12th FYP HRD Masterplan for the Economic Sectors (2018-23)

Ministry of Labour and Human Resources

Developed by
Human Resource and Skills Development Division (HRSDD)
Department of Employment and Human Resources (DEHR)
Ministry of Labour and Human Resources

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“The government has provided education to our youth. But for the nation to prosper for all time, a sound education must be succeeded by access to the right jobs and responsibilities, so that our youth may bloom as individuals and at the same time serve their Nation well.”

“The greatest and the most valuable wealth we have in Bhutan is our people. We can never go wrong if we invest in human resources - no matter how much it cost, that investment will give our Nation rich dividends and what we lack in number, we must make up in talent.”

His Majesty’s address at the 2012 National Day Celebration and 2015 Graduate Convocation

FOREWORD

The economic goals of a country can be achieved by creation of appropriate human capital. Towards this, the Ministry of Labour and Human Resources (MoLHR) has been making efforts to enhance skill and capability of human resource in the country through different HRD interventions designed for both young jobseekers as well as those workforce requiring reskilling and upskilling opportunities. In alignment with the five year planning cycle of the Government, the MoLHR has been developing the HRD Masterplan for the Economic Sectors. The first HRD Masterplan was prepared in the 9th FYP period with the establishment of the MoLHR. The HRD Masterplan has been an important guiding document for setting HRD directions and goals.

In the 12th FYP, the MoLHR will work towards productive and gainful employment of young jobseekers in transition to work. This will be done in collaboration with different stakeholders and partner agencies. With increasing job opportunities in the private sector, HRD for the sector is an important strategy to further accelerate growth and employment opportunities in the sector. Therefore, the MoLHR is pleased to present the 12th FYP HRD Masterplan for the Economic Sector (2018-23). The HRD Masterplan will be a strategic guide for implementation of different HRD programs by the MoLHR in the 12th FYP period, more specifically the critical skills (pre-service HRD) and critical capabilities (in-service HRD) programs implemented by the Department of Employment and Human Resources (DEHR).

The document has been developed in close consultation and coordination with different sector bodies/associations and stakeholders. A comprehensive skill needs assessment has been carried out with about 5000 establishments to assess the HR needs in the 12th FYP period. The MoLHR would also like to acknowledge the contributions from the members of the HRD Committee. Therefore, it's a document representing input and views of our industries and stakeholders in the different economic sectors.

My appreciation goes out to all different agencies and individuals for their full support and cooperation rendered to the MoLHR during the development process. I hope that different donors, training partners, and stakeholders will provide their support during the implementation of the HRD Masterplan.

Tashi Delek!

Sonam Wangchuk
Secretary, Ministry of Labour and Human Resources

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PART I
LABOUR MARKET CONTEXT

LABOUR MARKET CONTEXT

A critical challenge facing Bhutan is gainful employment of our youth and the development of competent workforce for sustained economic growth. Human resource development through a well-planned education and training initiatives can contribute significantly in promoting the interests of the individuals, the economy, and the society at large. To this end, concerted HRD effort can impact directly and positively towards helping individuals gain access to decent work and sustainable jobs and escape from poverty and marginalization. An efficient and effective HRD support can enhance productivity and competitiveness of workforce, and promote entrepreneurship activities in the country.

An increasing number of secondary and university graduates will enter the labour market in the next five years. It is estimated that about 12,000 to 13,000 secondary and university graduates from different schools and colleges will enter the world of work. This number excludes those who will reenter the labour market and those who will require re-skilling support. Many of those graduating from the secondary education, until specific skills set are provided within the institutions, will require transition support to enable them to find jobs. While most tertiary education graduates are expected to find jobs directly, some will require transition support considering both aspect of industry requirement as well as their academic qualification. A total of about 66,000 jobseekers will enter the labour market in the five year time frame.

Table 01: Forecast of jobseekers in the 12th FYP period

Education	2018-19	2019-20	2020-21	2021-22	2022-23	Total
Class X	2,943	3,024	3,304	3,051	2,938	15,260
Class XII	5,642	5,672	6,409	6,585	7,196	31,504
University Graduates	3,712	3,894	4,034	3,556	3,761	18,957
Total	12,297	12,590	13,747	13,192	13,895	65,721

Source: LMIRD

As per Labour Force Survey (LFS) 2016, the labour force population is about 355,000 out of which 97.9 percent are employed. Unemployment has decreased from 2.9 percent in 2013 to 2.1 percent in 2016. Youth unemployment on the other hand has increased from 9.6 percent in 2013 to 10.7 percent in 2015 and 13.3 percent in 2016. While the overall labour force participation rate averages to about 63 percent in the last five years, youth labour force participation rate was 32.4 percent in 2012 and 27.1 percent in 2016. Youth labour force participation rate is slightly higher for female and there is a decreasing trend for both gender. Labour force participation is much higher for those within the age of 25 to 64 years. The labour force participation for those within age bracket of 25-64 was 92 percent for male and 69.8 percent for female as per LFS 2016. Labour force participation rate for those above 65 years of age averages to about 35 percent in the last five years, which is

higher than the youth labour force participation rate. Female labour force participation rate has decreased from 67 percent in 2010 to 59.5 percent in 2013 and 54.5 percent in 2016. However, unlike the previous year, youth unemployment among female is much lower compared to male unemployment as per LFS 2016, indicating success of many female centric programs initiated by the MoLHR.

During the onset of the 11th FYP, unemployment among university graduates was an issue to be addressed. With many skilling and industry attachment programs geared towards university graduates, the percentage of university graduates against total unemployed has decreased from 32.72 percent in 2013 to 27.9 percent in 2016. In absolute number the figure has decreased from 3210 to 2244 individuals.

Table 02: Labour force indicators from 2009 to 2016

Indicator	2009	2010	2011	2012	2013	2014	2015	2016
Unemployment rate	4	3.3	3.1	2.1	2.9	2.6	2.5	2.1
Male	2.6	2.7	1.8	1.9	2.2	1.9	1.8	2
Female	5.3	4	4.5	2.2	3.7	3.5	3.1	2.3
Labour force participation rate	68.5	68.6	67.4	64.4	65.3	62.6	63.1	62.2
Male	71.9	69.3	70.1	66.6	67.9	65.7	64.8	65.4
Female	63.2	67	61.2	59.2	59.5	55.3	59.2	54.5
Youth unemployment rate	12.9	9.2	9.2	7.3	9.6	9.4	10.7	13.2
Male	10.7	7.1	6.8	7.3	9.2	8.6	8.2	16.4
Female	14.7	11	10.9	7.2	9.9	10	12.7	11

Source: LFS 2016

Supply from tertiary education institutions

The Royal University of Bhutan (RUB) has ten constituent colleges and three affiliated colleges. RUB is gradually increasing the intake capacity within different colleges. Some of the new programs that will be offered in the 12th FYP period are in the areas of media, ICT, agriculture and forest, and engineering sciences. An important strategy that RUB will be adopting to make graduates employable is through greater emphasis in entrepreneurship learning and support facilities provided in different colleges. Entrepreneurship modules will be integrated in all aspects of learning. RUB plans to establish incubation units in different colleges to support aspiring entrepreneurs. Employability skills (or transferable skills) like ICT, communication, teamwork, leadership and critical thinking will be integrated in all aspects of learning. Such transferable skills are expected to make graduates more mobile between different types of industries.

The 12th FYP will be a critical period for implementation of Tertiary Education Roadmap (2017-2027) by the Department of Adult and Higher Education (DAHE). The Roadmap has four key objectives; improving access, strengthening relevancy, enhancing quality and streamlining governance structure and financial sustainability in tertiary education. Some of the strategies highlighted to achieve the objectives are in terms of promoting private sector participation in tertiary education, diversifying modes of delivery and promotion of life-long learning, building active industry participation, developing a long-term human resource requirement direction, promotion of entrepreneurship culture, promotion of STEM programs, enhancing professional development of faculty, and strengthening financial sustainability among others. The DAHE will play a key role in the implementation of the Roadmap. The MoLHR will continue to work closely with DAHE in strengthening the relevancy of tertiary education in the country.

A total of about 3000 graduates with undergraduate degree are expected to enter the labour market annually in the 12th FYP period from different in-country tertiary education institutions. This number includes those graduating from the DAHE scholarship program but does not include the self-funded graduates studying outside Bhutan. The Beyond Graduation Survey 2017 indicates that on an average 29 to 30 percent self-funded graduates entered the labour market in 2017. The figure is different in 2013 and in 2014, and therefore it is difficult to assess the actual composition of self-funded graduates entering the labour market. The figure also varies for different fields of study. It was the highest for business and management studies, with about 51 percent of total graduates being self-funded. This figure is 29.45 percent for arts and humanities program, 20.69 percent for ICT program, 14.81 percent for science program, and 36.67 percent for engineering program. With more number of colleges offering Arts and Humanities program, there will be higher number of these graduates entering the labour market.

Table 03: Graduates entering the labour market in the 12th FYP period

SN	Fields	2018	2019	2020	2021	2022	2023
1	Arts and Humanities	751	756	798	819	830	830
2	Business and Management	663	667	669	660	660	660
3	ICT	70	162	50	170	232	232
4	Science	129	235	243	302	302	302
5	Engineering and related technologies	336	366	343	371	480	545
6	Agriculture and Forest	213	311	313	307	305	305
7	Education	496	497	518	515	130	130
8	Health	61	39	68	48	39	30
	Total	2719	3033	3002	3192	2978	3034

Source: RUB and DAHE

Supply from TVET institutions

Technical and Vocational Education and Training (TVET) will have greater emphasis in the 12th FYP period. The Department of Technical Education (DTE) has been established during the onset of the 12th FYP period with an objective to revamp the TVET system and bring greater diversity, quality and relevancy of TVET opportunities available in the country. A new Technical Training Institute (TTI) will be established in the fields of automobile and media programs. Most of the existing TTIs and Institute of Zorig Chusum (IZC) will be upgraded to Vocational College and they will provide National Diploma courses. Similar to RUB, DTE will provide greater emphasis on providing entrepreneurship and employability skills to students enrolled in different TTIs and IZCs. Incubation facilities will be established within different TTIs and IZCs.

Reforms within the TVET system are expected to be implemented through the four pillar approach highlighted in the TVET Blueprint. The TVET Blueprint will provide direction on the different areas of interventions in the 12th and 13th FYP period. Intake capacity within the TTIs and IZCs will be doubled in the 12th FYP. Market relevant short-term courses will be provided on regular basis in different institutes. TVET provision in collaboration with private providers will be strengthened, through emphasis on both quality and relevancy of the program. TVET quality will be enhanced through capacity development of TVET trainers, Quality Management System (QMS) support facilitation in all institutes and through accreditation of programs.

In the 12th FYP, private TVET providers are expected to play a key role in providing short-term need based skilling. Bhutan currently has a total of about 115 registered training providers, out of which 95 are private providers, totaling to about 83 percent.

The total number of graduates from the different TTIs and IZCs will increase from about 700 in the initial years to more than 1000 by the end of the plan period. Short-courses within the institutes will be introduced to maximize utilization of institute infrastructures, equipment and resources. Institutes under different Government agencies such as RITH and RAPA are also expected to provide higher access.

Table 04: Graduates from TTIs and IZCs in the 12th FYP period

SN	Institute	2018-19	2019-20	2020-21	2021-22	2022-23	Total
1	TTI - Samthang	93	84	108	130	133	548
2	TTI - Thimphu	42	48	48	108	136	382
3	TTI - Khuruthang	105	95	100	110	110	520
4	TTI - Rangjung	73	93	96	127	133	522
5	TTI - Chumey	137	90	116	124	132	599
6	JWPTI	124	105	200	200	200	829
7	IZC - Thimphu	35	70	82	94	94	375
8	IZC-Tashiyangtse	68	85	85	105	105	448
	Total	677	670	835	998	1043	4223

Source: DTE

Prospective demand from existing establishments

The Establishment Survey was conducted in 2017. A total of 5,029 business establishments participated in the survey, out of which survey outcome for 4939 establishments were used. The survey outcome has been instrumental in designing the masterplan. A total of six broad economic sectors were covered; construction sector including both hydro and non-hydro constructions, tourism, production including firms engaged in food-based, arts and craft and other areas of production, education and training, ICT and service sector. Establishments were asked on the areas of vacancies in the 12th FYP period. As indicated in the following table, 3,991 establishments, which constitute about 81 percent of the surveyed establishments indicated that they will be hiring in the next five years. Majority of these establishments are located in Thimphu region. Employment prospect looks better in the service sector and in the micro and small scale industries. This is something to be taken into consideration while moving forward.

Table 05: Establishments with indication of recruitment in the 12th FYP period

Broad sector	Total firms	Micro	Small	Medium	Large	Total	Percentage
Total firms	4939	3395	1207	274	63		
Construction	233	58	96	30	7	191	81.97
Education & Training	142	41	53	28	4	126	88.73
ICT	339	176	62	15	4	257	75.81
Production	530	213	165	41	13	432	81.51
Services	3089	1,925	448	53	12	2,438	78.93
Tourism	606	253	223	68	3	547	90.26
Total		2,666	1,047	235	43	3,991	80.81
Percentage		78.53	86.74	85.77	68.25	80.81	

The 3,991 establishments have indicated vacancies for about 16,000 jobs in the 12th FYP period. Most of these requirements are immediate in nature since many establishments lack long term human resource or business strategic planning. As indicated in the following table, the highest number of vacancies are in the major occupation category of service and sales workers (29.4 percent). This is expected since majority of the surveyed establishments are in the service sector. The next major occupation is crafts and related trades workers, followed by technical and association professionals, and plant and machine operators/assemblers. 72 percent of the vacancies are either in the micro or small establishments. Vacancies in the larger establishments are much lower in comparison to the smaller establishments. This holds true for all occupation categories. Sector wise, vacancies are higher in service sector followed by production, tourism and construction sector.

Table 06: Prospective jobs the 12th FYP period in major occupation by establishment scale

Major Occupation	Micro	Small	Medium	Large	Total	Percent
Managers	81	98	93	27	299	1.83
Professionals	401	657	449	237	1,744	10.70
Technicians and Associate Professionals	680	499	473	794	2,446	15.00
Clerical Support Workers	129	164	194	51	538	3.30
Services and Sales Workers	3,349	1,043	206	26	4,624	28.36
Forestry Workers	2	0	33	0	35	0.21
Craft and Related Trades Workers	1,214	1,224	642	196	3,276	20.09
Plant and Machine Operators and Assemblers	78	229	151	318	776	4.76
Elementary Occupations	1,020	793	233	522	2,568	15.75
Total	6,954	4,707	2,474	2,171	16,306	100
Percent	42.65	28.87	15.17	13.31	100	

Table 07: Prospective jobs the 12th FYP period in major occupation by economic sector

Major Occupation	Economic Sectors						Total
	Construction	Education & Training	ICT	Production	Services	Tourism	
Managers	13	15	37	29	97	108	299
Professionals	253	510	254	106	488	133	1,744
Technicians and Associate Professionals	180	35	775	423	829	204	2,446
Clerical Support Workers	21	13	153	39	165	147	538
Services and Sales Workers	11	57	49	87	3,320	1,100	4,624
Forestry Workers	0	0	156	5	30	0	191
Craft and Related Trades Workers	384	28	41	1,183	1,490	35	3,161
Plant and Machine Operators and Assemblers	361	5	23	176	106	87	758
Elementary Occupations	669	15	0	349	966	546	2,545
Total	1,892	678	1,488	2,397	7,491	2,360	16,306
Percent	11.60	4.16	9.13	14.70	45.94	14.47	100

Table 08: Prospective jobs the 12th FYP period in different economic sector by region

Trade Region	Construction	Education & Training	ICT	Production	Services	Tourism	Total	Percent
Thimphu region	1,373	550	1,278	1,231	5,175	1,698	11,305	69.33
Phuentsholing region	60	69	133	702	1,118	237	2,319	14.22
Gelephu region	54	21	36	105	374	78	668	4.10
Samdrup Jongkhar region	17	6	10	77	146	75	331	2.03
Mongar region	317	32	20	183	441	139	1,132	6.94
Trongsa region	71	0	11	99	237	133	551	3.38
Total	1,892	678	1,488	2,397	7,491	2,360	16,306	100

Bhutan also has a high number of foreign workers in the country. As of January 2018, about 50,000 foreign workers were residing in the country. While majority (82 percent) of them are in craft and related trade worker, about 260 are in manager position, 1200 in professional position, and 570 in technical and association professional. High number of foreign workers in the country (especially in different low and medium skilled jobs) is expected since Bhutan is a small nation with booming construction sector requiring high number of workforce. The strategy should not be to replace foreign workers in manual jobs but rather build skills in high and medium level so that individuals are able to get quality employment. In the 12th FYP, the number of foreign workers in the managerial, professional, and technical and associate professional should decrease with necessary intervention in the area.

Labour Productivity

Labour productivity has been assessed using figure available on the real Gross Domestic Product (GDP) and employed labour force in the 11th FYP period. As indicative from the following table, Bhutanese workforce is highly productive. On an average, in the last four years, each worker engaged in the primary sector has daily contributed about Nu. 400 to the GDP. The average contribution from individual worker in the secondary sector is about Nu. 1300 and in the tertiary sector is about Nu. 1900. The labour productivity assessment done by World Bank[1] also indicates that between 2009 and 2015, estimated median productivity almost doubled from USD 5,700 per worker to more than USD 10,000 per worker. Labour productivity in Bhutan was also assessed to be comparatively higher in the region.

Labour productivity rate has been on an increasing tread in the last four years in all the sectors. In fact, the overall increase has been steady at about 6.5 percent in the 11th FYP period. Secondary

[1]Investment Climate Assessment of Bhutan 2016

sector has the highest contribution to GDP per worker, taking into account the 45,000 foreign workers engaged in the construction and manufacturing industries. This has been done to give correct assessment of the figure.

However, on the flipside, labour cost per unit is very low. This has been calculated taking into consideration the wages paid[2] to all the workforces engaged in the sector. As indicated in the following table, for every Nu. 1000 contributed to the GDP, the average labour cost in the last four years is Nu. 30. This figure is the lowest in the primary and secondary sector averaging to about Nu. 20 in the former sector and about Nu. 11 in the latter sector. Despite the fact that the secondary sector is one of the most productive sectors, it pays the least amount of wages to its workers. This number does not look good in any of the three broad sectors. Thus, policy intervention in terms of wage reform through minimum wage revision will be an important strategy in the 12th FYP.

Table 09: Labour Productivity[3]

Labour Productivity (GDP per day worked)

Economic Sector	2013	2014	2015	2016
Primary	345	401	424	476
Secondary	1,092	1,133	1,281	1,344
Tertiary	1,533	1,777	1,914	2,107
Total	504	526	560	599

Labour Productivity growth rate

Economic Sector	2014	2015	2016
Primary	16.2%	5.8%	12.3%
Secondary	3.8%	13.0%	4.9%
Tertiary	15.9%	7.8%	10.1%
Total	4.3%	6.5%	6.9%

Labour Cost per unit (for every Nu. 1000 contributed to the GDP)

Economic Sector	2013	2014	2015	2016
Primary	14.05	17.14	19.92	24.19
Secondary	12.86	9.81	11.02	13.48
Tertiary	61.75	58.17	55.57	54.51
Total	32.36	30.46	30.38	31.95

[2]source: Labour Force Survey 2013, 2014, 2015, and 2016

[3]About 45,000 foreign workers accounted in the secondary sector. Average working day in a year calculated at 260 days.

