low	Quite high	High	Very high	Total					
	Blended											
Primary (n=43)	12%	16%	26%	23%	16%	7%	100%					
Secondary (n=128)	1%	16%	26%	25%	20%	13%	100%					
TVET (n=134)	4%	5%	18%	44%	26%	2%	100%					
HEI (n=37)	3%	11%	16%	41%	24%	5%	100%					
Total (n=342)	4%	11%	22%	34%	23%	7 %	100%					
				Online								
Primary (n=43)	19%	23%	28%	12%	14%	5%	100%					
Secondary (n=128)	3%	19%	27%	22%	16%	13%	100%					
TVET (n=134)	7%	11%	28%	40%	12%	3%	100%					
HEI (n=37)		5%	24%	27%	35%	8%	100%					
Total (n=342)	6%	15%	27 %	28%	16%	8%	100%					

Source: Online survey.

Note: The darker the shading, the higher extent digital technologies are part of innovative learning and teaching concepts.

A2. Rules and regulations

A2.1. Overarching rules and regulations

The Cambodian Constitution (1993) addresses Cambodians' right to education and Education for All. According to the Constitution, all Cambodians have the right to 9-year basic education and both men and women have equal opportunities to access education services, especially those in rural areas.

The Cambodian Labour Law (1997) governs the relations between workers and employers resulting from employment contracts (article 1). The Law covers all establishments or enterprises in all sectors. However, some occupations are excluded from this Law, such as domestic or household servants (article 1), unpaid family workers (article 3), self-employed workers and workers who do not have employment contracts. In terms of social protection, the Labour Law is aware of women's needs and interests through its provision on non-discrimination against sex and other attributions (article 12). Furthermore, female minor apprentices are protected by prohibiting employers or instructors in charge of an apprenticeship from living in the same house (article 55). According to the Labour Law, a company that employs more than 60 employees must implement an apprenticeship scheme otherwise they have to pay a levy (which currently is not enforced).

Rectangular Strategy IV: HRD is one of the priorities of the Rectangular Strategy (RS) IV, which aims to improve education and vocational skills. In order to achieve this goal, the government is committed to strengthening the quality of education, science, and technology and vocational training by focusing on 7 priorities, including; teachers; school expansion at all levels; enhancement of comprehensive inspections of school management; promotion of technical education at upper secondary education; skills education in response to labour market demand; development of comprehensive curricula and textbooks; and preparation for the Southeast Asian Games 2023.

The National Strategic Development Plan (NSDP) 2019-2023 is a roadmap for implementing RS IV. The NSDP also aims to promote HRD in order to create jobs and increase economic growth by focusing on strengthening the quality of education, science, and technology; technical education training, public service and scholarship, and gender. Technical education training aims to:

- Promote "each individual youth specialises in at least one skill in life".
- Continue to implement TVET policy.

- Strengthen cooperation or partnership between TVET institutions and enterprises
 in order to increase capacity, technical skills and productivity, offer skills training
 in response to labour market demand, and strengthen the implementation of
 the National Skills Development Fund.
- Continue to strengthen TVET institutions in offering skills for any specific sector, especially support industrial development and fast changing of technology.
- Strengthen TVET institutions to offer skills training in response to market demand and to support start-ups in partnership with the private sector.
- Provide the vocational orientation and promote awareness raising on the benefits of TVET.

The Ministry of Education, Youth and Sports (MoEYS) and the Ministry of Labour and Vocational Training (MLVT) also prioritise the promotion of entrepreneurship and science, technology, engineering, and mathematics (STEM). The government will promote entrepreneurship and language and strengthen STEM by developing the Centre for Education and Technology. They also aim to encourage youth to develop innovative ideas and build an entrepreneurial spirit in the context of the digital economy and industry 4.0 (RGC, 2019a).

Industrial Development Policy (IDP) 2015-2025 is another key policy promoting industrial development and modernisation from labour-intensive industry to a higher-skills base by 2025. It also intends to strengthen competitiveness and enhance the productivity of domestic industries through the development of modern technology and knowledge-based industry. HRD and technical training is among the 4 strategic areas of IDP.

Neary Rattanak V 2019-2023: Neary Rattanak is a five-year strategic plan developed by the Ministry of Women's Affairs (MoWA) as Cambodia's strategic framework and plan for gender equality. Neary Rattanak is the most relevant government strategy addressing issues related to women's empowerment. One of its five strategies focuses on promoting women's and girl's education and women's economic empowerment; which aims to increase employment and business opportunities for women, especially vulnerable women, in the era of the digital economy and industry 4.0.

