

Report on National Human Resource Development Needs of the Kingdom of Bhutan



**Ministry of Labour and Human Resources
The Royal Government of Bhutan
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Acronyms and Abbreviations

ADB	Asian Development Bank
BBE	Bhutan Board of Examination
BCCI	Bhutan Chamber of Commerce and Industry
BDFC	Bhutan Development Finance Corporation
BEC	Basic Entrepreneurship Course
BHU	Basic Health Unit
BIHMPS	Bhutan ICT HRD Master Plan and Strategies
BIPS	Bhutan Information and Communications Technology Policy and Strategies
BPC	Bhutan Power Corporation
BPO	Business Process Outsourcing
BVQF	Bhutan Vocational Qualification Framework
CAB	Construction Association of Bhutan
CAPSD	Curriculum and Professional Services Division
CDB	Construction Development Board
CEC	Comprehensive Entrepreneurship Course
CIC	Community Information Centre
CNR	College of Natural Resources
CST	College of Science and Technology
DHI	Druk Holding and Investments
DHR	Department of Human Resources
DIMS	Diploma in Information Management System
DOS	Department of Occupational Standards
DSE	Department of School Education
ED	Entrepreneurship Development
EMSSD	Education Monitoring and Support Service Division
EPC	Entrepreneurship Promotion Centre
FDI	Foreign Direct Investment
FI	Financial Institution
FYP	Five Year Plan
HC	Human Capital
GDP	Gross Domestic Product
GNH	Gross National Happiness
GNHC	Gross National Happiness Commission
GNP	Gross National Product
HDI	Human Development Index
HR	Human Resources
HRD	Human Resource Development
HTMTI	Hotel Tourism Management and Training Institute
ICOR	Incremental Capital-Output Ratio
ICT	Information and Communication Technology
IMED	Institute of Management and Entrepreneurship Development
ILO	International Labour Organisation

IT	Information Technology
ITES	Information Technology Enabled Services
JNP	Jigme Namgyel Polytechnic
KSA	Knowledge, Skill and Attitude
LIMS	Labour Information Management System
MDGs	Millennium Development Goals
MDP	Management Development Programme
MoA	Ministry of Agriculture
MoE	Ministry of Education
MoFA	Ministry of Foreign Affairs
MoLHR	Ministry of Labour and Human Resources
MoU	Memorandum of Understanding
MSME	Micro, Small and Medium Enterprises
NFE	Non-Formal Education
NHRD	National Human Resource Development
NITM	National Institute of Traditional Medicine
Nu	Ngultrum
NWFP	Non Wood Forest Products
ODA	Official Development Assistance
OJT	On the Job Training
PAM	Production, Accessibility and Marketing
PAR	Poverty Analysis Report
PCS	Position Classification System
PGCE	Post Graduate Certificate in Education
PHC	Primary Health Care
PHCB	Population and Housing Census of Bhutan
RCSC	Royal Civil Service Commission
RGoB	Royal Government of Bhutan
RIHS	Royal Institute of Health Sciences
RIM	Royal Institute of Management
RNR	Renewable Natural Resources
RUB	Royal University of Bhutan
SDGs	SAARC Development Goals
T&D	Training and Development
TCB	Tourism Council of Bhutan
TNA	Training Needs Assessment
TVET	Technical and Vocational Education and Training
TVI	Tourism Vocational Institute
TTI	Technical Training Institute
IZC	Institute of Zorig Chusum