Industry Outlook

An assessment was made to understand the kind of training and development support provided by different establishments for their employees. Majority of large scale firms provide different range of training support and about 60 percent of them keep budget aside for training and development. They also keep slightly higher amount of budget for training. In-house training, which is cost effective and can be managed through internal expert, is common across all scale of industries. However, most training and development are ad-hoc in nature with almost 96 percent of the establishment not keeping budget aside for training and development of their staff. This can also mean that these establishments do not have clear human resource plan or strategy for their establishment. Further, most sector bodies are not very clear on long-term sector goals and direction, which can be instrumental for designing different program interventions. However, few sector bodies have short-term to medium-term HR plans. TCB has recently developed a TNA Report for the tourism sector, which gives training and development requirements to enhance productivity and services in the sector. Sector bodies like ABTO, BEA and GAB have regularly carried out few need based training programs for their member firms.

Table 10: Percentage of establishment providing Training and development for employees

Training types	Micro	Small	Medium	Large	Total
in-house training	19.56	44.82	62.41	76.19	28.83
in-country training	6.57	20.80	46.35	66.67	13.02
ex-country training	1.50	8.70	23.72	65.08	5.30
OJT training	12.05	31.40	40.51	63.49	19.01

Table 11: Percentage of establishment with Training and development budget

Salary Range	Micro	Small	Medium	Large	Total
None	98.82	93.37	80.29	41.27	95.73
Less than 20,000	0.29	1.16	1.09	1.59	0.57
20,001 to 50,000	0.21	1.16	1.09	1.59	0.51
50,001 to 80,000	0.12	0.41	1.09	1.59	0.26
80,001 to 100,000	0.15	0.66	1.09	0.00	0.32
100,001 to 200,000	0.06	1.24	3.28	0.00	0.53
200,001 to 300,000	0.09	0.58	1.82	1.59	0.32
300,001 to 400,000	0.00	0.08	1.46	1.59	0.12
More than 500,000	0.27	1.33	8.76	50.79	1.64
	100	100	100	100	100

An assessment was also made to understand the different challenges faced by the private sectors. These challenges being access to market, finance and land, different business licensing system and trading rules, transportation and logistics, telecommunication and internet facilities, labour law

and regulation, and availability of adequate workers with skills and qualification. Establishments were also asked to assess the difficulty of internal challenges such as competency of workers to carry out their job roles and responsibilities, management skills within the establishment, business competition with similar line of businesses, and employee turnover through job hopping. Majority of establishments seem to be struggling with challenges such as competition with similar line of businesses, limited access to market, and high and frequent employee turnover. The study carried out by the World Bank and the Asian Development Bank (ADB) gives similar result as indicated from the findings of the Establishment Survey 2017.

The Private Sector Assessment carried out by ADB indicates three main challenges concerning private sector development. First being the lack of finance for business growth and diversity. The study indicates lack of diversified sources of funding, requirement for collateral and complex loan procedures as a critical challenge. Second being inadequate infrastructure, especially in terms of transportation facilities. Last being inadequate skilled labour force. The Investment Climate Assessment of Bhutan 2017 developed by the World Bank also highlights similar constraints for private sector development. In order of severity, access to finance, access to skills, and access to external market has been highlighted as a difficult challenge for private sector development.

Table 12: Business challenges rated from moderate to very difficult by different establishments

Challenges	Overall %	Micro %	Small %	Medium %	Large %
Access to market	83.41	72.25	55.92	46.35	34.92
Access to finance	58.23	49.13	41.09	37.59	33.33
Access to Land	39.60	31.90	30.74	30.66	28.57
Access to skilled and qualified workers	47.59	36.61	41.34	38.69	34.92
Licensing and permit system	21.33	16.26	18.89	16.79	19.05
Trading rules and regulations	21.58	16.55	17.90	20.44	22.22
Labour law and regulation	23.95	17.67	20.30	28.47	28.57
Transportation and logistic	30.44	24.33	24.11	22.99	25.40
Telecommunication	41.94	34.34	30.90	30.29	41.27
Internet connectivity/facilities	49.27	39.65	37.95	39.42	38.10
Competencies of workers to carry out job roles	39.93	30.93	34.55	29.93	31.75
Management skills within the establishment	30.90	24.65	24.44	23.36	28.57
Business competition	90.33	73.61	70.59	63.50	38.10
Labour turnover	68.36	50.13	63.21	67.15	58.73

A very high number of graduates coming from different tertiary and secondary education institutions prefer to work in the Government sector. This is true even for those skilled specifically designed for the private sector employment. A survey carried out during the development of the 4th National HRD Advisory indicates that about 50 percent of those graduating from different

School-To-Work Transition (STWT) support programs offered through the MoLHR would prefer to work in the government sector (NHRD advisory 2017). The Beyond Graduation Survey 2017 gives an indication that 80 percent of the university graduates would first prefer to work in the government sector. The option for private sector jobs or self-employment for many is a last resolve, with one of the reasons being job security and good working condition within the government sector. In the last three FYPs, effort has been made to enhance the working conditions in the private sectors. The Labour and Employment Act was adopted in the 9th FYP, since then, other relevant regulations have been adopted to push forward the requirements in the Act, with the intention to improve working conditions in the private sector.

On different aspects of Labour and Employment Act, the survey gives an indication that majority of the large scale firms are in a better position compared to others. Having Internal Service Rules (ISR) in places can enable a establishment to have clearer guidelines on both aspects of human resource development and management. Almost all the large scale firms have ISR. They also have provident fund for their employees, keep record of wages paid, and have written job roles and responsibilities for the employees. This holds true even for the medium scale establishments. While these aspects of Labour and Employment Art may not be an issue in the government sector, it is a big challenge in the private sector at large.

Another priority in the 11th FYP has been to enhance occupational health and safety (OHS) in different establishments. OHS can enable promotion and maintenance of highest degree of physical, mental, and social well-being of workers in all occupations. The MoLHR collaborates with experts to provide first aid training and OHS requirement in work set up. Investment has also been made to provide personal protective equipment to workers at site. Higher percentage of medium and large scale establishment complying to OHS requirement can be directly attributed to the different capacity development and advocacy program implemented by the DoL. The DoL will continue to provide similar support in the 12th FYP for smaller establishments.

Table 13: Establishments with provisions under the Labour and Employment Act

Particulars	Micro %	Small %	Medium %	Large %	Total %
Establishment has Internal Service Rule (ISR)	16.94	53.27	85.04	98.41	30.63
Establishment has trained employees in occupational health and safety	4.09	24.94	48.54	80.95	12.63
Establishment has health and safety focal officer	1.68	11.93	35.40	73.02	6.96
Establishment has Provident Fund for employees	4.86	32.23	75.18	96.83	16.62
Establishment has overtime payment for employees	13.49	45.98	63.14	79.37	25.03
Establishment keeps record for wages paid to employees	44.27	85.92	95.99	95.24	57.97
Establishment has written contract/terms of employment for staff and new recruits	21.06	54.02	74.45	73.02	32.74
Establishment has clear job roles and responsibilities to staff and new recruits	70.75	87.24	96.35	98.41	76.55

Establishments were asked to evaluate the competencies (in terms of new recruits from different institutions being able to perform the assigned job roles and responsibilities) of graduates coming out from the training and tertiary education institutions. Similar assessment was made during the development of the National Workforce Plan (NWFP). The result then was that more than 30 percent of the establishments said that they were highly satisfied with the quality of graduates coming out of different training and tertiary institutions. The Establishment survey gives a good impression on the general competency of graduates from different in-country institutions. Less than 2 percent said that the quality of graduates is either poor or very poor. While about 35 percent of the establishments gave an average assessment, others indicated that the competency of graduates is either good or very good.

The Bhutan Qualification Framework (BQF) provides the larger quality assurance framework for education and training system in the country. The Bhutan Accreditation Council (BAC) currently provides institutional accreditation for all colleges in the country. Assessments are made on the infrastructure, instructors, research and other components. BAC will also venture into providing program accreditation in future which will provide added advantage of having international recognized/certified programs. BAC certification is recognized by Asia Pacific Quality Network (APQN), an international body for quality assurance in higher education. Benchmarking tertiary education at par with international labor economy will enhance quality of higher education in the country and also boost employability of graduates both within and outside the country.

Quality of TVET courses will be regulated through the QMS and accreditation guideline. While accreditation was not mandatory in the past, this will change in the 12th FYP. Effort will be made to align all TVET courses to the Bhutan Vocational Qualification Framework (BVQF). Existing certificate level programs will be upgraded to National Certificate program. Similarly, National Certification program will be upgraded to National Diploma programs. All these efforts are expected to enhance quality of graduates from different TVET institutions, both private as well as public.

Table 14: Assessment on competency of graduates from TVET and tertiary education institutions

Scale	Competency of Graduates		
	Tertiary education institution (%)	Govt. TVET provider (%)	Private training provider (%)
Very Good	9.27	6.01	5.97
Good	54.46	55.60	52.95
Average	34.12	36.61	38.06
Poor	1.66	1.32	2.33
Very Poor	0.45	0.43	0.65
	100	100	100

Key HRD Challenges

Some of the key challenges that the HRD Masterplan will seek to address are:

- Most of the existing establishments are operational with full human capacity with very moderate employment prospect over the next five years against the number of new workforce entering the labour market. Many of the education and training institutions were earlier designed to supply the HR needs of different industries, with the focus on catering to the HR needs of the government agencies and government owned enterprises. These agencies and enterprises have grown tremendously over the year providing employment for a majority of those entering the labour market till the 9th FYP period. Since then, there has been a gradual shift of employment opportunities from government based agencies to other sectors. Employment opportunity is especially grim in the larger scale establishments and better in the smaller scale establishments, giving clear indication for requirement of greater thrust in entrepreneurship and self-employment programs.

- Investment on training and development of workers is almost non-existent in many establishments, with close to 96 percent of them not keeping any HRD fund or budget aside. A very limited resource is spent on professional development of staff. Many studies conclude that workers recruited at secondary education have limited access to upgrade their skills or position in work places, thus giving indication for requirement of intervention in workers upskilling opportunities. Such support can enhance workers skills and productivity, ultimately leading to industry growth and employment generation.

- Increasing number of qualified individuals from tertiary education will enter the labour market with the intention to look for a job rather than opt for self-employment or entrepreneurship. Aspiration among young graduates to avail jobs in the government sector will continue to be high. The Beyond Graduation Survey 2017 indicates that 80 percent of the university graduates would first opt for the government jobs. The perception for entrepreneurship and self-employment opportunities is low. However, with more familiarization on entrepreneurship and self-employment opportunities in the learning institutes and support facilities being made available, things are expected to change.

- The existing strategy of trying to match supply to industry requirement will have to be complemented by emphasis on supply of workforce with entrepreneurship skills. Consideration needs to be made to influence start-up in new areas of businesses that are viable in our economy, in alignment with the FIP 2016 and EDP 2016.

- The existing modality of training delivery has to be strengthened and made more effective and sustainable. Uniform modality needs to be adopted across different programs based on past learning experiences. Cost of program will have to be dictated by the MoLHR to ensure that cost spike is curbed in training delivery.

- Any form of skills certification needs to be aligned with BVQF to ensure quality of skills delivery. This will also allow beneficiaries to negotiate for higher wages and endeavor to pursue life-long learning.

PART II
REVIEW OF 11TH FYP HRD MASTERPLAN (2013-18)

REVIEW OF 11th FYP HRD MASTERPLAN (2013-18)

There are two aspects of human resource development that the 11th FYP HRD masterplan would address. One related to the lack of skilled workers in various categories of the economic sector, most of which can be addressed through expanded pre-service vocational programs and in-service HRD programs. The other area which has received lesser attention in previous plans but is central to the growth of the Bhutanese industries is the prevailing gap in knowledge and competencies amongst higher managerial and professional staff. This gap is best illustrated by the nature of the enterprises and business operations in Bhutan. There is very little value creation or knowledge products being generated by the Bhutanese private sectors at present. Retail trading, low tech manufacturing and constructions dominate the private sectors. Much of the growth in fact continues to be fueled by the Government projects and public spending, further making the private sectors dependent on the Government. Therefore, intervention in the form of skilling mid managers and executives of the private sector to broaden their vision and skills through appropriate in-service higher education and training would be a priority.

The masterplan would have greater efforts towards focused HRD interventions as well as building a sustainable HRD system within the private sectors, establishments, association and institutions. The masterplan would seek to strike an appropriate balance between pre-service and in-service programs; between lower and higher level skills and knowledge. Further, the masterplan would have a sectorial approach by providing sector overview, and challenges faced by the sector which can be addressed through proper HRD interventions. The eight sectors have been identified in accordance with the Economic Development Policy 2010. The eight sectors are broadly categorized as follows:

- Construction;
- Power;
- Education and Training: including early childhood care and development, private schools, university education and TVET institutions;
- ICT, Media, and Transport: including communication industry, media industry, motion picture and music industry, and transport industry;
- Production and Mining: including wood based industry, mining industry, agro based industry and handicraft industries;
- Training and Services: including automobile workshops, beauty and grooming industry, and micro small and medium industry
- Tourism and Hospitality; and
- Finance.

The main objectives of the 11th FYP Master plan were to:

- Expand the pool of Bhutanese entrepreneurs, business leaders, managers and professionals who will be able to contribute to solving problems in their establishments, recognize opportunities, create new products and services and help their enterprises to grow,
- Continue building up the skills base of the country to fill in critical requirements in the existing as well as growth sectors,
- Develop a culture of HRD within the private sectors which can be self-sustaining, and
- Contribute to the development of a viable national education and training system which meets the national HR needs.

Summary of Slot and Budget Allocation

A total of 16,587 slots were planned to be implemented, with greater focus on skilling program geared towards jobseeker. In fact, 89 percent of the slot would be allocated for pre-service programs. An estimated budget of Nu. 2.78 billion would be required for the implementation of 11th FYP HRD Masterplan, out of which 83% of the budget would be allocated for pre-service HRD programs. The training areas were categorized in five levels, masters, under graduation, diploma, certificate and short-term training programs.

Table 15: Slot and Budget

In-service		Pre-service		TOTAL	
Slot	Budget (in million Nu.)	Slot	Budget (in million Nu.)	Slot	Budget (in million Nu.)
1,865	477.687	14,719	2399.06	16,584	2,876.747
11%	17%	89%	83%	100%	100%

Implementation against the plan

In the earlier HRD Masterplan, the focus was more on developing the workforce capacity within the critical sectors. As such, higher number of in-service programs has been carried out. However, there was a critical shift during the implementation on the 11th FYP HRD Masterplan. The focus was more towards providing skilling support to different secondary and university graduates in transition to work. New programs such as Direct Employment Scheme (DES), Youth Employment Skills (YES), Graduate Skills Program (GEP), Training and Employment Program (TEP), and Skills for Employment and Entrepreneur Development (SEED) were designed and implemented. This first program was geared towards providing on-the-job learning experience to young jobseekers and the latter were designed to provide skilling support to enhance employability of jobseekers in transition to work.

Project support provided through the Government of India (GOI) has been a critical source of fund for implementing many HRD programs. The Employment Guarantee Program (GEP) funded through Economic Stimulus Plan (ESP) and the HRD for Critical sector are both funded by the GOI. Against the target to enroll 7142 students in the TTIs and IZC, a total of 2736 were enrolled. The planned target was set with the intention to enroll higher number of secondary graduates entering the labour market. However, capacity within the TTIs and IZCs are limited and the enrollment target could not be met. In the 12th FYP, the enrollment capacity is expected to be doubled.

YES, GSP, SEED and TEP are some of the programs implemented under Skills Training Program. A total of 4,856 have been trained against the target of 4,500. Similar target will be set for the 12th FYP in focused priority sectors. The implementation against the ATP slot has been low, mainly due to the design and implementation of other similar and attractive programs. The DES program offers support under same modality with higher wage incentive. More than a thousand secondary and university graduates have been engaged in the program every year, with employment outcome as high as 80 percent (National HRD Advisory 2017).

Bilateral and multilateral donor offer received through the Australia Awards, ITEC, and others have been instrumental for implementing many long-term masters' level programs. About ten or more individuals have availed masters programs every year through different donor supported programs. The MoLHR will strengthen the implementation of these programs in the 12th FYP as well.

Projects such as HRD for Critical Sector and the Economic Stimulus Plan (ESP) have been one of the important sources for different HRD programs implemented by the MoLHR.

Table 16: Implementation status against the plan

SN	Programs	Planned target	Implementation status	Approximate cost (in million Nu.)	Main budget source
A	Pre-service programs:				
A1	TTIs/IZCs	7,142	2,736	492	RGoB
A2	Skills Training Program	4,500	4,856	437	GOI-PTA, ESP
A3	Apprenticeship Training Program	2,910	1,767	47	RGoB
	Sub-total	14,552	9,359	977	
B	In-service programs:				
B1	Short-term	1,588	3,178	191	GOI-PTA, RGoB, fellowship
B2	Long-term	277	156	47	fellowship program
	Sub-total	1,865	3,334	237	
C	Other programs:				
C1	SSDP and VSDP	na	828	13	RGoB
C2	DES	na	6,128[4]	552	ESP
C3	UGIP/PEEP	na	6418	72	RGoB
C4	Entp. Program	na	2225	56	RGoB, GOI
	Sub-total		15,599	692	
	TOTAL	16,417	28,292	1,906	

Besides the HRD programs, two National HRD Advisory have been developed in 2014 (a focus on Graduates and Labour Market Dynamics) and 2015 (a focus on TVET and Labour Market Dynamics). The advisory provides in-depth analysis on existing labour market situation and provides advises for implementation by different stakeholders. The first National Workforce Plan (NWFP) for three sectors (tourism, construction, and production) has been developed to provide information on the critical skills demand in the three sectors. The DHR has also worked on a TVET blueprint to bring guided interventions and reforms in the TVET sector.

The RGoB is the main source of fund for implementing formal TVET programs, VSDP, SSDP and ATP programs. In-service HRD programs are mainly funded through the bilateral or multilateral donor fellowship, especially the long-term fellowship programs. The STP programs are mainly funded through the GOI PTA project titled 'HRD for critical sector' and Economic Stimulus Plan (ESP) of the MoLHR funded by the GOI. Against the plan budget of 2.8 billion to train 16,584 candidates, a total

[4] Data as of April 2018

of 21,874 have been trained with approximate budget spending of Nu. 4.67 billion.