National Employment Policy 2015-2025: The policy aims to increase "decent and productive employment" opportunities, enhance skills and HRD, and enhance labour market governance.

A2.2. Rules and Regulations for Education

The Education Law (2007) is another key regulatory framework supporting the development of human resources, lifelong learning and rights to 9-year basic education for all Cambodians. The law also covers the scope of activities related to TVET and research.

Education Roadmap 2030: The roadmap is committed to achieve SDC 4 by ensuring "inclusive, equitable, and quality education" and promoting lifelong learning (LLL) opportunities. The roadmap has 5 priorities, focusing on: (1) equal access for boys and girls at pre-school, primary and lower secondary schools and free and equitable basic education (up to grade 9) for all boys and girls; (2) completion of upper secondary school with relevant learning results for both boys and girls and a substantial increase in youth access to technical education; (3) equal access to affordable and quality technical education and higher education for both men and women; (4) competency in literacy and numeracy skills for youths and adults and an increase in LLL opportunities for all age groups; and (5) improvement of education management and government at all levels.

Education Strategic Plan (ESP) 2019-2023: The ESP aims to ensure "inclusive and equitable quality education," especially for children from disadvantage families and "out-of-school youths," and promote LLL opportunities for all age groups. Also, it ensures that all children and youths obtain both cognitive and non-cognitive skills that respond to labour market demand.

New Generation Schools for Basic Education in Cambodia (2016): The new system allows schools to freely operate following a new structure and standards, and equipped with a modernised learning environment. Under this system, schools are required to use technology and drive innovation. Its curricula include STEM, foreign languages, and other subjects needed by the community.

Policy and Strategy on Information and Communication Technology (ICT) in Education (2018): The ICT Policy aims to integrate ICT in learning, teaching and knowledge in the education sector in order to equip students with knowledge and skills in response to the "21st century world of work" (p. 2). The policy has 5 priority strategies: (1) infrastructure connection and equipment; (2) ICT support for teaching and learning; (3) governance and management; (4) human resource development; and (5) financing for ICT in education. Under ICT support for teaching and learning, curricula will be modernized by including ICT and 21st century skills and knowledge. Moreover, e-learning will be used to "support the delivery of education services to all sub-sectors in education for students and for institutional human capacity development and lifelong learning" (p. 3).

Policy on Higher Education Vision 2030: The policy aims to develop mechanisms which ensure "the qualified students have an opportunity to access quality higher education programmes which respond to the needs of socio-economic development and the labour market" (p. 3). The strategy also intends to provide equitable access to higher education for poor and female students, and students with disabilities through the provision of the national scholarship program.

Policy on Inclusive Education (2018): The policy aims to provide education and training to vulnerable people to equip them with the knowledge and skills and ensure they receive lifelong learning within a quality, inclusive and equitable education system.

Policy on Education for Children with Disabilities (2008): The policy intends to support children with disabilities through increasing the awareness and acceptance of children with disabilities by communities and institutions, providing rehabilitation services and providing quality education, life skills and vocational training to children and youths with disabilities with equity and effectiveness.

National Technical Vocational Education and Training (TVET) Policy 2017-2025:

The TVET policy aims at "contributing to the development of the industrial sector by creating decent work and ensuring quality and high productivity of the workforce to better compete with regional countries." The policy intends to:

- Improve TVET quality to meet national and international market demand by continuing to develop and implement a quality assurance system based on the Cambodia Qualifications Framework; to improve trainers' quality and pedagogy and infrastructure in response to the fast development of technology and labour market demand; and to establish Technical and Vocational Parks in industry or economic zones
- Increase equitable access to TVET for employment generation through the increase in enrolment in the TVET system through flexible pathways; more opportunities for obtaining life skills, especially for women, marginalised groups, poor youth, school dropouts, migrant workers, and indigenous people; mechanisms to expand the CQF-based TVET training for all training institutions and stakeholders; increase in the awareness of the TVET system through providing consultation, career guidance and vocational skills, and establishment of a one-stop service and provision of convenient services related to TVET.
- Promote public-private partnerships (PPP) and aggregate resources from stakeholders to support sustainable development of the TVET system through enhancing PPP and partnerships with stakeholders in the TVET system;

expanding PPP and partnerships to develop training curricula in response to market demand and fast changing technology; establishing coordination mechanisms to set up the National Skills Development Fund; and developing a student fee policy for TVET providers offering scholarships for poor students, including women and indigenous people.