Executive Summary

The Context

- A) Bhutan is a small, mountainous, and landlocked country. It is a democratic constitutional monarchy. Its population is around seven hundred thousand and most people live in rural areas. The country has progressed quite fast in the last four decades. It is a medium human development index country. The Tenth Five Year Plan envisages Bhutan to develop into knowledge based society. Basic education is provided free of cost. Technical and professional education is predominantly at certificate and diploma level. Vocational education is also at a nascent stage. There are a few institutions for in-service training and development. It is high time that Bhutan starts focussing on development of medium and higher competencies in the youth to face the challenges of global economy and national needs effectively.
- B) The economic policy of a country decides the direction of economy and lays down rules, procedures, incentives, and disincentives for various economic activities. However, the economic policy has to be complemented by human capital of the country. Human resource is developed in several domains in Bhutan. However, there is lack of overall direction and co-ordination of HRD efforts. In addition, human resource development in the past has targeted at meeting the needs of the civil service. As a result, the private and corporate sector that is envisaged as the engine of growth has been unwingly ignored. Hence, a need for development of national human resource development policy was felt. The National HRD policy is expected to be proactive, dynamic, inclusive and comprehensive. Further, it aims at providing guidance to HRD policies and plans in the different sectors of the economy. The major components of HRD are: Education (Long-term, generic), Technical and Vocational Education (Long-term, specific), Training (Short-term, specific) and Development (Short-term, generic).
- C) A study was conducted to examine HRD needs in Bhutan. It started with the diagnosis of the economy and situational analysis of its different sectors. Various policy documents and background materials were studied. Field visits were made to different educational and HRD institutions. Subsequently, the major sectors and their sub-sectors were examined in terms of their long-term targets on basis of available documents, the Tenth Five Year Plan and interviews with important stakeholders. Once a sector was analysed, effort was made to assess HRD needs in terms of education and training & development. Subsequently, the availability of various HRD services and institutions was examined. If there were gaps, the required HRD institutions were proposed. Based on HRD needs in the different sectors, the National HRD policy was developed.
- D) The report is divided into 12 chapters. The first chapter examines the context, the geographical and historical background of Bhutan, pattern of socio-economic development and Five Year Plans. The second chapter is related to the elaboration of conceptual and methodological approach to the study. Chapters 3 to 11 describe the status of HRD in the different sectors of the economy, educational and in-service training, the gaps and recommendations for strengthening HRD in the sectors. The sectors are as listed below:

- Natural Renewable Resources
- Private and Corporate
- Tourism
- Hydropower
- Construction
- Information and Communication Technology
- Financial Services
- Education and Health
- Civil service

Finally, Chapter 12 presents the strategies for implementation of the National HRD policy and describes the action steps.

- E) Bhutan is an agrarian country. Agriculture, forestry and livestock constitute the renewable natural resources (RNR) sector. Most Bhutanese people live in villages and depend on agriculture and renewable natural resources for their living. The main objective of the Tenth Five Year Plan (FYP) is poverty alleviation. The incidence of poverty is widespread. The Tenth FYP focuses on commercialisation and mechanisation of agriculture so that farm productivity is enhanced and farming becomes more attractive for the rural youth. Export of horticulture products, development of niche organic products, and spotlight on non-wood forest products are the new strategies for the development of the RNR sector. The HRD in the RNR sector has two focal points: development of farmers and rural folks by the employees of MoA and education and development of employees of the MoA, related divisions and agencies. A survey conducted by the Royal Institute of Management (RIM) reveals that only 46% employees of MoA received some kind of training in the last five years. These programmes were held at the College of Natural Resources (CRN) and the RIM. Many training programmes were conducted through donor agencies. Generally, they were ad hoc in nature and were rather supply driven. There are two major institutions in the RNR sector: College of Natural Resources, Lobesa and Ugyen Wangchuck Institute of Forestry and Environmental Studies, Bumthang. The CNR should offer degree, postgraduate and doctoral courses and diversify courses that are in demand by the labour market. Similarly, Ugyen Wangchuck Institute of Forestry and Environmental Studies (UWIFES) should offer degree and postgraduate courses in the future. These institutions should also develop capabilities for training and development of in-country and foreign participants. Rural Development Training Centre, Zhemgang should also focus on rural entrepreneurship.
- F) The tourism sector includes tour operations, hotels restaurants and handicrafts. It is not only an important contributor to convertible foreign exchange but also one of the largest providers of employment in the country. It generates lots of indirect employment. The tourism policy of the country is characterised by “high yield and low volume” where revenue per tourist is high but mass tourism is not encouraged. The underlying philosophy is that the tourists should have a high value experience. In turn, it necessitates that tourism services are of high quality. The Tenth Plan proposes significant increase in hotels and restaurants. Development of new tourist spots is also under consideration. Education of people

working in hotels and restaurants is low. There is a strong need to upgrade education and skills among people as international tourists visiting Bhutan are highly qualified and well-educated. Tourism Council of Bhutan (TCB) is the main agency responsible for development and promotion of tourism in Bhutan. The TCB is involved in development of curricula for different certificate programmes. It has a Training Unit that conducts certificate courses. The Hotel Tourism Management and Training Institute (HTMTI) is under development and is likely to be functional from 2010. The HTMTI should be the main institution for providing professional education at diploma and degree level. It should be developed as the centre of excellence and requisite resources should be provided to it so that it can emerge as one of the important educational institutions in the South Asia region. As a centre of excellence in education in the tourism sector, the HTMTI should be equipped by the best human resources, equipment, and library. It is recommended that a Tourism Vocational Institute (TVI) should be established, preferably by the Ministry of Labour and Human Resources (MoLHR), as it is responsible for vocational education in Bhutan. This Institute should be established either in Paro or Thimphu so that there is substantive industry-institute interaction. It should offer national certificate courses as well as short-term, pre-service certificate courses for job seekers. In the long term, the HTMTI should emerge as the apex body for in-service training of managerial and supervisory employees in the tourism and hotel management area. Training and development of workers should be done by the proposed Tourism Vocational Institute.