Annual HRD Advisories issued under focused theme

The Ministry of Labour and Human Resources (MoLHR) through its annual National HRD Advisory aims to bring collaboration and cohesion among different HRD implementing agencies and stakeholders in addressing the labour market challenges, unemployment issues, mismatch of skills and shortage of workforce in the economy. The first advisory document provided policy interventions required in order to enable growth in the various economic sectors. While the first advisory document looked into the macro labour market challenges, the subsequent advisories were developed under different focused themes. The 2014 advisory was developed to provide insight into the various dimensions concerning graduates and labour market dynamics. The first Beyond Graduation Survey was conducted as part of developing the advisory document. The Beyond Graduation Survey has been carried out in 2015 and 2017 as well.

The 3rdAdvisory document was developed to provide insight into the various dimensions concerning Technical and Vocational Education and Training (TVET). TVET is increasingly having an important role to play with the increasing youth unemployment and skills mismatch. TVET's orientation towards the world of work and acquisition of employable skills means that it is well placed to address labour market challenges such as skills mismatch that impeded smooth School-To-Work Transition for many young people. Further, an efficient TVET can lead to accelerated economic activities in the country through supply of skilled workforce, thus contributing to the Government's vision of achieving full employment and promoting social inclusion and ultimately promoting Gross National Happiness amongst our citizens.

The Advisory has carried out assessment of the TVET institutions, TVET program profile, and Industry outlook. The HRD Advices highlighted in this Advisory document are targeted to the Royal Government of Bhutan, policy maker, TVET sector/institutions, students and all other TVET stakeholders for any relevant policy or program intervention. The advices are presented under three broad topics; increased relevancy and quality of TVET, increased Promotion and Partnership in TVET and expanding TVET support and information. The Advisory document was launched in March 2015.

The 4th NHRD Advisory 2017 has been developed under the theme 'An assessment of School-To-Work Transition support programs'. The advisory provides an insight into the outcome of various School-To-Work Transition (STWT) support services of the MoLHR for jobseekers in transition. STWT support is provided at two levels; for those individuals who are not in transition yet, and for those in transition. The first category are those individuals who are still in school or currently not pursuing employment, and the second category are for those who have entered the labour force and are actively looking for employment.

HRD process enhanced

The Ministry of Labour and Human Resources (MoLHR) is also strengthening its effort to make the HRD procedures more efficient and effective. To this end, the Ministry has developed the Training Rules and Regulation (in-service). The Regulation has been developed from the earlier Human Resource Development Guideline, with the objective to strengthen and promote effective and efficient implementation of training programs and services for the in-services working in sectors outside the civil service. Further, it is imperative for these establishments to submit their Internal Service Rules (ISR) as mandated under the Labour and Employment Act of the Kingdom of Bhutan, in order to be eligible for HRD support and facilities of the Ministry. The Regulation shall promote fair, transparent, coherent and efficient implementation of HRD programs and services by the MoLHR for the in-service. In particular, the Regulations shall have the following objectives:

- Enhance performance, professionalism and productivity of the Bhutanese workforce.
- Ensure allocation of scarce resources in accordance with the development priority of the Royal Government of Bhutan to promote a balanced and sustainable human resource development across all sectors.
- Ensure implementation of HRD plans and programs in the most fair, transparent, coherent and efficient manner.
- Allocate training opportunities and support to all the economic sectors in the most fair, transparent, coherent and efficient manner.
- Ensure that trained human resource is properly assigned and effectively utilized in the respective nominating agency to optimize returns from the RGoB investments in HRD and to foster/ promote sector growth.

National Workforce planning initiated

The National Workforce Plan (NWFP) has been prepared for three critical sectors; tourism, construction and production. The NWFP is an effort to bridge the gap between the employer demand and labour supply so that the jobs generated from the economic or sector growth matches with the skills supplied by the tertiary and TVET institutions, leading to employment and workforce productivity. The main objectives of the NWFP are to:

Ensure that the three identified economic sectors have access to appropriate and adequate workforce for its growth and productivity;

Guide and inform on the demand (critical jobs) in the three sectors for appropriate interventions from the tertiary education and TVET institutions; and

Identify appropriate workforce development strategies and interventions that will lead to employment generation and address the mismatch in the labour market.

A total of nine strategies have been identified in the NWFP with critical skills gap and skills shortage

areas in the three sectors. The MoLHR will focus and give priority in the implementation of strategies and specific recommendations highlighted in the NWFP. In-service implementation priority will be for the skills gap identified in the NWFP. Similarly, pre-service training priority will be in the areas of skills shortage identified in the NWFP.

Strategic approach to revamp TVET sector initiated through TVET Blueprint

The DHR, MoLHR has developed a TVET Blueprint to bring guided reform in the TVET sector over a period of ten years (2016-24). The Blueprint specifies actions that are needed to maximize the impact of TVET on skilling–up people for Bhutan's greater socio–economic development. The blueprint provides specific sets of strategies and actions needed to be implemented to expand TVET provision, improve quality, improve relevant, and strengthen management systems. Some of these strategies will be implemented in the 11th FYP.

The TVET Blueprint will provide specific set of strategies and actions for implementation in the pre-service programs, both formal as well as alternative mode of TVET delivery.

The DHR, MoLHR has developed a TVET Blueprint to bring guided reform in the TVET sector over a period of ten years (2016-24). The Blueprint specifies actions that are needed to maximize the impact of TVET on skilling–up people. The blueprint was launched in July 2016.

HRD Committee established

An HRD-Committee has been established, comprising of members from all sector bodies in the country. The committee is also represented by members from tertiary and TVET institutions in the country. The main objective of the committee is to provide a formal platform for different sector association/body to voice their workforce and human resource issues, and for the MoLHR to gather important information for necessary interventions. The functioning of the committee will foster sustained partnership and coordination among different partners and HRSDD in workforce and HR development programs and initiatives.

Some of the key roles of the Committee are to provide advice on the workforce issues facing the industry at large for necessary policy and program interventions. The committee members are also expected to provide assistance during the development of different HRD plans and programs. The MoLHR will continue to strengthen collaboration with different sector bodies through this committee.

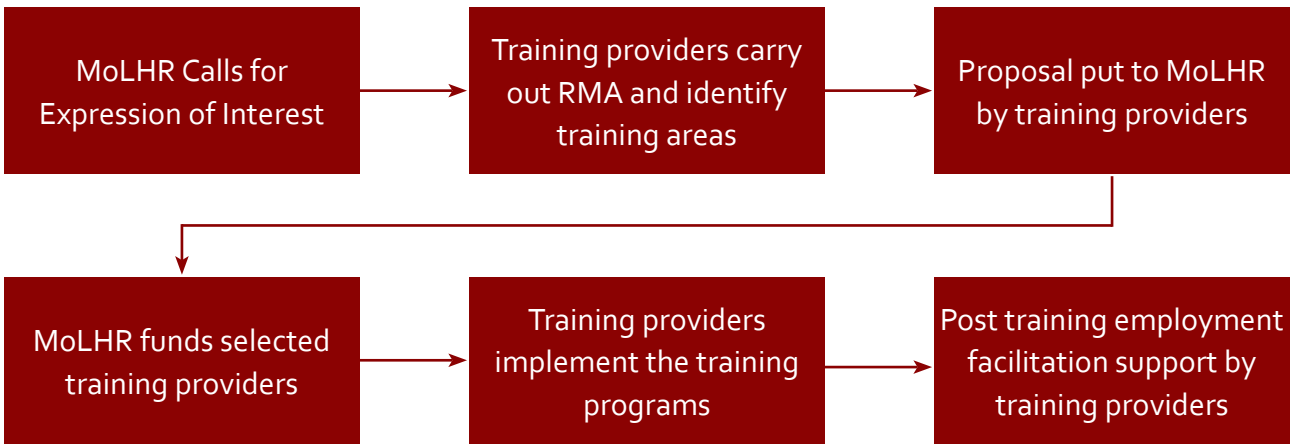
Delivery approaches

Employment based approach

Employment based approach was introduced with the objective to have higher employability in the skilling programs. When STP was first piloted in the 9th FYP, the focus was solely on the provision of skills. This has often resulted in trainees not being gainfully employed post-training. The first employment based approached was implemented for the IT/ITES sector training with support from World Bank in the 10th FYP. With funds being made available through the Economic Stimulus Plan (ESP) in the 11th FYP, two employment based programs were initiated; Youth Employment Skills (YES) and Graduate Skills Program (GSP).

YES and GSP are being implemented in partnership with local registered training providers. The training providers identify occupations with employment viability through an assessment tool called Rapid Market Appraisal (RMA) and Area Potential Survey (APS). The training providers are responsible for selecting the most appropriate candidates for the program, implementing a quality training program and delivering the employment result post-training. Payment to the training providers is based on the employment of individual candidates. Employment has been as high as 70% for the YES program and 95% in the hospitality sector.

The YES Program is targeted to the jobseekers with middle and higher secondary qualifications within the age limit of 18 to 29 years and GSP for university graduates job seekers. A certain percentage of the payment to the training providers is based on employment of trained candidates. Post-training, trained job seekers are assisted in finding employment by the training providers in the country.

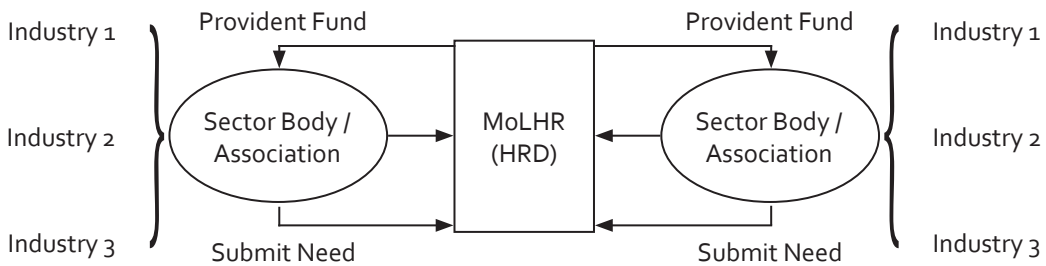


Need based approach

Need based approach was introduced to provide demand oriented programs which fits the skills and training requirements of the industry. One of the main issues in the past has been the supply oriented nature of HRD programs, which does not fit the requirement of the industry.

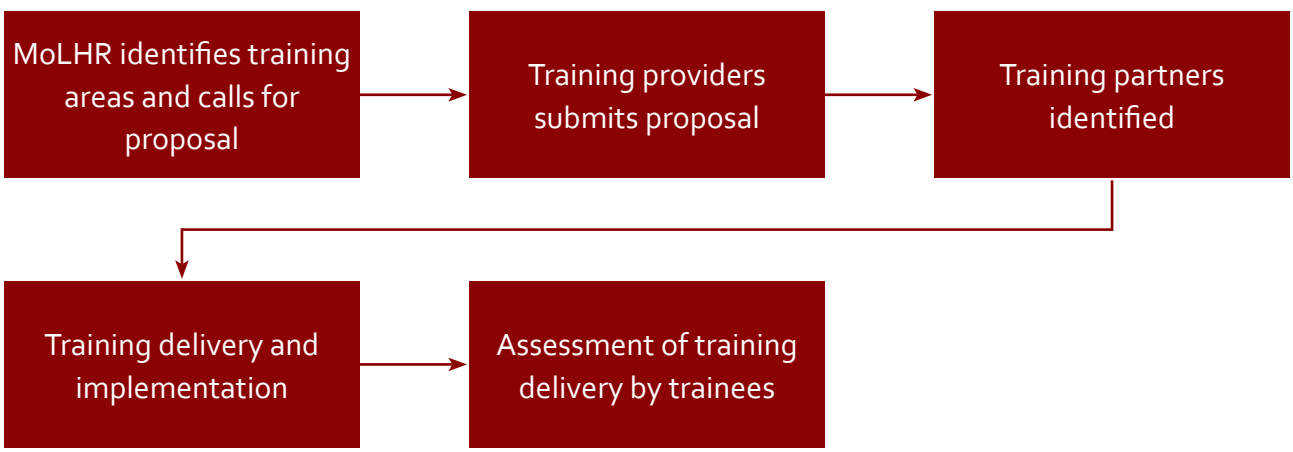
As part of this initiative, the DHR has built capacity of all registered training providers in RMA. RMA is a quick, innovative and effective method of labor market needs assessment. It helps the training providers to identify the needs and opportunities in the labor market. Training courses that are based on RMA results have proven to be effective in making graduates post-training more employable. RMA is used to gauge the skills shortage in the industry. The HRDD, DHR has successfully built capacity of all registered training providers in carrying out effective RMA for different kinds of industries. RMA is one of the main criteria used while assessing proposal submitted for the YES and GSP programs. The HRDD, DHR has also developed RMA Manual book to provide accessible guide to any training providers to carry out RMA with ease.

Need based program is an important modality in delivery of in-service HRD programs. Many of the training areas identified for the in-country programs are being implemented after assessing the requirements from the sector body and associations.



Performance based approach

Performance based approach has been used for skilling where employment is not a prerequisite. A skill for Employment and Entrepreneurs Development (SEED) is one such program where trainees are encouraged to actively partake in the assessment of the training that they participated in. That assessment then forms a core of evaluation for basing the training payment.

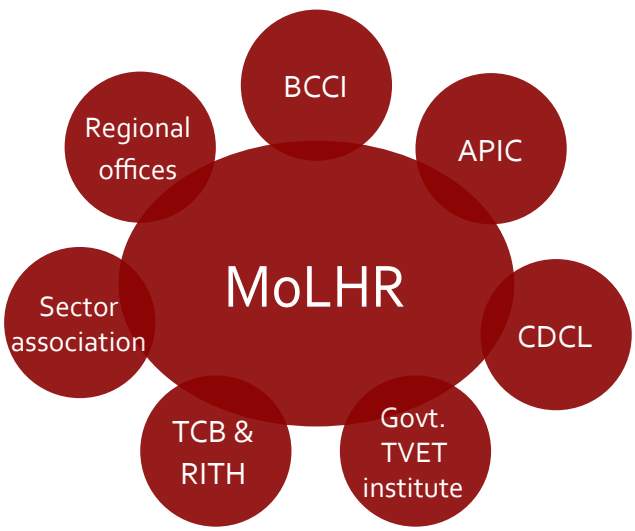


SEED has been developed with the objective to give vocational skills to young and aspiring entrepreneurs who are interested to set up their own businesses after acquiring specific skill set. The SEED has been designed to provide an individual with core skills which will provide specific subject requirement skills, On-the-Job Skills which will provide industrial attachment and learning from the relevant industry and entrepreneurship skills by the training providers to aspiring trainees with soft skills such as communication, marketing, and resource management. Further, SEED program will provide skills required to foster meaningful and gainful employment of job seekers through self-employment, and foster establishment for new viable businesses that will generate revenue and employment for the country. The performance based evaluation for SEED is defined as follows:

On Assessment of Training and post-training satisfaction level by the candidates (Assessment will be done from the trainees by the DHR, MoLHR). The satisfaction level will be aggregated: 90-100% satisfaction – full remaining tuition will be paid 80-89% satisfaction –90% of remaining tuition will be paid 70-79% - 80% of remaining tuition will be paid 60-69% - 70% of remaining tuition will be paid 50-59 – 60% of remaining tuition will be paid 40-49 – 50% of remaining tuition will be paid 39% below – remaining tuition will not be paid	The final payment for the training program is based on the performance evaluation

Partnership based approach

Partnership based approach is used in imparting and implementing various skilling programs both for in-services as well as pre-services. The partnership has been built on the principle and practices of shared commitment between the government and sector associations/partners that have common objectives and targets to be achieved with defined expectation and responsibilities.



The sector association/partners have played vital roles in imparting and implementing the required skills and knowledge based program for both pre-service and in-service candidates. This has contributed to the development goals of their organization and the sector they represent at large; develop capacity and capabilities to initiate development of new products and services

to help their establishments grow and diversify; enhance higher learning opportunities through acquisition of new and relevant skills, knowledge and talent, and support life-long learning in the private sector. The MoLHR has implemented various training programs based on the partnership approach such as: fellowship programs, cost-sharing program, in-service program and skills training programs.

In the 11th FYP, the DHR has also worked with different key agencies to identify focal HR officers, who will be the key communication point for various human resource development efforts. Some of the key partners in the 11th FYP have been Bhutan Chamber of Commerce and Industry (BCCI), Agency for Promotion of Indigenous Crafts (APIC), Constructing Development Corporation ltd., the TTIs and IZCs, and Tourism Council of Bhutan (TCB). These agencies represent specific sector and have greater capacity to deliver training requirements for their sector. Such collaboration and partnership will be strengthened in the 12th FYP as well.

Challenges during implementation of the Plan

Following are some of the challenges identified during the implementation of the 11th FYP HRD Masterplan

Need for stronger sector bodies and association

Bhutan has more than 14 sector bodies and associations in the country. The primary focus of these sector bodies/associations is to act as a bridge between the industry they represent and the government agencies. Many of them are also mandated to carry out human resource development efforts for the sector they represent. However, due to lack of capacity within the sector bodies themselves, this activity has not received greater attention and focus. Further, the sector bodies lack resources to carry out any human resource development activities.

Need for stronger private sector

Programs like YES and GSP have been initiated to skill youth for employment in the private sectors. The intention of the program is not only to provide individuals with skills but to also to supply the private sectors with trained human resources for their sector development. However, there is a lack of recognition and value for skilled workers by the society at large as well as by the industry themselves. While the understanding is that a skilled individual would contribute to the private sector growth and development, the private sector themselves fail to understand the value of hiring a skilled individual. Further, effort needs to be put in terms of making working condition within the private sectors attractive (wages policy and remuneration, job security, social security) for prospective employees.

The MoLHR has also introduced some skilling program with the intention that it leads to self-

employment. However, setting up a business or self-employment is never the first choice and young people often lack confidence in this area.

Need for skills diversity to meet youth's aspiration in skilling

The current TVET institutions offer very limited range of TVET programs. The Government administered TVET institutions offer courses in construction and traditional arts and craft trades. These institutions lack resources and capacity to diversify courses and introduce high level skills training. While the private providers are coming up with a wide range of programs, they often lack quality and sustainability. The MoLHR has recently started offering new sets of skilling programs which interest youth but they often lack depth and higher level learning.

Need for re-skilling and up-skilling opportunities

Currently the focus is geared more towards skilling of young jobseekers for employment within or outside the country. There are very limited opportunities for those who are skilled and engaged in the workforce to acquire new skilled or re-skill or upskill their knowledge or set of skills they have. Lack of skills/qualification upgradation opportunities within the industry for TVET graduates makes skilling less attractive than choosing higher education learning, which offers an opportunity for an individual to undergo post-graduation courses like masters or PhD. Most of the skilling programs are at certificate level and it ends there without any opportunity to upgrade to a higher level of skilling or specialization opportunity.

Need for sustainable fund for Skilling Bhutan

Most of the skilling initiatives are project based. Therefore, it is time bound and target oriented. Once the project is complete, a new source of fund needs to be secured for the programs to be carried forward. The Royal Government of Bhutan is not very keen on funding skilling programs due to budget deficiency within the government. Skilling an individual cost approximately a million ngultrum, which by any standard is a lot of money. Therefore, there is a need to create a sustainable fund for skilling if impact of skilling is to be sustained for a long period of time. The other option is to introduce cost-sharing modality in skills delivery process.