Improve governance of the TVET system through strengthening the TVET
regulatory framework in order to link skills training to the needs of the market;
developing results-based funding mechanisms for operating TVET institutions;
improving TVET management information systems and labour market
information systems, and strengthening labour market forecasting analysis and
needs assessment.

Master Plan for Technical Education at Upper Secondary Level (2015-2019):

Implemented by the Ministry of Education, Youth and Sport (MoEYS), the Master Plan includes 8 strategies and 24 sub-strategies. These 8 strategies include: a legislative framework to back up the general and technical education system; establishment of a general and technical education system; development of technical education curricula and text books; establishment of technical education facilities and installation of equipment; training of technical education teachers and promotion of technical education teachers' qualifications and competency; accreditation and quality assurance of technical education; establishment of a plan for the sustainability of technical education; and gender mainstreaming.

Cambodia Qualifications Framework (CQF): The objectives of the CQF are to ensure the equivalency of Cambodia qualifications standards to regional standards and to provide indicators for comparison to institutions and employers for planning, reviewing, accrediting, and understanding the skills and capacity of graduates. the CQF focuses on 4 elements, including levels, credits, learning outcomes, and study pathways. The study pathway helps students to move easily from technical and vocational education and training to higher education, and from academia to the labour market.

Strategic Action Plan for Modernisation of Technical and Vocational Education and Training 2019-2023: The strategic action plan intends to modernise TVET in response to labour market demand and improve Cambodian living standards. The policy focuses on 5 priority areas, including: quality of technical and vocational education and training; expansion of technical and vocational education and training services; partnership with the private sector (strengthening PPP) and other stakeholders; promotion of good governance; and the promotion of research and innovative technology in technical and vocational education and training.

A3. List of key informant organisations

No.	Organisation	Person	Position
1	MoEYS	Ms. Seng Janine	Director of Information and ASEAN Affairs Department
2	MoEYS	Mr. Kann Puthy	Deputy Director of the Primary Education Department
3	MoEYS	Mr. Pring Morokot	Director of the Secondary Education Department
4	MoEYS	Ms. Koulina	Director of Policy Department
5	MoEYS	Mr. Hang Chan Sovann	Deputy Director of Department for Non-Formal Education
6	National Institute for Special Education	Ms. Neang Phalla	Rector
7	MLVT	Mr. Thorng Samon	Deputy Director of The Directorate General of Technical Vocational Education and Training
8	Federation of Education Services in Cambodia	Mr. Pech Bolene	President
9	Young Entrepreneurs Association of Cambodia	Mr. Bun Sambath	Executive Director
10	Cambodia Women's Entrepreneurs Association	Ms. Onie Lunae	Executive Director
11	CAMFEBA	Mr. Sar Kinal	Board Member
12	GGEAR Group (Company)	Ms. Soeu Siya	Human Resource Manager

A4. Survey questionnaire

A4.1. Questionnaire for HEI

1. What is your occupation?

Introduction: Human Resource Development (HRD) is one of the activities in the Declaration of the ASEAN Secretariat. With support from the Federal Ministry for Economic Cooperation and Development (BMZ) via Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, the ASEAN Secretariat has carried out a *Study on Human Resources Development (HRD) Readiness in ASEAN* with simultaneous research activities in all ASEAN member states conducted in July and August 2020. The objective of the study is to analyse national policies, initiatives, and promising practices related to human resources development. Information identified in the research process will feed into other research on the development of a Human Resources Development Roadmap for ASEAN. The time required for filling in the questionnaire is less than 10 minutes. Your responses to this questionnaire will be kept confidential. Your name and identity will remain anonymous.