- G) Energy is probably the most important factor of national development. It enhances the standard of living and leads to industrialisation in any country. Bhutan, owing to its fast running perennial rivers, mountainous topography and climatic characteristics, has great potential for hydropower energy. There are two types of hydropower projects: bi-lateral (between Bhutan and India) and Bhutanese. Large hydropower projects are constructed by the Royal Government and then corporatized and transferred to the Druk Green Power Corporation Limited, which, in turn, is a subsidiary of the Druk Holdings and Investment (DHI) Limited. Certificate education in construction, electric and automobile engineering areas is offered by the different TTIs. Degree education is offered only in civil and electrical engineering areas by the College of Science and Technology (CST). Diploma education is available in electrical, mechanical and civil areas by the Jigme Namgyel Polytechnic (JNP). These two institutions need to increase the slots in different courses and also diversify their courses. The CST should collaborate with international academic and training institutions to offer executive development courses in the hydropower field.
- H) Construction is an important sector of the Bhutanese economy. Before 1988, construction work was directly done by the Royal Government. Now it is totally privatised. There are a large number of people employed in the construction sector. However, most of the workers in this sector are foreigners. The high-end design and engineering work is done by foreigners, while middle skill works like supervision and administration is done by the Bhutanese people. Low-skill work is again done by foreigners. This industry is facing a skills' crunch. There is a great scope for employment of Bhutanese youth in the construction sector. There

is an acute shortage of qualified and trained engineers in the areas, such as structural engineering, engineering geology, environment management, survey and design, contract management, quality control, etc. Certificate education in construction, electric and automobile engineering areas is available in the different Technical Training Institutes (TTIs). The TTIs should offer courses related to the mechanisation of construction. The College of Science and Technology (CST) offers degree education only in civil and electrical engineering areas. The Jigme Namgyel Polytechnic (JNP) provides diploma education in electrical, mechanical and civil areas. These two institutions should increase the slots in different courses and also diversify their courses as per labour market demands.

- I) The digital revolution has led to reduction in the cost of computer and telecommunication and contributed to new industries that have added to higher standard of living. The Internet is the pivot of an information society. It has emerged as a platform for new ways of doing business. Moreover, it has become a better way for governments to deliver public services. The development of ICT can be viewed from two perspectives: ICT as an enabler and ICT as an industry. ICT as an industry has two sub-sectors: IT products and applications and IT Enabled Services (ITES). The ITES is one area where Bhutan has some scope to compete. The country has a young population. The proficiency of English among the Bhutanese youth is fair. Their accent is neutral. The tasks that BPOs perform are diverse: telemarketing, technical support service, customer support service, insurance processing, data entry and conversion services, bookkeeping and accounting and online researching, and form processing. Thus, the problem is that there can be no standardised training programme suitable to all the BPOs that can be given to the prospective employees before they are actually absorbed into the company. Sherubste College and Royal Institute of Management (RIM) offer degree course in Computer Science and diploma course in Information Management System (DIMS), respectively. Certificate courses are offered by the TTIs (Khuruthang and Rangjung) and private IT educational institutions. There is a strong need to introduce new courses in IT and telecommunication areas, such as Information Technology, electronics and communication, and software engineering.
- J) Financial services sector consists of banks, investment funds, and insurance companies. It has less direct impact on an economy. The share of finance and insurance in the GDP increased from 4% to 5.4% from 2001 to 2006. The financial services sector is likely to be liberalised soon and more players, both domestic and international will enter the market. Further, with the consent of the Heads of State of all SAARC countries, the SAARC Development Fund Secretariat is being established in Thimphu. Hence, there is a strong need to develop professional manpower and to invest in human capital in this sector. MBA education is critical for the financial services sector. Chartered Accountants are also required by this sector.
- K) Investment in education and health results in creation of human capital in a country. There is strong evidence that education leads to poverty reduction. Article 9.16 of Constitution of the Kingdom of Bhutan avows, "The State shall provide free education to all children of school going age up to tenth standard and ensure that technical and professional education

is made generally available and that higher education is equally accessible to all on the basis of merit.” Primary schooling in Bhutan has produced good results. As a result, the requirements for faculty and infrastructure for middle and higher secondary education have gone up. With the Tenth Plan’s target of achieving primary net enrolment to near 100%, there will be an accelerating demand for primary teachers. In 2007, there were a total of 5,745 teachers in the school system. Out of them, 91% were trained in the teaching profession. There is a shortage of school teachers in Bhutan. There are two education colleges providing pre-service training. They provide B.Ed. and other part-time masters courses. Among others, there is a need for full-time course on Counselling and Career Guidance and a two-year full-time course in English teaching so that quality English education can be delivered. Other masters and doctoral courses in education are also required.