PART III
12TH FYP HRD MASTERPLAN FOR THE ECONOMIC SECTORS (2018-23)

12th FYP HRD MASTERPLAN FOR THE ECONOMIC SECTORS (2018-23)

The Royal Government has always taken a holistic approach to human resources development for both the government and the private sector since the initiation of the planning process. The HRD for these two broad sectors were separated during the 9th FYP, corresponding to the establishment of the Ministry of Labour and Human Resources (MoLHR) in 2003. It was then that the first HRD masterplan for the private sector was prepared. The overall HRD budget outlay was allocated equally for both the sectors. The need for a separate comprehensive HRD masterplan for the private sector was felt necessary with the realization that majority of the prospective job seekers were not attracted to join the private sectors, though jobs were available in these sectors. With the initiation of 9th FYP, HRD for the private sector was seen as an important strategy for facilitating growth and creating employment in the private sectors.

During the 9th FYP, the government officially endorsed the Labour and Employment Act to create an enabling environment for the people working in the private sectors. Further, the Bhutan 2020 was developed to provide long-term policy guidance in different developmental areas. The Bhutan 2010 envisaged the private sector 'as the engine of nation's future economic growth' and also 'essential for the enlargement of nation's tax base'. The private sector was expected to create wealth of the nation for the much needed economic development. The private sector was also expected to generate adequate employment opportunities to absorb the prospective job seekers in the country. The Royal government would work towards removing all impediments and obstacles to the development and Growth of the private sector, and in developing a favorable environment that respects and honors fair commercial practices and promotes entrepreneurial initiatives.

The Economic Development Policy (EDP) 2010 has been reviewed in 2016 to provide a strategic direction to ensure that economy takes the center stage of development initiatives. The policy aims to systematically remove constraints faced in terms of business growth to foster private sector development in the country. The EDP 2016 provides guidance on restructuring the macroeconomic base which includes the five jewels, namely hydropower, agriculture, cottage and small industries, tourism and mining. Other sectors include those identified during the EDP 2010. The strategies identified in the EDP 2016 are to promote the five jewels, diversify economic base with minimal ecological footprint, harness and add value to natural resource in a sustainable manner, increase and diversify export, promote Bhutan as an organic brand, promote industries to build the brand Bhutan image, reduce dependency on fossil fuel, and promote industries through a cluster effect and championing approach. The EDP 2016 has been complemented by the Fiscal Incentive Policy 2016, which seeks to provide tax and fiscal incentive in different priority sectors.

The MoLHR, through this HRD masterplan aims to foster greater growth and diversity within the private sector. Over the course of years to come, Bhutan will continue to see increasing number

of young people pursuing higher education. However, the current strategy of matching existing industry requirement to influence supply from the tertiary and TVET institutions will have to be complemented by relevant and effective school-work-transition support services for jobseekers. Diverse skilling opportunities complemented by employability and entrepreneurship skills will have to be made available to influence new business growth and diversity within our economy. The current issue of employment will gradually evolve from creating jobs to creating quality jobs with good earning prospect and working condition. The new generation of new entrants in the labour market will have to be supported in terms of fulfilling their professional aspiration. Such aspiration can lead to diversity within our economy and creation of new job opportunities.

Since the first HRD Masterplan, there have been several shifts in HRD interventions and approaches. In the 9th FYP, the focus was more on developing the capacity of workforce engaged in different sectors. The training requirements then were very basic in nature. Trainings like basic book keeping, accounting, marketing, and management skills were provided. With not many training providers in the country, the trainings were implemented through local and regional expert. Donor based fellowship support was one of the key sources. However, they were mostly supply driven and ad-hoc in nature. The first 'HRD for private sector project' with modest fund of Nu. 3 million was initiated through the Sustainable Development Fund (SDF). The success of the project has been instrumental in garnering subsequent project support of Nu. 30 million from the same funding agency in the subsequent plan period and support from the Government of India (GOI).

In the 10th FYP, the Establishment Regulation and the Training Regulation were developed. The two regulations played a key role in providing a platform for private sector engagement in training delivery and subsequently leading to an increasing number of private training establishments in the country. National level coordination to HRD effort was also strengthened through the National HRD Policy. The policy has been instrumental in bringing greater cohesion and collaboration in HRD effort scattered across different sectors and agencies, and bringing the role of MoLHR in the forefront. Priority sector approach was also initiated with focus geared towards HRD in the tourism, ICT and health sector. Programs were designed to provide skilling opportunities to new entrants joining the labour market. The first employment and incentive based approach to training were designed under the World Bank supported Private Sector Development Project (PSDP). The success of which has been replicated in the subsequent FYP.

The key milestones in the 11th FYP has been the initiation of workforce planning at the national level for three priority sectors, tourism, construction and production. Implementation of employment based skilling support was strengthened through incorporation of Rapid Market Appraisal (RMA) in the program design phase. Capacity within industry and training providers were built to assess key HR gaps in their organization and sector at large. Skilling opportunities were diversified though implementation of programs with higher self-employment viability. While informal collaboration existed with different sector bodies, it has been formalized through the establishment of the HRD Committee.

The 12th FYP HRD Masterplan will seek to build on the experiences gained from the implementation of the past HRD Masterplans. It will also seek to address key labour market challenges of the 12th FYP, which are curbing youth unemployment, enhancing employability through quality assurance mechanism, enhancing workforce productivity and diversity within the private sector, and bringing greater collaboration in HRD efforts between different key players and partners. The HRD Masterplan will be a guiding document for key HRD intervention in the 12th FYP period. Skilling has been broadly classified as critical skills and critical capabilities. Specific target for formal TVET programs and other STWT support program has also been set in this masterplan.

The current masterplan has been developed taking into consideration the views and input from all establishments in different economic sectors. A total of about 5000 establishments were interviewed during the Establishment Survey 2017, through which, input on workforce profile, business challenges, and assessment of those entering the labour market were collected. Specific information on training needs and recruitment plans in the 12th FYP were collected to prepare areas identified under the critical skills and critical capabilities. Sector level consultations were carried out with all sector bodies/associations to further validate information collected through the Establishment Survey and to understand sector direction and challenges in the 12th FYP period. Existing policy documents such as EDP 2016, National Workforce Plan, TVET Blueprint, Fiscal incentive Policy, Employment policy and others have been duly considered in developing this masterplan. The HRD Committee has also been instrumental in giving direction and input in the masterplan development process.

A total of six broad sectors have been identified in the 12th FYP HRD Masterplan. These sectors cover the five jewels and the priority sectors identified in the EDP 2016. The sectors are:

- ***Tourism,*** including hotels, resorts and tour operators;
- ***Construction,*** including both hydro and non-hydro construction;
- ***Production,*** including food-based, wood-based, arts and craft, and other production businesses;
- ***ICT,*** including film, media, cable operators, telecommunication, transportation, and other ICT businesses;
- ***Training and Education,*** including Early Childhood Care and Development (ECCD), private training providers, private schools and tertiary education institutions;
- ***Services,*** including auto-mobile, beauty, tailoring, café and restaurants, finance, consultancy, power and other services.

Objective

The 12th FYP HRD Masterplan will act as an important guide for different HRD program and policy interventions by the MoLHR, with the intention to foster greater employability among young jobseekers and to enhance workforce productivity in different economic sectors. The masterplan aims to:

- Enhance quality and access to skilling opportunities in the country which are linked with labour market requirement,
- Bring greater collaboration and coordination between different HRD partners and players for effective delivery of HRD programs,
- Enhance productivity and performance of workforce engaged in different priority sectors through effective and relevant reskilling and upskilling opportunities, and
- Enhance employability of jobseekers through provision of holistic support to skilling avenues.

HRD Approaches

The Masterplan will seek to provide different HRD intervention through following modes or approaches:

Employment integrated skilling

The first outcome assessment of different School-To-Work Transition (STWT) support provided by the MoLHR was carried out through the National HRD Advisory 2017. Different industry based learning and institute based skilling support were assessed. While the overall employment stood at 64 percent, programs tied with clear employment outcome had a much higher employment rate compared to other STWT support programs. Programs such as Youth Employment Skills (YES) and Graduate Skills Program (GSP), initiated under the Guaranteed Employment Scheme, had employment success rate of 79 percent and skills provided within the priority sectors as such and hospitality and tourism had employment rate as high as 90 percent.

Employment based modality will be further strengthened and modified. Some of the challenges have been weak monitoring mechanism once beneficiaries are placed for employment. The payment modality will be redesigned to incorporated post-skilling monitoring mechanism. Industry based learning will also be encouraged as an important component so that beneficiaries can learn on-the-job and adapt to the prospective working environment. Collaboration between the training providers and sector association will be encouraged during the initial program design, industry based learning and post-skilling employment facilitation. These features will be incorporated within the implementation and design framework of the training TOR.

Incentive will be integrated in programs design phase to encourage higher employment post-skilling. Greater accountability will be imposed on the beneficiaries themselves. Issues like program

hopping, unsuccessful completion of program, and not meeting program outcome expectation will be curbed through better monitoring and guiding mechanism.

Holistic integrated approach

Concerted effort will be made to nurture a jobseeker into someone with skills and confidence to take up diverse opportunities in the labour market. Skilling support (wherein only core skills are provided) will be complemented by provision of employability skills and entrepreneurship knowledge. An Employability skill (also known as transferable skill) is becoming an important necessity for individuals in getting, keeping and being successful in jobs. Ingraining employability skills during the training delivery has been highlighted as one of the key workforce development strategies in the National Workforce Plan (NWFP) 2016. Employability skills such as effective communication, team work, integrity, and work attitude have been highlighted important in the NWFP and will be made an important aspect of any skills delivery process. Efforts will be made to design an employability skill module in collaboration with DOS and DTE, so that it can be adopted by any training providers. Further, GNH values will be an important aspect of employability skills. Efforts will be made to provide trainers with TOT in GNH values so that there is a trickledown effect in terms of teaching and learning. This is expected to equip young jobseekers with practical skills and make them more adaptable and flexible in the job market.

With limited job opportunities within the existing industries, it will become important to give higher thrust on self-employment or entrepreneurship opportunities. Many of the areas identified under the critical skills are with the intention to foster employment within the existing industries as well as employment through entrepreneurship or self-employment. Efforts will be made to support skilling in areas where there are opportunities for self-employment. Therefore, skilling effort will be complemented with entrepreneurship knowledge. Post-program, beneficiaries will be supported to develop proposal and process micro-finances to set up their own businesses. Incubation support will also be encouraged in partnership with relevant agencies.

Integrated Industry learning

Program hopping has been a serious issue with many of the MoLHR related programs. While this could indicate lack of seriousness among the beneficiaries at the time they are opting for the program and also the lack of knowledge on the areas of support, it could also mean that there is a mismatch of aspiration during skilling and placement process. Most of the skilling programs implemented have limited opportunities for industry learning. Industry learning can prove an effective tool for the beneficiaries to exercise their skills and learning in real work place set up. It will also correct their expectation and perception on the employment outcome, in terms of working condition, work environment, salary expectation and other elements.

Training providers will have to develop partnership with sector bodies/associations in executing industry learning modules. Monitoring mechanism will have to be strengthened and clear learning outcome will have to be drawn. Industry learning can enhance effective partnership between the training providers and the sector bodies. It can also be an effective avenue for the beneficiaries to demonstrate learning on-the-job.

Quality Assurance in skills delivery

The Accreditation Guideline was developed in 2011 to support the MoLHR's efforts in development of skilled and competent workforce in the country through provision of vocational skills in alignment with the BVQF. Course accreditation is offered at five levels as per the BVQF. While course accreditation was not mandatory in the 10th as well as the 11th FYP period, there will be a greater push towards program accreditation in the 12th FYP. Critical skills programs supported through the MoLHR will be aligned with the BVQF to ensure quality and relevancy of skills delivery, and higher employability of those skilled.

The MoLHR will also insist on training providers to have QMS in place. QMS seeks to enhance work operation within the institute through assessment and improvement in different aspects such as, program delivery, resource management, trainees' support services, registration and selection process, training assessment process, handling complaints, internal auditing process, communication and record keeping process. QMS is expected to strengthen functionality and delivery of programs within the institutes.

The HRSDD will be prioritized to advocate on different programs to be implemented under the critical skills in the first year of the plan period. The MoLHR will provide facilitation support to the training providers in processing QMS certification and accreditation of skills delivery.

Building and strengthening partnership for HRD cooperation

Over the years, the MoLHR's role in skills delivery has gradually evolved from implementation to facilitation. This has been possible with increasing number of training partners in the country. Government sector bodies such as Tourism Council of Bhutan (TCB), Agency for Promotion of Indigenous Crafts (APIC), Bhutan Chamber of Commerce and Industry (BCCI) and others are playing a key role in implementation of different training and development programs for their sector. The Royal Institute of Hospitality and Tourism (RITH) is under direct administration of the TCB, thus allowing them to utilize expert and resources within their reach. APIC also has active network with skilled artisan and master craftsman scattered across the country. Collaboration with these agencies have proven effective in designing and delivering multiple programs for their sector. This modality of collaboration will be strengthened in the 12th FYP through introduction of skills certification. Sector based programs will be implemented in close partnership with sector bodies and associations.

The MoLHR will also introduce element of formal partnership between training providers and sector associations during the programs design phase (curriculum development), program implementation phase (on-the-job learning) and post-program phase (employment facilitation and monitoring). This will ensure greater input from sector bodies at all step in any HRD effort.

The HRD-Committee has been set up to bring greater collaboration and cooperation among different sector bodies and the MoLHR in implementation of different HRD interventions and programs. The Committee also seeks to provide a formal platform for different sector association/ body to voice their workforce and human resource issues, and for the MoLHR to gather important information for necessary interventions. The functioning and frequency of meetings will be enhanced and strengthened.

In providing support for critical capability development, firms will be encouraged to have Internal Service Rules (ISR). One reform in the fourth revision of HRD Regulation has been the requirements for the nominating firms to have ISR endorsed from the MoLHR. This has encouraged increasing number of establishments to process their ISR with the MoLHR. This will be further strengthened and advocated in close collaboration with the DoL.

Different partners are instrumental for execution of this plan. Capacity of different sector bodies has been built in workforce and HR planning in the 11th FYP. This will be further strengthened in the 12th FYP. Training of Trainer (TOT) support will be extended and strengthened for the private training providers. Support in terms of QMS development, accreditation process and entreprenuership skills delivery will be provided through different avenues. M&E of training delivery and employment process will be strengthened with different training partners.

Cost-sharing and cost control mechanism

The MoLHR will introduce different modality of skills delivery to encourage cost-sharing among beneficiaries, be it individuals themselves or by the industry. Introduction of Skills Coupon will be one such mode through which cost sharing will be encouraged. The program will seek to negate some of the existing challenges in skills delivery by putting beneficiaries at the center of the training delivery (wherein, they opt for program of their choice and are held responsible for post-training employment). During the program design phase for different skills delivery, cost-sharing component will be incorporated. This can be done through contribution from the sector bodies, from the relevant industries or from the individual beneficiaries themselves. Cost-sharing component for delivery for critical capability program will be continued as done in the past, especially for in-country programs.

The MoLHR will dictate costing and payment terms for different skilling programs implemented in partnership with training providers. This will be done to negate the current issue of escalating program cost. The costing for critical skill has been divided into three categories based on intensity

of machine and equipment. Program with high machine usage will be provided higher financial support and programs with lower machine usage will be provided lower financial support. The costing for any critical capabilities program will also be dictated during the program design phase in alignment with the masterplan. Costing for each area of support will be strongly guided by the costing premeditated in the masterplan.

Equity and inclusive access to HRD opportunities

Concerted effort will be made to provide equal access to both genders for different skilling avenues and opportunities. Consideration will also be made to design relevant programs which will suit the needs of both genders in different economic sectors. The past experience indicates that female participation is higher in tourism and service related programs, while male participation is higher in construction and production related programs. Training partners will be encouraged to provide gender equity during the enrollment and execution of the training program. Access will also be provided to special groups.

Overall Slot and budget

A total of about Nu. 1.9 billion will be required for the implementation of the masterplan. Considering the 12,000 to 13,000 jobseekers entering the labour market annually, the STWT support will be provided to a total of 24,000 jobseekers in the 12th FYP, with an annual target to engage about 5,000 young jobseekers. The STWT support will be provided through three main programs; critical skills, entrepreneurship and industry attachment programs. Intake within the TTIs and IZCs will be gradually increased to take in more secondary graduates. The VSDP and SSDP programs will be continued with a moderate annual target of 250. These programs will be implemented in partnership with different focal agencies.

A total of 5,000 will be skilled through the critical skills program (pre-service HRD) and a total of 2,230 through critical capabilities program (in-service HRD).

Table 17: Summary of slots and budget

SN	Programs	Y1	Y2	Y3	Y4	Y5	Total Slot	Approx. Cost (in million Nu.)
A	Critical Capabilities	362	467	517	517	367	2,230	84.0
A.1	Masters	12	17	17	17	17	80	7.5
A.2	Diploma	50	100	100	100	50	400	24.0
A.3	Short-term training	300	350	400	400	300	1,750	52.5
B	Critical Skills	300	1,000	1,500	1,200	1,000	5,000	400.0
	Total	662	1,467	2,017	1,717	1,367	7,230	484.0
Others:								
C	Industry Attachment/ engagement programs	2,166	3,150	3,150	3,150	2,250	13,866	894.5
D	Entrepreneurship training program	300	1,300	1,500	1,400	500	5,000	125.0
E	TTIs/IZCs	706	835	998	1,043	1,078	4,660	419.4
F	VSDP/SSDP	250	250	250	250	250	1,250	25.0
	Total	3,422	5,535	5,898	5,843	4,078	24,776	1,463.9
	TOTAL	4,084	7,002	7,915	7,560	5,445	32,006	1,947.9

Key policy interventions

Besides the skills delivery, the Masterplan will also seek to strengthen the National HRD coordination and planning framework through the following interventions:

Review of National HRD Policy

The National Human Resource Development Policy (NHRDP) 2010 of the Ministry of Labour and Human Resources (MoLHR) was the first national level effort in terms of drawing attention to the need for a coordinated and collaborative Human Resource Development effort in the country. The NHRDP was developed with the objective to bring coordination and cohesion among different human resource development activities in the country and to align the Economic Development Policy with the workforce development aspect. The policy has highlighted the need for the MoLHR to identify future HRD challenges and trends in the different sectors of the economy. The NHRD policy was launched in 2010 in alignment with the Economic Development Policy 2010. The EDP has been reviewed in 2016, thus requiring the need to review the existing NHRD Policy to ensure alignment with the provisions of the EDP 2016.

The NHRD policy will serve as an umbrella policy for encompassing human resource development activities at all levels. The policy must provide an overall direction to all the concerned agencies in their efforts towards fulfilling the future human resource needs of the country.