☐ Headmaster/Rector	
Teacher, which subject do you teach?	
2. a. To what extent are the following "future skills" incorporated e	explicitly and significantly in your curricula?
	Extent (1) very high; (2) high; (3) quite high; (4) quite low; (5) low; (6) none
Numeracy and literacy skills	
High-order cognitive skills (e.g. analysing; critical thinking; creating)	
ICT-skills / digital literacy (e.g. applying devices and tools; reflecting impact of ICT applications)	
STEM skills	
Social skills (e.g. communication; cooperation in teams; conflict resolution; empathy; emotional intelligence)	
Learnability (e.g. readiness to learn; learning motivation; curiosity; self-learning strategies)	
Character qualities (e.g. ethical reflection; social and cultural awareness; agility)	
Problem-solving in complex, technology-rich environments	
b. [If "none" is chosen for any "future skills"], why do you not	offer it?
\square No demand from the labour market demand	☐ Lack of experts in this skill
Lack of capital for developing such a skill	☐ No idea that this skill is necessary
Other, specify:	
c. [If "none" is chosen for any "future skills"], do you plan to incor	porate it in the curriculum in the future
Yes	□No

3.a. To what extent do teaching and learning resources provide support for promoting "future skills"?

	Extent (1) very high; (2) high; (3) quite high; (4) quite low; (5) low; (6) none
Textbooks	
Online resources	
Others:	

b.	Wha	at a	re th	ne sl	kills	offe	erec	o b	nlin	ıe?									

4. To what extent do assessments address "future skills"?

	Extent (1) very high; (2) high; (3) quite high; (4) quite low; (5) low; (6) none
Numeracy and literacy skills	
High-order cognitive skills (e.g. analysing; critical thinking; creating)	
ICT-skills / digital literacy (e.g. applying devices and tools; reflecting impact of ICT applications)	
STEM skills	
Social skills (e.g. communication; cooperation in teams; conflict resolution; empathy; emotional intelligence)	
Learnability (e.g. readiness to learn; learning motivation; curiosity; self-learning strategies)	
Character qualities (e.g. ethical reflection; social and cultural awareness; agility)	
Problem-solving in complex, technology-rich environments	

5.a. To what extent are digital technologies part of innovative teaching and learning concepts?

	Extent (1) very high; (2) high; (3) quite high; (4) quite low; (5) low; (6) none
Blended learning (selected phases online)	
Online learning	

5b. After COVID-19, do you plan to continue to adop Yes (specify if it is online learning or blended learn No, why?:	ing:)
6. To what extent are students exposed to the follow	ving provisions in your university?
	Extent (1) very high; (2) high; (3) quite high; (4) quite low; (5) low; (6) none
Career guidance counselling	
Vocational orientation	
Work experience / internships	
Entrepreneurship courses	
Other:	
7.a. Has your university partnered with the private opportunities? Yes b. If yes, to what extend do you cooperate with the private opportunities? Provide equipment and facilities Feedback on the quality of students Work together to revise the curriculum	□No
8.a. Do you have a target for the number of vulnerabl ethnic groups) for enrolment and graduation?	e students (poor, people with disabilities, and
b. If yes, what percentage? Percentage for enrolment: Plan Actual Percentage for graduation: Plan Actual	

A.4.2. Questionnaire for TVET

1. What is your occupation?

Introduction: Human Resource Development (HRD) is one of the activities in the Declaration of the ASEAN Secretariat. With support from the Federal Ministry for Economic Cooperation and Development (BMZ) via Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, the ASEAN Secretariat has carried out a *Study on Human Resources Development (HRD) Readiness in ASEAN* with simultaneous research activities in all ASEAN member states conducted in July and August 2020. The objective of the study is to analyse national policies, initiatives, and promising practices related to human resources development. Information identified in the research process will feed into other research on the development of a Human Resources Development Roadmap for ASEAN. The time required for filling in the questionnaire is less than 10 minutes. Your responses to this questionnaire will be kept confidential. Your name and identity will remain anonymous.

☐ Headmaster/Rector ☐ Teacher, which subject do you teach?	
2. a. To what extent are the following "future skills" incorporated o	
	Extent (1) very high; (2) high; (3) quite high; (4) quite low; (5) low; (6) none
Numeracy and literacy skills	
High-order cognitive skills (e.g. analysing; critical thinking; creating)	
ICT-skills / digital literacy (e.g. applying devices and tools; reflecting impact of ICT applications)	
STEM skills	
Social skills (e.g. communication; cooperation in teams; conflict resolution; empathy; emotional intelligence)	
Learnability (e.g. readiness to learn; learning motivation; curiosity; self-learning strategies)	
Character qualities (e.g. ethical reflection; social and cultural awareness; agility)	
Problem-solving in complex, technology-rich environments	
b. [If "none" is chosen for any "future skills"], why do not you	offer it?
No demand from the labour market demand	☐ Lack of experts in this skill
Lack of capital for developing such a skill Other, specify:	☐ No idea that this skill is necessary
,	
c. [If "none" is chosen for any "future skills"], do you plan to incorpo	rate it into the curriculum in the future?
Yes	□No

3.a. To what extent do teaching and learning resources provide support for promoting "future skills"?

	Extent (1) very high; (2) high; (3) quite high; (4) quite low; (5) low; (6) none
Textbooks	
Online resources	
Others:	

b. What are the skills offered online?	

4. To what extent do assessments address "future skills"?

	Extent (1) very high; (2) high; (3) quite high; (4) quite low; (5) low; (6) none
Numeracy and literacy skills	
High-order cognitive skills (e.g. analysing; critical thinking; creating)	
ICT-skills / digital literacy (e.g. applying devices and tools; reflecting impact of ICT applications)	
STEM skills	
Social skills (e.g. communication; cooperation in teams; conflict resolution; empathy; emotional intelligence)	
Learnability (e.g. readiness to learn; learning motivation; curiosity; self-learning strategies)	
Character qualities (e.g. ethical reflection; social and cultural awareness; agility)	
Problem-solving in complex, technology-rich environments	

5. a. To what extent are digital technologies part of innovative teaching and learning concepts?

	Extent (1) very high; (2) high; (3) quite high; (4) quite low; (5) low; (6) none
Blended learning (selected phases online)	
Online learning	

b. After COVID-19, do you plan to continue to ac	dopt online learning or blended learning?
☐ Yes (specify if it is online learning or blended I	earning :)
☐ No, why?:	
6. To what extent are students exposed to the f	following provisions in your institution?
	Extent (1) very high; (2) high; (3) quite high; (4) quite low; (5) low; (6) none
Career guidance counselling	
Vocational orientation	
Work experience / internships	
Entrepreneurship courses	
Other:	
 7. a. Has your institution partnered with the opportunities? Yes b. If yes, to what extend do you cooperate with Provide the equipment and facilities 	private sector for internship and/or employment No the private sector (multiple choices)? Feedback on needed skills
☐ Feedback on the quality of students	☐ Feedback on the quality of internships
☐ Work together to revise the curriculum	Other, specify:
8. a. Do you have a target number for vulners ethnic groups) for enrolment and graduation Yes	able students (poor, people with disabilities, and n?
b. If yes, what percentage?	
Percentage for the enrolment:	
• Plan	
• Actual	
Percentage for graduation:	
· Plan	
 Actual 	

A.4.3. Questionnaire for General Education

Introduction: Human Resource Development (HRD) is one of the activities in the Declaration of the ASEAN Secretariat. With support from the Federal Ministry for Economic Cooperation and Development (BMZ) via Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, the ASEAN Secretariat has carried out a *Study on Human Resources Development (HRD) Readiness in ASEAN* with simultaneous research activities in all ASEAN member states conducted in July and August 2020. The objective of the study is to analyse national policies, initiatives, and promising practices related to human resources development. Information identified in the research process will feed into other research on the development of a Human Resources Development Roadmap for ASEAN. The time required for filling in the questionnaire is less than 10 minutes. Your responses to this questionnaire will be kept confidential. Your name and identity will remain anonymous.

1.	What is your school type?
	Primary school (students up to 10 years old)
	(Lower) secondary school (students from 11 to 16 years old)
2.	What is your occupation?
	☐ Headmaster
	☐ Teacher, which subject do you teach?
3.	To what extent are the following "future skills" incorporated explicitly and significantly in

curricula in general education, TVET and higher education?

	Extent (1) very high; (2) high; (3) quite high; (4) quite low; (5) low; (6) none
Numeracy and literacy skills	
High-order cognitive skills (e.g. analysing; critical thinking; creating)	
ICT-skills / digital literacy (e.g. applying devices and tools; reflecting impact of ICT applications)	
STEM skills	
Social skills (e.g. communication; cooperation in teams; conflict resolution; empathy; emotional intelligence)	
Learnability (e.g. readiness to learn; learning motivation; curiosity; self-learning strategies)	
Character qualities (e.g. ethical reflection; social and cultural awareness; agility)	
Problem-solving in complex, technology-rich environments	

4. To what extent do teaching and learning resources provide support for promoting "future skills"?

	Extent (1) very high; (2) high; (3) quite high; (4) quite low; (5) low; (6) none
Textbooks	
Online resources	
Others:	