Long-term Workforce Planning

Workforce planning is an important aspect for effective labour market synergy (between supply of workforce from TVET and education institutions and demand from industry). Workforce planning can be an effective tool to curb unemployment and other labour market issues in the long-run. Enhancing the roles of sector association and bodies in workforce planning is an important mechanism that needs to be instituted. Many of the programs and services provided by the MoLHR are reactive in nature, in a sense that once the pool of unemployed are in the labour market, programs and activities are designed to engage them. One such program is the different STWT support programs offered by the MoLHR. Workforce planning can be an effective tool that can create synergy between labour supply and labour demand.

Institutionalising the national workforce planning and development effort requires greater commitment from the government, considerable financial resources and collaboration among different stakeholders. While no workforce demand data is expected to be perfect, it can provide an important guide for the government to make appropriate policy decision, for the TVET and tertiary education provider to design appropriate courses, and for students to assess labour market requirements which they can base their decision on. A comprehensive national strategy for the development of workforce planning information bases will ensure that right information

and decision are made over time. There is a need for collaborative efforts on development of an appropriate strategy for ensuring that relevant qualitative and quantitative information for the development of workforce plan is available.

Policy support, areas of cooperation, and role of stakeholders need to be defined through intensive dialogues. Such forward looking strategy will increase the complementarities of intervention and reduce the risk of isolated efforts and wasted investments. There is also the need to develop capacity of different players, industry body and workforce planning body, partnership agencies in gathering skills requirement, consolidating and analysing data.

The objective of the Workforce Planning is to address increasing youth unemployment and effective matching between labour supply and labour demand in the country. The long-term workforce plan will seek to address mismatch between tertiary education supply and long-term labour force requirement. It will seek to ensure that the country have access to appropriate and adequate workforce at all times, guide and Inform on the demand (critical jobs) in the country for appropriate intervention from the tertiary education, and identify appropriate workforce development strategies and interventions that leads to employment generation and economic productivity.

National HRD Advisory

National HRD Advisory has been instrumental in assessing different labour market challenges, from both demand and supply aspect. Several industry outlook survey, beyond graduation survey, perception survey and outcome survey have been carried out as part of developing the NHRD advisories. The Advisory has been instrumental in bringing attention to specific labour market issues like increasing unemployment among university graduates, requirement for greater thrust in TVET and impact of different STWT support provided by the MoLHR. The MoLHR will continue to provide annual National HRD advisory under different themes. A total of three advisories will be developed in the 12th FYP. Further, the MoLHR will continue to carry out beyond graduation survey for both tertiary and TVET institutions.

Monitoring and Evaluation Framework

The Bhutan Labour Market Information System (BLMIS) has been developed with the intention to provide a one-stop service for jobseekers (in accessing different STWT support opportunities), program managers (in management and monitoring of program), employers and other stakeholders. The system has been integrated with other smaller system, and will provide real-time data and information on different programs implemented by MoLHR.

The BLMIS system will be strengthened in the 12th FYP period. The system will give wider access to data and information on different HRD programs. It will also provide up-to-date and comprehensive data on different aspects of skilling. The system will be integrated with other MIS (tertiary

education). User access will be provided to different partners; training providers, sector bodies and beneficiaries themselves to provide input on the MIS.

Currently, most of the programs monitoring are carried out by the MoLHR on different aspects of learning and training delivery. Program delivery and post-program monitoring will be strengthened by enhancing the role of different training partners. The roles of sector bodies will be enhanced on sector specific training programs. Speedy and efficient feedback mechanism will be instituted to twig and improve training delivery process.

Feedback from beneficiaries will be collected using different online survey tools. These feedbacks will be assessed to further improve the training delivery process and content.

Efforts will be made to strengthen the level of commitment from beneficiaries through different mechanisms. Program hopping will be minimized through aptitude assessment and giving clear program outcome during the enrollment phase. Mechanism will also be instituted to many different MIS to avoid beneficiaries benefitting from more than one program.

An M&E framework will be developed to bring greater coordination between different programs and partners. The framework will be made easy and accessible to monitor programs at the time of delivery and post-delivery. Linkage will be developed with the job portal system to ensure correct reporting on employment facilitation numbers.

Building image

Image building will be an important exercise for different MoLHR programs. Besides uplifting the image of TVET in the country, image of different STWT support will be strengthened to bring greater awareness and access to the MoLHR supported programs. There is lack of information dissemination on simple labour market information, industry work culture and values, employability skills required, employment policies of the government, programs to assist jobseekers in transition, job prospect and opportunities, opportunities on self-employment and entrepreneurship among others. Therefore, creative and effective information development and sharing will be a priority.
The MoLHR will work on building image for different programs. Advocacy through different media and creative channels will be explored to bring culture and perception shift on jobs and employment avenues. Comprehensive advocacy will create constant awareness and understanding among young people on different options and opportunities available to them, thus leading to proper matching of programs to young jobseekers in the short run and overall job satisfaction among those employed in the long run.

Considering the importance of entrepreneurship culture, an image building on self-employment avenues for young jobseekers will be a priority. This will be done through entrepreneurship fair, camps, start-up program, and other avenues. Success stories will be used to generate interest and build the image in taking up entrepreneurship and self-employment opportunities.

Key HRD program interventions

Critical Skills Development (pre-service HRD)

Critical skills are geared towards skilling young jobseekers entering the labour market and will seek to address skills shortage within different sectors. Areas have been identified considering the demand within the existing industry and new potential in the economy so that individuals can set up their small businesses at the end of the program. A total of about 60 different areas have been identified to be implemented and a total of 5000 will be skilled.

Based on the HRD modality highlighted in the prevision section, components of employability skills and entrepreneurship skills will be made a core feature of any skilling initiative. This will ensure holistic development of an individual to find better opportunities in the labour market.

Workable and effective linkage between critical skills will be established with the entrepreneurship programs and industry attachment programs. Critical skills provided with the intention for self-employment will be tied closely with the entrepreneurship program, whereas critical skills leading to employment in existing industries will be tied closely with the industry attachment programs. Benefit and payment mode during the industry attachment will be different from that paid during the institute based learning, to ensure cost effectiveness of the program. These features will be incorporated in the program design phase.

Linkage between critical skill and industry learning will be established and strengthened with the establishment of closer coordination within the MoLHR divisions providing these two programs. Workable and effective system will be developed to smoothly transition a beneficiary from institute based learning to industry based learning and then to the job market.

QMS and accreditation will be an important aspect of critical skills delivery. While the program implemented in the past insisted on institute registration, moving forward, there will be a greater push for the programs to be aligned with the BVQF. The training providers will be made aware of the different programs to be implemented in the 12th FYP period, so that they can process for accreditation within the first year of the planning period. The standard and curriculum development process and mechanism will have to be made more efficient to cater to request from the private training providers. The areas identified under the critical skills will incorporate different learning elements to make an individual viable, either for employment within the existing industry or for self-employment.

Critical Capability Development (in-service HRD)

Critical capabilities are those training and development needs required within the existing workforce to enhance their performance and productivity. This will be geared towards upskilling the needs of the existing workforce to address skills gap within different sectors.

There will be greater focus towards building the technical capacity of workforce through reskilling and upskilling opportunities. Generic and basic trainings implemented in the past will be done away with. In the last two plan periods, much of the resources were spent on skilling young people in different areas. Therefore, efforts will be made to upskill them. The Masterplan will seek to explore support for short-term diploma programs ranging from one to six months. These diploma programs will be need based and comprehensive, providing individuals with opportunity to upgrade themselves in the work places. New skills will be added on to the existing knowledge. A total of eleven diploma programs will be implemented for 400 beneficiaries.

The MoLHR will continue to depend on bilateral and multilateral donor such as Australia Award, Nehru-Wangchuck Scholarship and others for the execution of any ex-country post-graduation programs. The MoLHR will explore possibility of cost-sharing master's program through in-country institutions. A total of 20 master's program will be implemented in different in-country institutions. The master's support to different in-country institutions will not only benefit in terms of meeting professional requirements in the country but also strengthen the capacity within the institutions to deliver programs in these areas. In the long-run, the country is expected to have different institutions with the capacity to deliver diverse and relevant post-graduation programs.

The key focus will be the short-term training programs, which will seek to address reskilling and upskilling needs through short term (duration less than a month) certificate program. A total of about 60 programs have been identified to be implemented targeting around 1750 beneficiaries. These areas have been identified in close consultation with the sector bodies/association and the establishments themselves (training need collected through the Establishment Survey 2017). Careful consideration has been made in filtering out basic and viable programs (for which establishment can invest on their own). Most of the trainings identified are technical in nature, with the intention to build human capacity and competency within the different sectors. Cross-sectorial programs such as management/leadership, marketing, project management and customer care will be implemented to suit the specific needs of different industries. However, priority will be on the technical programs. The different HRD modes or approaches described above will be taken into consideration during the design and implementation phase.

The MoLHR will continue to work closely with the sector bodies in implementation of critical capability development. Areas and beneficiaries for the program will be validated through these bodies. Sector bodies with capacity to implement the program will be provided with funding support.

Entrepreneurship Development

Considering the existing labour market challenges, entrepreneurship support programs will be an important strategy in the 12th FYP period. All critical skills support will be complemented with entrepreneurial skills. Capacity within the private training providers will be built to provide entrepreneurship skills through different TOT programs. Simultaneously, effort will be made to integrate entrepreneurship learning within the schools, training institutions and colleges, so that the new generations of jobseekers will have entrepreneurship knowledge and awareness as and when they enter the labour market. This is also expected to change the perception among young jobseekers on self-employment avenues. Incubation support will also be strengthened and expanded.

The Priority Sector Lending (PSL) initiative will provide a strong foundation for entrepreneurship promotion in the 12th FYP. The PSL initiative is expected to increase opportunities for youth employment, and act as a strong driver for establishment of micro and small businesses in the country. Funding support up to Nu. 10 million will be provided by all financial institutions at modest interest rates. The MoLHR will foster this support for different beneficiaries in close collaboration with different financial institutions. Further, the Cottage, Small and Medium Industry (CSMI) policy 2012 has highlighted enhancing employment and development of entrepreneurship culture as one of the important strategies for development of CSMI in the country.

A total of about 5000 will be engaged in different entrepreneurship programs. All beneficiaries will be supported through the PSL and other micro lending schemes available in the country. Greater collaboration will be built with the financial institutions, entrepreneurship supporting agencies, incubation centers, and the Department of Cottage & Small Industry (DCSI) to bring a coordinated and effective impact on entrepreneurship culture and result in the country. Building image through entrepreneurship fairs, skills fair, business idea competitions, entrepreneur camps, start-up weekend and other creative outlets will be explored to generate interests among young jobseekers and adult alike in entrepreneurship and acquisition of skills.

Vocational programs will be complemented with entrepreneurship training, so that beneficiaries will have options to explore self-employment post-skilling support. Capacity of different training providers will be built to provide entrepreneurship skills, and entrepreneur curriculum/modules will be made available to them.

The EDP and FIP 2016 will seek to support entrepreneurship development in the country through support in different economic sectors. An Entrepreneurship Development Institute will be established to promote entrepreneurship. Easy and accessible finance will be provided to those interested in setting up micro and small businesses in the country.

Industry Attachment and learning

Industry attachment or learning support has evolved over the years. The first attachment program was implemented through apprentice learning with different industries. Tri-party agreement was signed between the employer, the MoLHR and the apprentice, defining roles and responsibilities of each party. The duration of support ranged from 6 to 12 months, with employment guarantee at the end of the program. Further, pre-employment engagement programs were designed and developed with the establishment of the MoLHR to provide flexible short-term industry learning opportunities to different jobseekers in transition. However, since the outcome of the program was not well-defined, employment success rate was lower compared to other programs. Building on to these experiences, the Direct Employment Scheme (DES) was designed in the 11th FYP period. DES has higher salary incentive with clear employment outcome requirements. The program is aligned with the requirements in the priority sector. Though the per head employment cost is higher, the program has been effective in engaging thousands of jobseekers every year. The impact has also been in terms of jobseekers being able to negotiate higher wages in the private sector.

Industry attachment and learning programs will be strengthened in the 12th FYP, based on the past learning experiences. Every year the MoLHR will be annually engaging more than 3000 youths on in different industry learning programs. A total of 6000 will be engaged through the short-term industry engagement program, 1250 in ATP and 6616 in DES in the 12th FYP period.

There will be a stronger collaboration between skilling component and industry learning component within the MoLHR. The two programs will be amalgamated in some areas to provide a holistic approach to skilling, thus making a beneficiary equipped with classroom learning and industry based learning. Industry based learning will also be integrated within critical skills training. Private training providers will have to build stronger collaboration with relevant sector bodies and institute effective mechanism to monitor industry based learning.

Monitoring mechanism will be instituted to ensure effective learning during industry attachment. Uniform modality and costing will be adopted to ensure duplication and proper streamlining of different industry attachment programs.

TTIs and IZCs

There will be a stronger thrust in strengthening TVET in the 12th FYP. The budget allocation for the MoLHR has been increased with emphasis on revamping the TVET system. Within the existing TTIs and IZCs, the enrollment capacity is expected to double. The intake will gradually be enhanced to enroll higher number of secondary graduates into the TVET programs. A new TTI will be established in Thimphu with funding support from ADB. The new TTI will venture into providing automobile, ICT and media related skills.

With increase in quality of and access to TVET programs, rebranding and building the image of TVET will be a priority. Vocational Colleges will be set up and existing TTIs and IZCs will be upgraded to Vocational Colleges with the introduction of National Diploma courses. Accreditation of all the courses offered by the TTIs and the IZCs will be a priority. Three courses provided by the IZCs have been accredited and will be expanded to other programs. New courses will be designed/implemented and existing courses will be upgraded from National Certificate to National Diploma level. Some of the new courses will be provided in the areas of food processing, packaging, computer application and other areas. Female enrollment within the institute will also be increased from 35 percent to 40 percent. Gender friendly courses will be introduced in all the institutes.

The four pillar strategies identified in the TVET Blueprint (2016 to 2026) will be implemented in the 12th FYP. The four pillar strategies are to expand TVET provision, improve quality, improve relevance, and strengthen management system. Under the different strategies, some of the expected course of actions will be to enhance capacity of public TVET system from 1500 to 3900 in ten years, upgrade existing physical facilities and equipment in public TVET institutions, establish a vocational college, increase the role of private providers in TVET delivery, increase access to disadvantaged groups, and improve the image of TVET. Effort will be made to strengthen collaboration between training providers and industry, capacity of TVET trainers will be built, and alignment between skills delivery and economic priorities will be strengthened.

Table 18: Enrollment in the TTIs/IZCs in the 12th FYP

SN	Institute	2018-19	2019-20	2020-21	2021-22	2022-23	Total
1	TTI - Samthang	84	108	130	133	138	593
2	TTI - Thimphu	48	48	108	136	148	488
3	TTI - Khuruthang	95	100	110	110	115	530
4	TTI - Rangjung	93	96	127	133	138	587
5	TTI - Chumey	90	116	124	132	140	602
6	JWPTI	105	200	200	200	200	905
7	IZC - Thimphu	70	82	94	94	94	434
8	IZC-Tashiyangtse	85	85	105	105	105	485
9	New TTI				300	300	600
	Total	670	835	998	1,343	1,378	5,224

Alternative skilling programs

The Special Skills Development Program (SSDP) and Village Skills Development Program (VSDP) are two programs initiated before the establishment of the MoLHR. The SSDP was initiated under the Royal Command in 1996. The program was geared towards skilling of armed forces in vocational skills so that they are in a position to generate income upon retirement from their service. The program later expanded to other special groups, such as differently-abled, juvenile and delinquencies, monks/nuns, prisoners, and disbanded gang members. While the focus in the 9th FYP was on the juvenile and delinquent with support provided to Draktsho Vocational Institute (under the administration of Youth Development Fund then), the focus shifted towards training of monks and nuns in the 10th FYP. SSDP has been recently integrated and decentralized in the four MoLHR regional offices in 2015 and is being implemented in close coordination with the regional stakeholders. The VSDP was introduced in 1984 under the Royal command. The program provides skills development training for the villagers. The objective of the program is to enhance community participation in their local development activity through provision of relevant skills. The program also provides avenues for villagers to participate in income generation activities once skilled. VSDP has been integrated and decentralized in the MoLHR regional offices with effect from 2015.

The two programs will be continued with modest target of 1250 individuals to be skilled in the 12th FYP.

SECTOR FOCUS

CONSTRUCTION

Construction is a growing sector contributing 15.46 percent to the GDP in 2015 and 16.28 percent to the GDP in 2016. It will continue to be an important sector in the 12th FYP period with on-going and new constructions in hydro power projects, government initiated infrastructure development projects, infrastructure repair and maintenance, and private constructions. The number of construction firms registered with the Construction Development Board (CDB) has also increased from 3800 in 2016 to 4012 in 2018. In 2018, there were a total of 218 large scale, 505 medium and 3687 small firms registered with the CDB. The sector is also largely dependent on government projects. The National Workforce Plan (NWFP) 2016 indicates that 77.8 percent of the construction firms were in one way or the other engaged in government funded projects, thus indicating strong dependency of construction firms on the government investments.

Despite being one of the highest contributors to the GDP, the sector engages only 2.6 percent of the employed workforce (LFS 2016). The sector's human resource requirement is largely met through foreign workers. The ES 2017 indicates that about 13,500 workers are engaged in the construction sector, which includes 70 percent foreign workers. The sector is male dominated with only 6.8 percent female workers. Majority of the workforce are engaged in craft related trades (38 percent), followed by plant/machine operators, elementary workers and technicians.

The education profile of the workforce engaged in the sector corresponds with the occupation profile of the workforce. 12 percent of the workforce has no formal education, whereas 45 percent has primary level education, 33 percent secondary level education and 11 percent tertiary education. The sector also has a significant number of managers with no formal education. Only 33 percent of managers have some form of tertiary education.

The sector engages low number of regular paid workers (NWFP 2016). This is mainly because of the time-bound nature of work in the sector, wherein work is executed as and when construction contracts are available. The works in the sector are also manual and not very mechanized. This discourages many young people to opt to work in the sector.

Some of the key challenges highlighted in the NWFP 2016 are the low level of productivity due to lack of specialization and use of old technology ultimately resulting in high cost and low quality construction. Other issues are related to low focus and attention on human resource development within the industry. The establishment of CDB has had positive impact in the sector, through the institutions of registration and online service system. CDB provides induction courses for new construction firms which equip them with procurement and management skills. The different refresher courses provided to the construction firms help them increase work efficiency within their firms. The sector also faces high shortage of skilled workers. 28.7 percent of the industries indicated that the skills that they need are not available in the country (NWFP 2016). Attrition in the sector is also high (47.2 percent).

Table 19: Profile of workforce by major occupation and gender

Major Occupation	Male		Female		Total	%
	Number	%	Number	%		
Managers	171	83.0	35	17.0	206	1.5
Professionals	564	82.3	121	17.7	685	5.1
Technicians and Associate Professionals	1,116	84.7	201	15.3	1,317	9.8
Clerical Support Workers	504	75.6	163	24.4	667	4.9
Services and Sales Workers	277	88.2	37	11.8	314	2.3
Forestry Workers	5,105	99.5	25	0.5	5,130	38.1
Craft and Related Trades Workers	2,339	99.7	6	0.3	2,345	17.4
Plant and Machine Operators and Assemblers	2,485	88.3	329	11.7	2,814	20.9
Total	12,561	93.2	917	6.8	13,478	100.0

Table 20: Profile of workforce by major occupation and education level

Major Occupation	No Education		Primary		Secondary		Tertiary		Total
	Number	%	Number	%	Number	%	Number	%	
Managers	23	11.0	43	21.0	71	34.0	69	33.0	206
Professionals	0	0.0	0	0.0	10	1.0	675	99.0	685
Technicians and Associate Professionals	18	1.0	106	8.0	1035	79.0	158	12.0	1317
Clerical Support Workers	6	1.0	47	7.0	270	40.0	344	52.0	667
Services and Sales Workers	37	12.0	184	59.0	90	29.0	3	1.0	314
Forestry Workers	657	13.0	2744	53.0	1554	30.0	175	3.0	5130
Craft and Related Trades Workers	411	18.0	1391	59.0	516	22.0	27	1.0	2345
Plant and Machine Operators and Assemblers	408	14.0	1473	52.0	913	32.0	20	1.0	2814
Total	1560	12.0	6010	45.0	4459	33.0	1495	11.0	13478

In the 12th FYP period, one of the main priorities of CDB will be to enhance professionalism in the sector. Critical capabilities in the areas of quality control, cost estimation, project planning, project execution and risk management will be provided by CDB in collaboration with different training partners. These trainings will be provided for all the registered construction firms in the country and provided on modest training fees.

Long-term HRD in the areas of construction management, civil/electrical engineering, media, financial management and others have been prioritized for the sector, which will be executed through support from different fellowship offers.

The sector has a steady source of workforce supply in both in-country tertiary and vocational institutions. All construction trainings provided in the TTIs will be aligned with the BVQF. National Diploma level programs will be introduced in different construction trades. Incubation support within the TTIs will be established to enhance employability of graduates.

The second phase of Occupational Skills Development for Construction Sector (OSD4CS) project funded by HELVETAS will focus on building skills and productivity within the construction sector. Dual system of training will be imparted, which will have a good combination of classroom learning and industry learning. More than thousand are expected to be skilled in different construction trades through the project. The Dual system of training will enforce stronger linkage with the Construction Association of Bhutan (CAB) and industries in the sector. CAB is expected to play greater roles in bringing linkages between skills delivery process, industry linkage and employment facilitation.

Critical skills in the areas of construction supervision, heavy machine repair and maintenance, plumbing and pipe fitting, tunneling technology, and others have been identified in the masterplan. These programs will be implemented in partnership with different training providers. Sector bodies will play a key role in the implementation process. The program will have strong emphasis on industry based learning and employment outcome.

TOURISM

Tourism is an important sector for revenue and employment generation. Over the years, the 'high volume, low impact' policy has evolved to 'high value, low impact' policy with an intention to take advantage for increasing number of tourist arrival in the country. In fact, the number of tourist arrival has seen an increasing trend in the last five years. The Bhutan Tourism Monitor 2016 indicates that in 2016, a total of about 210,000 tourists visited Bhutan. This is 35 percent increase from the previous year. The revenue generated by the industry was USD 73.74 million in 2016, which was an increase of 4 percent from 2015 (USD 71.05 million). Diversity of tourist arrival in the country has also expanded. Initially, majority of the visitors were from Europe and North America. Now, an increasing number of tourists are visiting from different Asian countries. As per BTM 2016, a majority of tourists visiting Bhutan were from India, China, Bangladesh and Thailand.

As per the ES 2017, there are a total of about 5700 individuals working in the sector. The sector engages high number of female workforce, in fact the gender workforce ratio is almost 1:1. This holds true for higher major occupation categories such as manager and professional. The employment success rate of hospitality related programs implemented through YES is as high as 89.5 percent. Female enrollment in the program was 58.56 percent.

Majority of workforce in the sector are with middle and higher secondary level education (76 percent). 17 percent of the workforce has tertiary education. Unlike the construction sector, majority of those in the manager and professional category are those with tertiary education.

As per the NWFP 2016, attrition and job-hopping is a big challenge in the sector. However, unlike the other sectors, workers hop within the sector. 36.2 percent of the establishments were facing skills shortage, due to the indicated impact of quality of services, productivity and efficiency within the establishment and loss of revenue.

The LFS2016 indicates that the educational qualification of people working in accommodation and food services activities is very low. Only 2.9 percent of the workforces have tertiary educational qualification. The industry is largely driven by people with secondary or primary education. Therefore, very weak human resource capacity is driving the sector. Hence, inadequacy of competent human resource capacity is an issue to consider.

Table 21: Profile of workforce by major occupation and gender

Major Occupation	Male		Female		Total	%
	Number	%	Number	%		
Managers	388	53.7	334	46.3	722	12.7
Professionals	62	58.5	44	41.5	106	1.9
Technicians and Associate Professionals	228	58.3	163	41.7	391	6.9
Clerical Support Workers	374	52.5	339	47.6	713	12.5
Services and Sales Workers	809	55.1	660	44.9	1,469	25.9
Forestry Workers	79	86.8	12	13.2	91	1.6
Craft and Related Trades Workers	232	77.3	68	22.7	300	5.3
Plant and Machine Operators and Assemblers	676	35.8	1,214	64.2	1,890	33.3
Total	2,848	50.1	2,834	49.9	5,682	100.0

Table 22: Profile of workforce by major occupation and education level

Major Occupation	No Education		Primary		Secondary		Tertiary		Total
	Number	%	Number	%	Number	%	Number	%	
Managers	59	8.0	98	14.0	295	41.0	270	37.0	722
Professionals	0	0.0	0	0.0	4	4.0	102	96.0	106
Technicians and Associate Professionals	11	3.0	36	9.0	262	67.0	82	21.0	391
Clerical Support Workers	7	1.0	20	3.0	329	46.0	357	50.0	713
Services and Sales Workers	112	8.0	414	28.0	855	58.0	88	6.0	1469
Forestry Workers	21	23.0	28	31.0	41	45.0	1	1.0	91
Craft and Related Trades Workers	54	18.0	172	57.0	70	23.0	4	1.0	300
Plant and Machine Operators and Assemblers	178	9.0	519	27.0	1159	61.0	34	2.0	1890
Total	442	8.0	1,287	23.0	3,015	53.0	938	17.0	5682

The Training Needs Assessment of Bhutan Hospitality and Tourism sector has been developed by the TCB in 2017. The document provides different areas of intervention required to enhance service delivery and productivity in the sector. The MoLHR provided fund of about Nu. 8.9 million in 2017 under the GOI-PTA project to executive priority skills identified in the TNA report. The TCB will continue to implement different areas identified in the TNA report in the 12th FYP period. The TCB will also play a greater role in standardization of courses offered by different training providers in the country.

Collaboration with the Royal Institute of Tourism and Hospitality (RITH) will be built to execute need based training for the sector. Under support from ADB project, food production training at NC2 or NC3 level will be piloted which will be expanded to other programs. Industry based learning and employment outcome will be an important aspect of such partnership.

Critical skills such as food and beverage, food production, bakery, front desk, and house-keeping will be implemented in partnership with different training providers. Upskilling support through short-term diploma in areas of hotel management, cooking and other areas will be provided to enhance opportunity for skills and position upgradation of workforce engaged in the sector. Short term certificate programs like hotel management, river expedition, home stay management, eco-tourism and food safety and hygiene, and long-term support in terms of hospitality and tourism management are also included in the masterplan.

Sector bodies like ABTO, GAB and HRAB will play a key role in skills delivery process. Training partners are expected to develop stronger linkage with industry through these sector bodies during the program design, program implementation and post-program employment facilitation process.

PRODUCTION

Production sector consists of wood based industries, mining industries, agro-based industries and handicraft industries. As per the NSB report, the manufacturing sector contributes 7.46 percent to the GDP in 2016. The wood based industry presided by the National Resource Development Corporation Ltd (NRDCL) is the oldest industry in the sector. The industry comprises of logging units, sawmills, furniture houses and board and particle units. One of the main units is the Bhutan Board Particles Ltd, which was established in 1982 and had been pioneering firms to produce furniture using the particle board. Similarly, the Wood Craft Centre in Thimphu has been producing high quality and modern furniture and upholstery. It also serves as a training center for national diploma program in furniture making.

Another opportunity is in the agro-based industry. Agriculture has been the backbone to the economy of the country, and it contributes to 16.52 percent of the GDP (NSB report 2016) and employs over 58 percent of the workforce. Over the last 50 years, the Government has invested huge revenue to build and strengthen the industry. Until recently, the Government has come up with many new production firms and agro-processing units. Many farmers, youth cooperative and cooperative farming have been encouraged nation-wide with the aim to meet food self-sufficiency in the country. Currently there are 73 agro-based industries as of June 2017, of which majority are situated in Chukha Dzongkhag.

Likewise, arts and craft is another important industry under the sector. Bhutan has a unique culture and tradition and has a set of cultural items and textiles. The Institute of Zorig Chusum (IZC) in Trashiyangtse and Thimphu complemented by Choki Traditional Arts and Craft School (CTAS) plays a key role in building competent and capability workforce supply for the sector. These institutes are specialized in all thirteen traditional arts and craft. One important initiative by the Government has been the establishment of the Agency for Promotion of Indigenous Crafts (APIC), established in 2011. APIC aims to execute handicrafts related initiatives and help the industry by enhancing skills and business knowledge in the craft community with innovation, product development and marketing. In the 11th FYP, the MoLHR has developed partnership with APIC in delivery of different indigenous skills training with the help of master craftsman and artesian.

As per the ES 2017, the production sector as a whole engages about 6500 people of which only 27 percent are female. Majority of the workforce are engaged in clerical support, plant and machine operators and other elementary occupations. The sector is largely driven by the workforce with qualification below secondary education with only 11 percent of the workforce with tertiary education. The sector has a good number of managers with tertiary education (41 percent), which is an indication that the sector is led by highly educated individuals.

Unlike the past, the production sector has grown drastically but since the sector is highly mechanical, lack of technology and technical expertise is one of the major issues. Despite the fact that the sector requires the highest number of professional in different fields, the figure is only 3.8 percent as per

the ES 2017. Many of the vocational courses currently offered are at the certificate level. So lack of technical/professional expertise in various fields of production is a challenge. Other challenges are lack of technology and machineries to improve production, wastage during production, packaging, marketing, and lack of innovation and design to improve the products.

Table23: Profile of workforce by major occupation and gender

Major Occupation	Male		Female		Total	%
	Number	%	Number	%		
Managers	228	70.4	96	29.6	324	5.0
Professionals	156	62.7	93	37.4	249	3.8
Technicians and Associate Professionals	299	68.3	139	31.7	438	6.7
Clerical Support Workers	796	65.1	426	34.9	1,222	18.8
Services and Sales Workers	307	79.3	80	20.7	387	5.9
Forestry Workers	98	83.8	19	16.2	117	1.8
Craft and Related Trades Workers	970	77.6	280	22.4	1,250	19.2
Plant and Machine Operators and Assemblers	508	93.6	35	6.5	543	8.3
Elementary Occupations	1,383	70.0	592	30.0	1,975	30.4
Total	4,745	72.9	1,760	27.1	6,505	100

Table 24: Profile of workforce by major occupation and education level

Major Occupation	No Education		Primary		Secondary		Tertiary		Total
	Number	%	Number	%	Number	%	Number	%	
Managers	8	2.0	64	20.0	118	36.0	134	41.0	324
Professionals	0	0.0	3	1.0	26	10.0	220	88.0	249
Technicians and Associate Professionals	5	1.0	80	18.0	320	73.0	33	8.0	438
Clerical Support Workers	43	4.0	191	16.0	666	55.0	322	26.0	1222
Services and Sales Workers	67	17.0	127	33.0	188	49.0	5	1.0	387
Forestry Workers	51	44.0	43	37.0	17	15.0	6	5.0	117
Craft and Related Trades Workers	246	20.0	371	30.0	628	50.0	5	0.0	1250
Plant and Machine Operators and Assemblers	191	35.0	245	45.0	106	20.0	1	0.0	543
Elementary Occupations	345	17.0	930	47.0	694	35.0	6	0.0	1975
Total	956	15.0	2,054	32.0	2763	42.0	732	11.0	6505

The EDP 2016 seeks to improve agricultural productivity and production to achieve national food security, supply raw materials to agro-based industries and for exports. It also highlights on the importance of transforming subsidence to commercial production with postharvest value addition. Farm mechanization and strengthening the marketing infrastructures and systems are highlighted as important strategies to encourage farmers to form farmers group or cooperatives and all the gewogs will be provided with farm shops. Also the Government have been identifying and incentivizing traditional and high value products in pursuit of creating green and climate smart agriculture. In line with this, the Government has developed 'Brand Bhutan' policy, which is expected to enhance quality of agro produce, handicrafts, natural resources and tourism products. Some of the issues in the sector are the lack of entrepreneurship skills, creative ideas and innovative plans.

Long-term HRD support in the areas of MBA in corporate strategy, entrepreneurship, agro-processing and film productions will be provided. In addition, design, tailoring, product design, and furniture design and development are some areas that are identified under the critical skills. Short-term trainings in product design and development, cosmetology, wood based product development, handicraft and traditional product design and development, and food processing have been identified. Most of the programs identified under these sectors are related to production and processing.

Critical skills provided for the sector will be complemented with entrepreneurship support and training. Beneficiaries interested in self-employment will be supported through the programs. Incubation support in partnership with relevant agencies will be provided.
Critical capabilities in the areas of agro-based food processing, bakery and confectionery, bamboo product design and development, ceramic and pottery, and others will be implemented. In implementing these programs, key partnership and collaboration with APIC and HAB will be strengthened.

ICT

Since the establishment of the first telephone network in 1963, Bhutan has seen tremendous progress in telecommunication. In 1999, coinciding with the Silver Jubilee celebration of our Fourth Druk Gyalpo's accession to the throne, television and internet services were introduced. In subsequent years, mobile services were introduced by the Government and in later years private company launched these services. Many IT based products, IT applications and IT enabled services are now available in the country. In addition to this, television, media, film, and music industries are core part of the sector. Bhutan Telecom and Tashi Info Communication provide fixed line and mobile services employing over 719 people. Also since the sectors have widespread regional offices and have a need of huge man power, and there has been a need to improve quality of services and upgrade technology. The sector received greater thrust in the 10th FYP with the implementation of Private Sector Development Project (PSDP) funded by the World Bank. Under the project, the Thimphu Tech Park was established and a capacity of more than 1300 youths was built in IT/ITES skills.

Currently 2340 people are employed in the sector, out of which 37 percent of the workforce are female. The sector has a good number of technician and associate professionals (28 percent) but low number of those working in professional and managerial positions (8 percent and 3 percent). Female engagement is higher in technical and association professional and low in other major occupations.

The sector employs higher proportion of secondary education graduates (57 percent) and tertiary education graduates (20 percent). Unlike the previous sector, majority of those engaged in managerial position have tertiary level education.

Table 25: Profile of workforce by major occupation and gender

Major Occupation	Male		Female		Total	%
	Number	%	Number	%		
Managers	55	82.1	12	17.9	67	2.9
Professionals	114	60.0	76	40.0	190	8.1
Technicians and Associate Professionals	240	36.5	417	63.5	657	28.1
Clerical Support Workers	470	65.6	247	34.5	717	30.6
Services and Sales Workers	49	62.0	30	38.0	79	3.4
Forestry Workers	191	88.8	24	11.2	215	9.2
Craft and Related Trades Workers	167	98.2	3	1.8	170	7.3
Plant and Machine Operators and Assemblers	185	75.5	60	24.5	245	10.5
Total	1,471	62.9	869	37.1	2,340	100.0

Table 26: Profile of workforce by major occupation and education level

Major Occupation	No Education		Primary		Secondary		Tertiary		Total
	Number	%	Number	%	Number	%	Number	%	
Managers	0	0.0	1	1.5	17	25.4	49	73.1	67
Professionals	0	0.0	0	0.0	28	14.7	162	85.3	190
Technicians and Associate Professionals	1	0.2	10	1.5	631	96.0	15	2.3	657
Clerical Support Workers	6	0.8	90	12.6	380	53.0	241	33.6	717
Services and Sales Workers	15	19.0	11	13.9	47	59.5	6	7.6	79
Forestry Workers	35	16.3	76	35.3	101	47.0	3	1.4	215
Craft and Related Trades Workers	18	10.6	120	70.6	28	16.5	4	2.4	170
Plant and Machine Operators and Assemblers	62	25.3	77	31.4	103	42.0	3	1.2	245
Total	137	5.9	385	16.5	1335	57.1	483	20.6	2340

The sector will require high skilled workforce to adapt to the development and changes in the sector. Digitization of cable industry will be an important development in the sector. A Multi Service Operator (MSO) will be setup with an intention to provide centralized service in procurement of channel and distribution to different cable operators. Wireless technology will be available and monitoring mechanism will be improved. The industry will require specialized cable technician/ operators, electronic communication and quality assurance specialist. Digitization is expected to have ripple effect within the industry and create opportunities in the film and media industry. It is also expected to resolve revenue generation loopholes for the cable operators.

The expansion of Thimphu Tech Park is expected to create about 500 additional jobs in the sector. Intervention will be designed to build capacity of prospective workforce interested to engage in the sector. The Gyalposhing College of Information Technology is expected to have a positive impact in meeting the workforce requirement of the sector. Courses in computer application, ICT, computer science and multimedia and animation will be introduced with average intake of 150 every year. Further, the new TTI in Thimphu is expected to provide ICT and media related vocational programs. The masterplan has identified long-term support in the areas of ICT, media and communication. Short-term diploma programs in advanced animation, film and media, software development, application development to cable/technician/digitalization will also be explored. The development within the sector can have effector on development within other sectors, especially in tourism, service, and arts and craft. Opportunities to enhance e-commerce and ICT services in these sectors

will be supported.

Critical skills in 2D/3D animation, application development, graphics and multimedia, web design and others have been identified. These programs will be implemented in close partnership with private training providers with clear employment outcome. Skills leading to entrepreneurship or self-employment will also be supported.

EDUCATION AND TRAINING

Education and training is an important sector. The sector has direct impact on the quality of workforce in the economy. The sector mainly consists of the early childhood care and development institutes, private training providers, private schools and tertiary education institutes.

Holistic development of a child is crucial for physical, social, psychological and mental wellbeing of a child in its early age of 3-6. ECCD program has been initiated by the Ministry of Education (MoE) with objective to promote sound parenting and child care practices. The program also helps in smooth transition of a child before getting enrolled in primary education. As per the NSB report 2016, there are 7409 children enrolled in different ECCD centers with 591 caregivers. With an increasing number of working parents, the ECCD center also caters to children below 3 years old. Many of the care givers and facilitators are fresh secondary school leavers with no competencies in child care. Capacity is mainly built in-house.