5. To what extent do assessments address "future skills"?

	Extent (1) very high; (2) high; (3) quite high; (4) quite low; (5) low; (6) none
Numeracy and literacy skills	
High-order cognitive skills (e.g. analysing; critical thinking; creating)	
ICT-skills / digital literacy (e.g. applying devices and tools; reflecting impact of ICT applications)	
STEM skills	
Social skills (e.g. communication; cooperation in teams; conflict resolution; empathy; emotional intelligence)	
Learnability (e.g. readiness to learn; learning motivation; curiosity; self-learning strategies)	
Character qualities (e.g. ethical reflection; social and cultural awareness; agility)	
Problem-solving in complex, technology-rich environments	

6. To what extent are digital technologies part of innovative teaching and learning concepts?

	Extent (1) very high; (2) high; (3) quite high; (4) quite low; (5) low; (6) none
Blended learning (selected phases online)	
Online learning	

7. To what extent are students exposed to the following provisions in (lower) secondary education?

	Extent (1) very high; (2) high; (3) quite high; (4) quite low; (5) low; (6) none
Career guidance counselling	
Vocational orientation	
Work experience / internships	
Entrepreneurship courses	
Other:	

A.4.4. Questionnaire for HRD Readiness

Introduction: Human Resource Development (HRD) is one of the activities in the Declaration of the ASEAN Secretariat. With support from the Federal Ministry for Economic Cooperation and Development (BMZ) via Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, the ASEAN Secretariat has carried out a *Study on Human Resources Development (HRD) Readiness in ASEAN* with simultaneous research activities in all ASEAN member states conducted in July and August 2020. The objective of the study is to analyse national policies, initiatives, and promising practices related to human resources development. Information identified in the research process will feed into other research on the development of a Human Resources Development Roadmap for ASEAN. The time required for filling in the questionnaire is less than 10 minutes. Your responses to this questionnaire will be kept confidential. Your name and identity will remain anonymous.

Thank you very much for supporting us with your expertise!

The questions are intended to receive your appraisal on six main areas within Human Resource Development. For each area we would like your appraisal with regard to its importance and realisation. There may be gaps between what is desirable and what has already been achieved.

For your responses in the following questionnaire you will need between 5-10 minutes!

Your responses will be kept anonymous and strictly confidential!

Your institutional affiliation

☐ Ministry of Primary / lower secondary school ☐ TVET school / college / academy ☐ University / research institution ☐ Company ☐ Business membership organisation	_ (if applicable, please complete name of ministry)
Other:	(if applicable, please specify)
Main expertise in the following fields:	
General / basic education Technical and vocational education Higher education Corporate learning & development Non-formal / informal education	
Other:	(if applicable, please specify)

		Important	
	very high (100%)	high (80%)	quite high (60%)
Promote HRD culture: There is an awareness and culture of HRD empowering people to make them resilient for an environment of constant change!			
Adopt inclusive approach: HRD includes specific programmes and support for vulnerable groups at risk of being left behind!			
Modernise HRD programs: "Future skills" ²¹ are fully incorporated into curricula, teaching and learning resources and assessments in general, vocational and higher education!			
Professionalise development of qualified teaching personnel: There are standards for the training of teachers and in-company trainers which address the acquisition of "future skills"!			
Promote engagement of the business sector: In the field of TVET and Higher Education, there are strong links between state bodies and the business sector in terms of public-private-partnerships in HRD			

^{21. &}quot;Future skills" comprise especially: (1) cognitive skills (numeracy and literacy as foundation skills; low- and high-order skills, e.g. critical thinking, creating / innovating); (2) ICT skills / digital literacy; (3) STEM skills; (4) social skills; (5) learnability (e.g. readiness to learn, learning motivation; curiosity, self-learning strategies); (6) character qualities (e.g. ethical reflection and action, social and cultural awareness, agility, initiative); and (7) problem-solving in complex, technology-rich environments.

/ Desirable			Realised / Achieved					
quite low (40%)	low (20%	none (0%)	very high (100%)	high (80%)	quite high (60%)	quite low (40%)	low (20%	none (0%)

References

Barbotte, E., Guillemin, F., Chau, N., Chau, N., Guillaume, S., Otero-Sierra, C., ... Schleret, Y. (2001). *Prevalence of impairments, disabilities, handicaps and quality of life in the general population: A review of recent literature*. Bulletin of the World Health Organization, 79(11), 1047-1055.