The number of private training providers is gradually increasing. There are a total of 114 registered training providers (TVET QAMIS 2018) in the country against 91 in 2015. The number includes the eight institutions under direct administration of the MoLHR. Almost 74 percent of the institutes are graded 'C' and the rest are graded 'B'. As per the TVET Blueprint 2016, the main issues identified are lack of capacity within the TVET providers, poor quality of TVET program, lack of relevancy of programs, and weak institutional capacity. The DTE will take the lead in addressing these issues through the implementation of the four pillar strategies in the 12th FYP period.

With the establishment of the Royal University of Bhutan in June of 2003, tertiary education system within the country has been strengthened. Further, the KGUMSB has been established to offer specialized medical and health related programs. Currently, there are 12 colleges, including 2 private colleges under RUB. 3 institutes under KGUMSB and 2 autonomous agencies (Annual Education Statistics 2017). Recently, 3 new public colleges (Rigney College at Trashiyangtse under MoLHR, Yonphula College of Advance Studies & Gyalposhing College) and 1 private college (Norbuling Rigter College) have been established. The primary focus of DAHE will be to enhance quality of and access to different degree programs. Plans have been drawn out to increase relevance of degree programs and to improve tertiary education management. New private colleges are also expected to be established in the 12th FYP period.

As per ES 2017, there are 1675 workforces engaged in the sector. The sector has high proportion of female workforce (47 percent). The sector also has higher proportion of professional and managers. Female composition are higher in managerial (76 percent), professional (47 percent), technician and association (52 percent) and clerical support (58 percent). The sector has the highest number of tertiary graduates compared to other sectors (54 percent), which is a good indication since the sector requires highly qualified and competent workforce.

Table 27: Profile of workforce by major occupation and gender

Major Occupation	Male		Female		Total	%
	Number	%	Number	%		
Managers	6	24.0	19	76.0	25	1.5
Professionals	565	52.8	506	47.3	1,071	63.9
Technicians and Associate Professionals	55	48.3	59	51.8	114	6.8
Clerical Support Workers	66	42.0	91	58.0	157	9.4
Services and Sales Workers	77	83.7	15	16.3	92	5.5
Forestry Workers	29	80.6	7	19.4	36	2.1
Craft and Related Trades Workers	40	95.2	2	4.8	42	2.5
Plant and Machine Operators and Assemblers	53	38.4	85	61.6	138	8.2
Total	891	53.2	784	46.8	1,675	100.0

Table 28: Profile of workforce by major occupation and education level

Major Occupation	No Education		Primary		Secondary		Tertiary		Total
	Number	%	Number	%	Number	%	Number	%	
Managers	0	0.0	1	4.0	12	48.0	12	48.0	25
Professionals	0	0.0	4	0.0	202	19.0	838	78.0	1071
Technicians and Associate Professionals	0	0.0	1	1.0	103	90.0	10	9.0	114
Clerical Support Workers	1	1.0	16	10.0	103	66.0	37	24.0	157
Services and Sales Workers	41	45.0	34	37.0	14	15.0	3	3.0	92
Forestry Workers	6	17.0	3	8.0	25	69.0	2	6.0	36
Craft and Related Trades Workers	7	17.0	25	60.0	9	21.0	1	2.0	42
Plant and Machine Operators and Assemblers	38	28.0	62	45.0	35	25.0	3	2.0	138
Total	93	6.0	146	9.0	530	32.0	906	54.0	1675

Different levels of HRD intervention have been proposed for different sub-sectors. The primary focus for the tertiary education institutions will be in terms of support through the provision of master's level support. The tertiary education institution themselves are expected to have their own HRD plans and funds to carry out both short-term and long-term critical development. From the limited fellowship offers received by the MoLHR, priority will be given in developing capacity within the tertiary education institutions. The HRD Rules and Regulation has also been revised to give due consideration to the capacity development in the tertiary education sector.

TOT in pedagogy and entrepreneurship support will a priority for different registered training providers. Capacity will also be built in RMA. Skills partnership will be built with the institutions having QMS certification/endorsement, therefore effort will be made to build competency in this area as well. Course accreditation is an important priority in the 12th FYP. While effort will be made to fully accredited all courses offered in public institutions, increasing number of private providers will be encouraged to accredit their course. Accreditation is expected to enhance relevancy and quality of TVET delivery in the country.

The MoLHR will closely coordinate with relevant Department under the MoE to ensure effectiveness of different HRD intervention for the education sector (specifically private establishments). Such coordination will be instituted to avoid duplication of effort and proper utilization of limited resources.

SERVICE SECTOR

This is one of the biggest sectors in the country, in terms of business diversity and workforce engagement. The different industries in the sector are automobile, café & restaurants, tailoring, finance, consultancy firms, power and other services. The sector has the highest potential for employment generation as per the ES 2017. There is also a scope for prospective entrepreneurs to set up small businesses, especially in the areas of hair and beauty, tailoring, restaurant, consultancy, and automobile.

As per the ES 2017, the sector employs about 14,400 of which 52.2 percent are female workforce. Female workforce engagement is high in all occupational categories with the exception of crafts and trade workers. In fact, female workforce is 64 percent in managerial and 55 percent in professional position. Majority of the workforces in the sector are with primary level (32 percent) and secondary level (39 percent) education. A very high number of those working in the managerial position are those with secondary level education.

Table 29: Profile of workforce by major occupation and gender

Major Occupation	Male		Female		Total	%
	Number	%	Number	%		
Managers	780	36.0	1,384	64.0	2,164	15.1
Professionals	406	44.6	505	55.4	911	6.3
Technicians and Associate Professionals	573	42.6	771	57.4	1,344	9.4
Clerical Support Workers	1,539	52.9	1,368	47.1	2,907	20.3
Services and Sales Workers	700	37.9	1,146	62.1	1,846	12.9
Forestry Workers	38	32.5	79	67.5	117	0.8
Craft and Related Trades Workers	1,415	62.7	842	37.3	2,257	15.7
Plant and Machine Operators and Assemblers	268	57.6	197	42.4	465	3.2
Elementary Occupations	1,149	49.0	1,194	51.0	2,343	16.3
Total	6,868	47.8	7,486	52.2	14,354	100.0

Table 30: Profile of workforce by major occupation and education level

Major Occupation	No Education		Primary		Secondary		Tertiary		Total
	Number	%	Number	%	Number	%	Number	%	
Managers	387	17.9	718	33.2	818	37.8	241	11.1	2,164
Professionals	0	0.0	5	0.5	65	7.1	841	92.3	911
Technicians and Associate Professionals	17	1.3	76	5.7	1144	85.1	107	8.0	1,344
Clerical Support Workers	54	1.9	325	11.2	1388	47.7	1140	39.2	2,907
Services and Sales Workers	284	15.4	859	46.5	672	36.4	31	1.7	1,846
Forestry Workers	0	0.0	0	0.0	114	97.4	3	2.6	117
Craft and Related Trades Workers	391	17.3	1,178	52.2	672	29.8	16	0.7	2,257
Plant and Machine Operators and Assemblers	49	10.5	318	68.4	94	20.2	4	0.9	465
Elementary Occupations	525	22.4	1,126	48.1	646	27.6	46	2.0	2,343
Total	1707	11.9	4605	32.1	5613	39.1	2429	16.9	14354

Upskilling support through short-term diploma in cosmetology and design and tailoring will be explored. Critical capabilities in areas of tailoring, fabrication, waste management, auto mechanic management, customer care and others will be provided. Critical skills in auto mechanics, denting and painting, green card technology, home appliance repair, hair and beauty, photography and tailoring (traditional and western garments) will be a priority.

Sector collaboration will be an important feature of any critical skills delivery. Trainings will be imparted in partnership with training providers with clear employment outcome. As mentioned in earlier section, class room based learning complemented by industry based learning will be an important aspect. Components of employability skills and entrepreneurship skills will be incorporated in training delivery.

PART IV
ANNEXURE

ACRONYMS

ABCO	Association of Bhutan Cable Operators
ABI	Association of Bhutan Industries
ABTO	Association of Bhutan tour Operators
APIC	Agency for Promotion of Indigenous Crafts
ATP	Apprentice Training Program
AWBI	Association of Wood Based Industries
BCCI	Bhutan Chamber of Commerce and Industry
BEA	Bhutan Exporters Association
BICTA	Bhutan ICT and Training Association (BICTTA)
BLMIS	Bhutan Labour Market Information System
BQF	Bhutan Qualification Framework
BVQF	Bhutan Vocational Qualification Framework
CAB	Construction Association of Bhutan
DAHE	Department of Adult and Higher Education
DEHR	Department of Employment and Human Resources
DES	Direct Employment Scheme
DoL	Department of Labour
DOS	Department of Occupational Standards
DTE	Department of Technical Education
EDP	Economic Development Policy
ES	Establishment Survey
ESP	Economic Stimulus Plan
FAB	Film Association of Bhutan
FIP	Fiscal Incentive Policy
FYP	Five Year Plan
GAB	Guide Association of Bhutan
GDP	Gross Domestic Product
GEP	Guaranteed Employment Program
GOI	Government of India
GSP	Graduate Skills Program
HAB	Handicraft Association of Bhutan
HRAB	Hotel and Restaurant Association of Bhutan
HRD	Human Resource Development
ICT	Information, Communication and Technology
ISR	Internal Service Rules
LFS	Labour Force Survey
LMI	Labour Market Information

MoE	Ministry of Education
MoLHR	Ministry of Labour and Human Resources
NWFP	National Workforce Plan
OHS	Occupation Health and Safety
OSD4CS	Occupation Skills Development for Construction Sector
PEEP	Pre Employment Engagement Program
QMS	Quality Management System
RCSC	Royal Civil Service Commission
RGoB	Royal Government of Bhutan
RITH	Royal Institute of Tourism and Hospitality
RUB	Royal University of Bhutan
SEED	Skills for Employment and Entrepreneur Development
STP	Skills Training Program
STWT	School-to-Work Transition
TCB	Tourism Council of Bhutan
TNA	Training Need Assessment
TOT	Training of Trainer
TVET	Technical and Vocational Education and Training
UGIP	University Graduate Internship Program
YES	Youth Employment Skills

ANNEXURE

Critical Skills

SN	Areas	Slot	Y1	Y2	Y3	Y4	Y5	Sector	Location preference	Equipment usage	Cost (in million Nu.)
1	2D Animation	50			√		√	ict	in-country	Medium	3,600,000
2	3D Animation	50			√		√	ict	in-country	Medium	3,600,000
3	Agro-based food processing and production	150		√	√	√	√	P	in-country	High	13,500,000
4	Application development	80		√			√	ict	in-country	Medium	5,760,000
5	Auto Mechanics	100		√		√		S	in-country	High	9,000,000
6	Bakery and Confectionery	200	√	√	√	√	√	P, T	in-country	Medium	14,400,000
7	Bamboo product design and development	50		√	√	√		P	in-country	Medium	3,600,000
8	Bar tendering	50		√	√	√		T, S	in-country	Medium	3,600,000
9	Barista	30		√	√	√		T, S	in-country	Medium	2,160,000
10	Bio product development	30		√	√	√		P	in-country	Medium	2,160,000
11	Broadcasting and Audiovisual Technicians	30	√	√				ict	in-country	Medium	2,160,000
12	Ceramic and pottery	50	√		√		√	P	in-country	Medium	3,600,000
13	Clay based product development	50	√		√		√	P	in-country	Medium	3,600,000
14	Construction supervision	50			√		√	C	in-country	Low	2,475,000
15	Cooking	400	√	√	√	√	√	T, S	in-country	Medium	28,800,000
16	Dairy product development	50	√	√	√	√	√	P	in-country	Medium	3,600,000
17	Denting and painting	50		√	√		√	S	in-country	Medium	3,600,000
18	Early Childhood care and development	100		√		√		ET	in-country	Low	4,950,000
19	e-commerce	30			√			ict	in-country	Medium	2,160,000
20	Floriculture	20			√			P	in-country	Medium	1,440,000
21	Food and Beverage	150	√	√	√	√	√	T	in-country	Low	7,425,000
22	Food processing	100	√	√	√	√	√	P	in-country	Medium	7,200,000
23	Food production (RITH)	250	√	√	√	√	√	T	in-country	High	22,500,000

24	Front Desk	150	√	√	√	√	√	T	in-country	Low	7,425,000
25	Fruit Processing	70			√			P	in-country	Medium	5,040,000
26	Furniture design and making	250	√	√	√	√	√	P	in-country	High	22,500,000
27	Graphics and Multimedia	30			√	√	√	ict	in-country	Medium	2,160,000
28	Green car technology	20				√		S	in-country	Medium	1,440,000
29	Hair and Beauty	75		√		√		S	in-country	Medium	5,400,000
30	Handicraft design and development	60	√	√	√	√	√	S	in-country	Medium	4,320,000
31	Health product/food development	30		√	√	√		P	in-country	Medium	2,160,000
32	Heavy machine operation and maintenance	125	√	√	√	√	√	C	in-country	Medium	9,000,000
33	Home Appliance repair	50	√	√	√	√	√	S	in-country	Medium	3,600,000
34	Housekeeping	180	√	√	√	√	√	T	in-country	Low	8,910,000
35	Industrial plumbing and fitting	30		√				P	in-country	High	2,700,000
36	Jewelry design and development	10		√			√	P	in-country	High	900,000
37	Machine embroidery	20		√	√	√		S	in-country	Medium	1,440,000
38	Metal based product design and development	20		√		√		P	in-country	Medium	1,440,000
39	Movie editing	20			√			ict	in-country	Medium	1,440,000
40	Multimedia Development	50							in-country	Medium	3,600,000
41	Organic cosmetic development	30			√	√	√	P	in-country	Medium	2,160,000
42	Packaging	100	√	√	√	√	√	P	in-country	Medium	7,200,000
43	Paper development	50		√	√			P	in-country	Medium	3,600,000
44	Photography	50		√				S	in-country	Low	2,475,000
45	Pigmentation	30	√	√	√	√	√	S	in-country	Low	1,485,000
46	Plumbing and Pipe Fitting	150	√	√	√	√	√	C	in-country	High	13,500,000
47	Script and Screenplay writing	40		√		√		ict	in-country	Low	1,980,000
48	Spa Therapy	100		√	√	√	√	T	in-country	Medium	7,200,000
49	Shoe design and development	20			√			S	in-country	High	1,800,000
50	Software Development	40	√	√		√	√	ict	in-country	Medium	2,880,000
51	Souvenir design and development	150		√			√	P	in-country	Medium	10,800,000

52	Tailoring - traditional clothes	260	√	√	√	√	√	S	in-country	Medium	18,720,000
53	Tailoring - Western garment	150	√	√	√	√	√	P	in-country	Medium	10,800,000
54	Textile design, weaving and development	150	√	√	√	√	√	P	in-country	Medium	10,800,000
55	Traditional healing and therapy	20		√		√		P	in-country	Medium	1,440,000
56	Tunneling technician	20		√				C	in-country	High	1,800,000
57	Upholstery	100		√	√				in-country	High	9,000,000
58	VFX and special effect	20		√				ict	in-country	Medium	1,440,000
59	Web development	30	√	√	√	√	√	ict	in-country	Low	1,485,000
60	Welding and Flame Cutting	60		√			√	P	in-country	High	5,400,000
61	Wine making - using local fruit	20		√		√		P	in-country	Medium	1,440,000
62	Wood based product design and development	100		√	√			P	in-country	Medium	7,200,000
		5000									400,000,000

CRITICAL CAPABILITIES

Long-term training

SN	Areas	Slot	Y1	Y2	Y3	Y4	Y5	Sector	Location	Approx. Cost (in million Nu.)
1	Construction Management	3	√		√		√	C	ex-country	Fellowship
2	Civil Engineering	3		√		√		C	ex-country	Fellowship
3	MBA- Corporate strategy	5	√	√	√	√	√	T, C, P, ict, ET, S	ex-country	Fellowship
4	MBA - Financial Management	2	√		√			T, C, P, ict, ET, S	ex-country	Fellowship
5	MBA-Corporate Professional Accountancy	2		√		√		T, C, P, ict, ET, S	ex-country	Fellowship
6	MBA - Entrepreneurship	3	√		√			T, C, P, ict, ET, S	ex-country	Fellowship
7	Management and Information System (MIS) - System Administration	2	√	√				T, C, P, ict, ET, S	ex-country	Fellowship
8	Management and Information System (MIS) - Cyber Security	2		√	√			ict	ex-country	Fellowship
9	Management and Information System (MIS) - Network Security	2			√	√		ict	ex-country	Fellowship
10	Film and Production	1		√		√		P	ex-country	Fellowship
11	Media and Communication	3	√		√		√	T, C, P, ict, ET, S	ex-country	Fellowship
12	Mass Communication	2		√		√		S	ex-country	Fellowship
13	Journalism	2		√		√		S	ex-country	Fellowship
14	Hospitality and Tourism	5	√	√	√	√	√	T	ex-country	Fellowship
15	Economics	2			√		√	S	ex-country	Fellowship
16	Human Resource Management/Development	10	√	√	√	√	√	T, C, P, ict, ET, S	ex-country	Fellowship
17	Education and Training	5	√	√	√	√	√	ET	ex-country	Fellowship
18	Agro processing and production	2		√		√		P	ex-country	Fellowship
19	Masters in Commerce	2		√		√		T, C, P, ict, ET, S	ex-country	Fellowship
20	Electrical Engineering	2	√	√				C, P	ex-country	Fellowship
21	MBA/CPA	20		√	√	√	√	T, C, P, ict, ET, S	in-country	7.5
		80								

Diploma

SN	Areas	Slot	Y1	Y2	Y3	Y4	Y5	Sector	location	Approx. Cost (in million Nu.)
1	Advance animation	40	√		√			ict	in-country/ex-country	2,400,000
2	Advance cooking	40	√	√	√	√	√	T	in-country/ex-country	2,400,000
3	Advance Bakery and confectionery	30		√		√		P, T	in-country/ex-country	1,800,000
4	Design and Tailoring	40	√	√	√	√	√	S, P	in-country/ex-country	2,400,000
5	Film and media	30		√		√		ict	in-country/ex-country	1,800,000
6	Product design (Arts and craft)	40		√		√		P, S	in-country/ex-country	2,400,000
7	Software development	40	√	√	√	√	√	ict	in-country/ex-country	2,400,000
8	Tourism management	20		√		√		T	in-country/ex-country	1,200,000
9	Hospitality Management	50	√		√		√	T	in-country/ex-country	3,000,000
10	Furniture design and development	40	√	√		√		P	in-country/ex-country	2,400,000
11	Advanced cosmetology	30	√		√			S	in-country/ex-country	1,800,000
		400								24,000,000