GSO. (2020). Results - The Viet Nam Population and Housing Census of 00:00 Hours on 1 April 2019. Hanoi, Viet Nam.

ILO. (2016). The Future of Jobs at Risk of Automation.

ILO. (2019). Decent Work and the Sustainable Development Goals in Viet Nam: Country Profile.

Nguyen, Q. T. N. (2016). *The Vietnamese Values System: A Blend of Oriental, Western and Socialist Values.* International Education Studies, 9(12), 32. https://doi.org/10.5539/ies.v9n12p32

NIVET. (2019). Report on Vocational Education and Traning in Viet Nam 2018. Hanoi.

Salmi, J., & Pham, L. T. (2019). Academic Governance and Leadership in Viet Nam: Trends and Challenges. Journal of International and Comparative Education, 8(2), 103-118. https://doi.org/10.14425/jice.2019.8.2.103

Yang, J. (2015). Recognition, Validation and Accreditation of Non-formal and Informal Learning in UNESCO Member States.

Online Resources

http://hdr.undp.org/en/indicators/103006

(last access 5 August 2020)

https://ourworldindata.org/grapher/mean-years-of-schooling-1

(last access 5 August 2020)

http://9hdr.undp.org/en/indicators/103006#

(last access 5 August 2020)

https://data.worldbank.org/indicator/SE.ADT.1524.LT.ZS?locations=vn&year_high_desc=true (last access 5 August 2020)

https://www.gso.gov.vn/default_en.aspx?tabid=515&idmid=5&ItemID=19616 (last access 5 August 2020)

https://www.ilo.org/gateway/faces/home/ctryHome?locale=EN&countryCode=VNM®ionId=3&_adf.ctrl-state=ux3ids27p_4# (ILO, accessed 20 June 2020)

http://uis.unesco.org/country/VN (last access 5 August 2020)

https://www.gso.gov.vn/default_en.aspx?tabid=515&idmid=5&ItemID=19616 (last access 5 August 202

https://www.cia.gov/library/publications/the-world-factbook/geos/vm.html (last access 5 August 2020)

https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=VN (last access 5 August 2020)

https://www.cia.gov/library/publications/the-world-factbook/geos/vm.html (last access 5 August 2020)

http://hoidongquocgiagiaoduc.moet.gov.vn/gioi-thieu/Pages/default.aspx?ltemID=5289 (last access 5 August 2020)

According to the speech of the Minister of education at the Education World Forum in London in January 2019. https://english.Viet Namnet.vn/fms/education/216664/Viet Nam-spends-5-8--of-gdp-on-education.html (last accessed 5 August 2020)

http://gdnn.gov.vn/AIAdmin/News/View/tabid/66/newsid/37955/seo/Nghe-nao-tuyen-nhieu-trong-nam-2021-/Default.aspx (access 15 August 2020)

https://baodautu.vn/covid-tai-xuat-trien-vong-cac-nganh-cuoi-nam-2020-the-nao-d127026.html (access 15 August 2020

https://VietNamnet.vn/vn/kinh-doanh/thi-truong/de-t-may-lo-ma-t-11-nghi-n-ty-nhie-u-lao-do-ng-ma-t-vie-c-628185.html (access 15 August 2020)

https://data.worldbank.org/indicator/IT.NET.USER.ZS?locations=VN (last access 28 August 2020)

http://international.fpt.edu.vn/about-us/ (last access 29 August 2020)

http://phenikaa.com/en/business-fields#tab-3 (last access 28 August 2020)

https://vingroup.net/tin-tuc-su-kien/bai-viet/2193/vinfast-hop-tac-dao-tao-cao-dang-chuyen-nganh-co-dien-tu-va-ky-thuat-o-to (last access 28 August 2020)

http://news.chinhphu.vn/Home/Key-economic-regions-are-major-national-growth-poles-says-PM/20205/40244.vgp (last access 28 August 2020)

was established pursuant to the Prime Minister's Decision 1018/1997/QD-TTg
was established pursuant to the Prime Minister's Decision 44/1998/QD-TTg
was established pursuant to the Prime Minister's Decision 492/2009/QD-TTg
http://asiaperspective.net/ap17/wp-content/uploads/2019/11/ap-Viet Nam-kez-report-part-one-251119a.pdf (last access 31 August 2020)