Shor-term training

SN	Areas	Slot	Y1	Y2	Y3	Y4	Y5	Sector	Location	Approx. Cost (in million Nu.)
1	Construction management	60		√		√	√	C	in-country	1,800,000
2	Plumbing technology	20	√					C, P	in-country	600,000
3	Health and safety	100	√	√	√	√	√	C, P	in-country	3,000,000
4	Child care and development	60			√	√		ET	in-country	1,800,000
5	Curriculum development training	50	√	√	√	√	√	ET	in-country	1,500,000
6	TOT - entrepreneurship	50	√	√	√	√	√	ET	in-country	1,500,000
7	Rapid Market Appraisal	50		√	√			ET	in-country	1,500,000
8	TOT - pedagogy	50	√	√	√	√	√	ET	in-country	1,500,000
9	Auto machine system	30			√			ict	in-country	900,000
10	Cable technician/operator	30	√	√				ict	in-country	900,000
11	Electronic repair and maintenance	30		√		√		ict	in-country	900,000
12	Script and screenplay writing	20		√	√	√		ict	in-country	600,000
13	Software development	20	√		√		√	ict	in-country	600,000
14	Sound/Audio engineering	20		√		√		ict	in-country	600,000
15	Network/Internet security	20		√	√		√	ict	in-country	600,000
16	Cable Digitization training	40	√	√				ict	in-country	1,200,000
17	Electronic communication	30			√	√	√	ict	in-country	900,000
18	Content development - mass communication	10			√	√	√	ict	in-country	300,000
19	Film Direction	5			√		√	ict	in-country	150,000
20	Film editing	5			√		√	ict	in-country	150,000
21	Cinematography	5	√				√	ict	in-country	150,000
22	Application development	30	√	√				ict, S	in-country	900,000
23	Assembly work and management	20						P	in-country	600,000

24	Ceramic product design	50	√	√		√	√	P	in-country	1,500,000
25	Creative design	30	√	√	√	√	√	P	in-country	900,000
26	Dapa design and making	20		√				P	in-country	600,000
27	Handicraft design	30	√					P	in-country	900,000
28	Jewelry design and making	10		√		√		P	in-country	300,000
29	Paper making	10		√		√		P	in-country	300,000
30	Product design - wood based	30	√	√	√	√		P	in-country	900,000
31	Product packaging	50	√	√	√	√		P	in-country	1,500,000
32	Production planning process	20	√	√	√	√		P	in-country	600,000
33	Soap making and packaging	10		√	√			P	in-country	300,000
34	Tshoglham making	10		√	√			P	in-country	300,000
35	Upholstery	30			√	√		P	in-country	900,000
36	Wood craft/carving	10			√	√		P	in-country	300,000
37	Traditional furniture making	30		√	√	√		P	in-country	900,000
38	Metal crafting	10			√	√		P	in-country	300,000
39	Lacquering	20	√	√		√	√	P	in-country	600,000
40	Total quality management	20	√	√	√	√	√	P	in-country	600,000
41	Machine repair and maintenance	30		√				P, C	in-country	900,000
42	Welding and fabrication	10		√				P, S	in-country	300,000
43	Advance tailoring	50			√		√	P, S	in-country	1,500,000
44	Disaster management	20		√		√		P, T, C	in-country	600,000
45	Pastry and confectionery	30	√		√		√	P, T, S	in-country	900,000
46	Waste management	20		√		√		S	in-country	600,000
47	Auto mechanic management training	30	√		√			S	in-country	900,000
48	Hotel management	30		√		√		T	in-country	900,000
49	River expedition	20			√			T	in-country	600,000
50	Home stay management	10		√	√			T	in-country	300,000

51	Eco tourism	30		√	√			T	in-country	900,000
52	TOT- first aid in wilderness responded courses	20			√			T	in-country	600,000
53	TOT - GNH	30		√				T	in-country	900,000
54	Business management and leadership	55	√	√	√	√	√	T, C, P, ict, ET, S	in-country	1,650,000
55	Human Resource Management	30	√	√	√	√	√	T, C, P, ict, ET, S	in-country	900,000
56	Risk/project management	30	√	√	√	√	√	T, C, P, ict, ET, S	in-country	900,000
57	Customer care	50	√	√	√	√	√	T, P, ict, S	in-country	1,500,000
58	Advanced cooking	40	√	√	√	√	√	T, S	in-country	1,200,000
59	Event management	20		√		√		T, S	in-country	600,000
60	Food safety and hygiene	50	√	√	√	√	√	T, S	in-country	1,500,000
		1750								52,500,000

Pro Forma Costing

SN	Programs	Average Costing per head
A	*Critical Capabilities*	
1	Masters	300,000
2	Diploma	60,000
3	Short-term training	30,000
B	*Critical Skills*	
1	High Equipment/material usage	90,000
2	Medium Equipment/material usage	72,000
3	Low Equipment/material usage	49,500

List of Registered TVET Providers in the country

SN	Name of Institute	Grade	Dzongkhag	Ownership type
1	Academy for Professional Development	C	Thimphu	Private
2	Advanced Institute for Tourism.	C	Thimphu	Private
3	Agriculture Machinery Training Centre	B	Paro	Corporate
4	Athang Training Academy	B	Thimphu	Private
5	Bhutan Centre for Japanese Studies	C	Thimphu	Private
6	Bhutan Development & Training Centre	C	Thimphu	Private
7	Bhutan Elite Security Services	C	Paro	Private
8	Bhutan Institute for Training and Development (BITAD)	B	Thimphu	Private
9	Bhutan Institute of Himalayan Studies	C	Thimphu	Private
10	Bhutan Institute of Information Technology	C	Tsirang	Private
11	Bhutan Institute of Information Technology and Management	B	Paro	Private
12	Bhutan Institute of International Language, IT and Management	C	Thimphu	Private
13	Bhutan Institute of Martial Arts	C	Thimphu	Private
14	Bhutan International school of hospitality & Tourism	B	Thimphu	Private
15	Bhutan Media & Communications Institute	B	Thimphu	Private
16	Bhutan Media Foundation	C	Thimphu	NGO
17	Bhutan School of Management and Technology	B	Thimphu	Private
18	Bhutan Training Institute	C	Chukha	Private
19	Bongde Institute of Hotel & Hotel and Tourism	B	Paro	Private
20	Bright Life Institute of Management	C	Thimphu	Private
21	Central Institute of Information Technology	C	Sarpang	Private
22	Centre for Professional Development	C	Thimphu	Private
23	Choki Traditional Art School	B	Thimphu	Private
24	Computer & management Institute	B	Chukha	Private
25	Dechen IT & Management Institute	C	Thimphu	Private
26	Dickie training institute	C	Thimphu	Private
27	Dorji International Training Institute	B	Thimphu	Private
28	Druk Institute of Management and Technology	C	Chukha	Private
29	Druk Tshemzo Training Institute	B	Thimphu	Private
30	Dzongkha Development Training Institute	C	Thimphu	Private

31	Dzongkha Learning Centre	C	Thimphu	Private
32	Eastern Computer Training Centre	C	Samdrupjongkhar	Private
33	Eastern Driving Training Institute	C	Mongar	Private
34	Fablab Bhutan Training Institute	C	Thimphu	Private
35	Fashion Institute of Technology	C	Thimphu	Corporate
36	Film & Television Institute of Bhutan (FTIB)	C	Thimphu	Private
37	Financial Institutions Training Institute Limited	B	Thimphu	Corporate
38	Gangchen Language and Management Institute	C	Thimphu	Private
39	Gangjung Driving Centre of Excellence	B	Thimphu	Private
40	Ghadyen Driving Training Institute	C	Wangdue Phodrang	Private
41	Global Computer Training Center	C		Private
42	Global Retail Academy	B	Thimphu	Government
43	GPY Computrer Training Institute	C	Chukha	Private
44	Guide Association of Bhutan	C	Thimphu	NGO
45	Heurka Security Services	C	Wangdue Phodrang	Corporate
46	Himalayan Institute of Technology & Management	C		Private
47	Himalayan School of Music	C	Thimphu	Private
48	iBEST Institute of Media, Management and Technical Studies	B	Thimphu	Private
49	Institute for Excellence and Development (i-ED)	C		Private
50	Institute for Excellence and Development (iED), Pling Branch	C		Private
51	Institute for Management & Technical Studies	C	Thimphu	Private
52	Institute for Management Studies	B	Thimphu	Private
53	Institute for professional studies	B	Thimphu	Private
54	Institute for Zorig Chusum, Trashiyangtse	B		Government
55	Institute of Information Technology and Management	C	Thimphu	Private
56	Institute of Zorig Chusum	C	Thimphu	Government
57	Jachung Security Services Pvt Ltd	B	Thimphu	Private
58	JCB Operators Training Centre	C	Thimphu	Private
59	Jigme Wangchuck Power Training Institute	B		Government

60	Karma Driving Training Institute	C	Chukha	Private
61	karma Driving Training Institute	C	Thimphu	Private
62	KARSEL DAWA DRIVING TRAINING INSTITUTE	C	Thimphu	Private
63	Kesang Driving School	C	Thimphu	Private
64	KheyRig Institute of Accounts & Management	C	Thimphu	Private
65	Kilu Bhutan Music School	C	Thimphu	Private
66	Kinley Yergay Tailoring Training Institute	C	Thimphu	Private
67	Kinzang Driving Training Institute	C	Bumthang	Private
68	Kuenphen Computer and Tailoring Training Institute	C	Haa	Private
69	Kuenphen Language and Culture Training Institute	C	Haa	Private
70	Kunjung Institute of Technology & Innovation	B	Sarpang	Private
71	Language and Management Institute	C	Thimphu	Private
72	Learn Zone Institute	C	Thimphu	Private
73	Lekdrup Skill Development Institute	C	Thimphu	Private
74	Manju Shiri International	C	Thimphu	Private
75	Niche Institute of Management & Technology	C	Thimphu	Private
76	NLD Training Institute	C		Private
77	Norbu Academy of Spa and Massage Therapy	C	Thimphu	Private
78	NorChuk Institute of Technology	C	Samtse	Private
79	Padmarkara Training Institute	C	Chukha	Private
80	Pema Driving Training INstitute	C	Trashigang	Private
81	Popzey Institute of Hospitality and Services	C	Thimphu	Private
82	Professional Development Institute	C		Private
83	Professional Skills Institute	C	Thimphu	Private
84	Puensum Driving Institute	C	Punakha	Private
85	Rainbow Training Institute of Tourism	C	Thimphu	Private
86	RDTC (Rural Development Training Centre, MoAF, Zhemgang	C	Zhemgang	Government
87	Rewang Driving School	C	Chukha	Private
88	ReWang Driving Training School	C	Paro	Private
89	Rigsum Institute of Technical Education & Management Studies	B	Thimphu	Private

90	Royal Academy of Performing Arts	C	Thimphu	Private
91	Royal Institute for Tourism and Hospitality	B	Thimphu	Private
92	RTC Training and Professional Services	B	Thimphu	Private
93	Rumi Hospilality and Beauty Wellness Institute	C	Trongsa	Private
94	Sacho Driving Training Institute	C	Samtse	Private
95	Sacho Driving Training Institute	C	Dagana	Private
96	Sacho Ga Driving Training Institute	C	Chukha	Private
97	Shacho Driving Training Institue	C	Chukha	Private
98	Sompal Driving Training Institute	C	Paro	Private
99	Spark Training Center	C	Thimphu	Private
100	STCBL IT Training Center	C	Thimphu	Corporate
101	Tacho Bala Ha	C	Samdrupjongkhar	Private
102	Tacho Bala Ha Driving Training Institute	C	Pemagatshel	Private
103	Technical Training Institute Samthang	B	Wangdue Phodrang	Government
104	Technical Training Institute-Chumey, Bumthang	A	Bumthang	Government
105	Technical Training Institute-Ranjung	B	Trashigang	Government
106	Technical Training Institute-Thimphu	B	Thimphu	Government
107	Tenzin's Hair and Beauty Academy	C	Thimphu	Private
108	Thimphu Institute of Management (TIM)	C	Thimphu	Private
109	Thimphu TechPark Ltd	C	Thimphu	Corporate
110	TTI Khuruthang	B	Punakha	Government
111	Ugyen International Language and culture Training Institute	C	Thimphu	Private
112	Ugyen Wangchuck Institute for Conservation and Environment	B	Bumthang	Government
113	USD Driving School, Gelephu	C	Sarpang	Private
114	USD Driving School, Phuentsholing	C	Chukha	Private
115	USD Driving Training Institute	C	Thimphu	Private
116	Why Dee Driving Training Institute	C	Paro	Private
117	Wood Craft Centre Ltd.	C	Thimphu	Corporate
118	Yarab Institute for Hospitality Management	C	Thimphu	Private
119	Youth Development and Rehabilitation Center (YDRC)	C	Chukha	Corporate

List of Tertiary Education institutions in the country

SN	Name	Location	Programs offered
1	College of Language and Culture Studies	Trongsa	Bachelor of Arts in Language and Culture Studies
			Masters in Dzongkha and Choekey
			Bachelor of Arts in Bhutanese Arts and Himalayan Studies
			Bachelor of Arts in Language in Language and Literature
			Diploma in Language and Communication Skills
			Honours of Arts in Bhutanese and Himalayan Studies
			Honours of Arts in Language and Literature
2	College of Natural resources	Punakha	B.Sc Agriculture (Diploma Nested)
			B.Sc Animal Science (Diploma Nested)
			B.Sc Environment & Climate Studies
			B.Sc Food Science and Technology (Diploma Nested)
			B.Sc Forestry (Diploma Nested)
			B.Sc Sustainable Development
			M.Sc Natural Resources Management
			Master's in Development Practices
3	College of Science and Technology	Chhukha	Bachelor of Architecture
			Bachelor of Engineering in Civil Engineering
			Bachelor of Engineering in Civil Engineering (In-services)
			Bachelor in Engineering in Electrical Engineering
			Bachelor in Engineering in Electrical Engineering (in-services)
			Bachelor of Engineering in Electronics and Communication Engineering
			Bachelor of Engineering in Information and Technology
			Master of Engineering in Renewable Energy
4	Gaeddu College of Business Studies	Chhukha	Bachelor of Commerce
			Bachelor of Business Administration
			Master of Business Administration
5	Gyalpozhing College of Information Technology	Mongar	Bachelor of Computer Applications

6	Jigme Namgel Engineering College	Sandrupjongkhar	Bachelor in Engineering in Power Engineering
			Diploma in Civil Engineering
			Diploma in Computer System and Network
			Diploma in Electrical Engineering
			Diploma in Electronics and Communication Engineering
			Diploma in Materials and Procurement Management
			Diploma in Mechanical Engineering
			Diploma in Surveying
7	Paro College of Education	Paro	B.Ed Dzongkha
			B.Ed Primary
			B.Ed Secondary
			Diploma in Physical Education & Sports Coaching
			PDGE in Dzongkha
			B.Ed Primary DE
			Diploma in ECCD
			M.Ed in Educational Leadership & Management
8	Samtse College of Education	Samtse	Bachelor of Education (B.Ed) Primary
			Bachelor in Education (B.Ed) Secondary
			Master of Education(M.Ed) in Science and Math
			Post Graduate Diploma in Contemplative Counseling and Psychology(PDGCCP)(Post Graduate Diploma) full time
			Post Graduate Diploma in Education(PGDE)
			Diploma in Library and Information Management (DLIM)
			Diploma in School Science Laboratory Management (DSSLM)
			Master of Arts in Contemplative Counseling and Psychology (MACCP)
			Post Graduate Certificate in Higher Education(PGCHE)
			Post Graduate Diploma in Contemplative Counseling and Psychology (PGDCCP)(Post Graduate Diploma) part time
			Post Graduate Diploma in Education(PGDE)
			Post Graduate Diploma in Higher Education (PGDHE)

9	Sherbets College	Trashigang	B.A Dzongkha & English
			B.A Economics & Population Studies
			B.A Geography & Economics
			B.A History & Dzongkha
			B.A Media Studies and Dzongkha
			B.A Media Studies and English
			B.A Political Science & Sociology
			B.A Population & Development Studies
			B.Sc Environmental Science
			B.Sc Chemistry & Mathematics
			B.Sc Mathematics & Physics
			B.Sc Physics & Chemistry
			B.Sc Chemistry
			B.Sc Computer Science
			B.Sc Life Science
			B.Sc Physics
			Post Graduate Diploma in English
10	Yonphula Centenary College	Trashigang	MA in English
11	Faculty of Nursing and Public Health (KGUMSB)	Thimphu	Clinical Counseling
			Community Health
			Dental Hygiene
			Dental Technician
			Foundation
			Medical Laboratory Technology
			Nursing and Midwifery
			Pharmacy
			Physiotherapy
			Public Health
			Radiography and Medical Imaging
12	Faculty of Postgraduate Medicine (KGUMSB)	Thimphu	MD Anesthesiology
			MD General Practice
			MD in Pediatrics
			MD in Surgery
			MD Medicines
			MD Obstetrics and Gynecology
			MD Orthopedics
			MD Ophthalmology

13	Faculty in Traditional Medicine (KGUMSB)	Thimphu	Diploma in Sorig Pharmacy
			Diploma in Traditional Medicine
			Masters in Traditional Medicine
			Bachelor in Traditional Medicine
14	Rigney College	Trashiyangtse	BA Language and Literature General
15	Jigme Wangchuk School of Law	Paro	LL. B / LL.M
16	Royal Institute of Management	Thimphu	Master of Business Administration (MBA)
			Post Graduate Diploma in Financial Management (PGDFM)
			Post Graduate Diploma in National Law (PGDNL)
			Post Graduate Diploma in Public Administration (PGDPA)
			Diploma in Financial Management (DFM)
			Diploma in Information System (DIMS)
			Diploma in National Law (DNL)
17	Royal Thimphu College	Thimphu	Bachelor of Arts in Development Economics
			Bachelor of Arts in English Studies
			Bachelor of Science in Environmental Management
			Bachelor of Arts in History & Dzongkha
			Bachelor of Arts in Political Science & Sociology
			Bachelor of Arts in English and Dzongkha
			Bachelor of Arts in English and Environmental Studies
			Bachelor of Arts in Economics & Environmental Studies
			Business Foundation
			Bachelor of Commerce
			Bachelor of Business Administration
			Bachelor of Computer Application
18	Reldri Academy of Health Sciences(RAHS)	Chhukha	General Nursing and Midwifery
19	Norbuling Rigter College	Paro	B.Com
			BBA

Members of the HRD Committee

Human Resource and Skills Development Division (HRSDD) - coordinating body
Bhutan Chamber of Commerce and Industry (BCCI)
Labour Market Information and Research Division (LMIRD), DEHR
Employment Service Division (ESD), DEHR
Department of Labour (DoL)
Policy and Planning Division (PPD), MoLHR
Policy and Planning Division, Ministry of Economic Affairs
Department of Adult and Higher Education (DAHE)
Department of Technical Education (DTE)
Hotel and Restaurant Association of Bhutan (HRAB)
Construction Association of Bhutan (CAB)
Association of Bhutan Industries (ABI)
Bhutan ICT and Training Association (BICTTA)
Guide Association of Bhutan (GAB)
Association of Bhutan Tour Operators (ABTO)
Bhutan Film Association (BFA)
Handicraft Association of Bhutan (HAB)
Association of Bhutan Cable Operators (ABCO)
Bhutan Exporters Association (BEA)
Automobile Sector Association of Bhutan (ASAB)
Association of Wood Based Industries (AWBI)