- L) Good health not only leads to personal well-being but also to economic growth and industrial productivity. Bhutan in the past has substantially invested in health. Article 9.21 of the Constitution of the Kingdom of Bhutan proclaims, “The State shall provide free access to basic public health services in both modern and traditional medicines.” People are satisfied with free health services but they also have higher expectations from the health system. There is a shortage of doctors, super-specialists, nurses and other paramedics. The Royal Institute of Health Sciences (RIHS) and National Institute of Traditional Medicine (NITM) are the two major providers of health education in Bhutan. The RIHS provides education in the allopathic system at certificate and diploma levels. There is a strong need for degree and postgraduate medical education in Bhutan. Further, the country has to focus on both medical and paramedical education.
- M) Bhutan has three main bodies of the democracy: Judiciary, legislative and executive. The Prime Minister is the head of the Royal Government. There are ten ministries and attendant agencies. In addition, there are some constitutional bodies. The civil servants are categorised into four major positional categories: Executives/Specialists, Professional/Management, Supervisory/Support, and Operations. In June 2008, there were a total of 19,516 employees in the Royal Government. The maximum employees are with the Ministry of Education, followed by the Ministry of Agriculture and the Ministry of Health. In-service training of the civil servants is the responsibility of the Royal Civil Service Commission (RCSC). Almost all ministries prepare their HRD master plans that detail long-term and short-term training needs both ex-country and in-country. It is recommended that 40 hour training per employee per year should be followed for all civil servants. In-house trainers also have to be developed. They should be trained in areas of training skills and facilitation. Ex-country training can be implemented depending on availability of aid from different donors. Ex-country training should be used more for the training of trainers. The Royal Institute of Management (RIM) is the major institution for education and training in the civil service sector. The RIM should be provided with extra-resources, both physical infrastructure and human capacity, to play an active role in the in-service HRD. Further, the RIM should exclusively focus on the HRD in the civil service sector.

- N) Now onwards, we summarise NHRD policy. The emerging knowledge society the world over necessitates the development of higher knowledge and competencies of people. Today Bhutan is standing at a significant point in history where it has an opportunity to transform itself as the knowledge based society. There is a shortage of technical and vocational skills and trained manpower. Gross National Happiness (GNH) is the overriding philosophy of Bhutan's socio-economic development, social welfare and governance. Creating right conditions for happiness of people is the mandate of the Royal Government and its different ministries and agencies. Happiness is not possible if people do not have the requisite knowledge and skills for gainful employment and future employability. The National HRD policy envisages a paradigmatic shift in the overall educational system wherein it repositions itself from providing low and middle knowledge and skills to providing medium and high knowledge and skills. It aims at developing Bhutan as an educational hub in the South Asia region by involving the Royal Government, private players, civil society institutions and foreign investors in developing HRD institutions and human resources. The mission of the National HRD policy is to create and enhance competencies of individuals through strengthening of the existing HRD institutions and promoting the required world class HRD institutions to help the country achieve its strategic goals, increase employability and provide decent employment to people.
- O) The National HRD policy has the following objectives:
- • To create human capital conducive to the development of Bhutan as knowledge based society
 - • To study labour market periodically and to project future labour demand and supply
 - • To develop qualified manpower in line with the labour market demands
 - • To strengthen the existing HRD institutions
 - • To plan for the required HRD institutions
 - • To develop HRD professionals
- P) The coverage of the National HRD policy is as follows:
- i) Tertiary education
 - ii) Technical and vocational education and training
 - iii) Non-formal vocational training
 - iv) Vocational education in the lower and middle secondary education
 - v) In-service training in the civil service
 - vi) In-service training in the private and corporate sector organisations
 - vii) Development of HRD profession
- Q) The Royal Government shall promote and support research-based, technical education institutions that will be centres of excellence. Bhutan shall have two types of institutions: Government universities & institutions and private institutions. The Royal University of Bhutan (RUB) shall strengthen the existing colleges and help them introduce new courses as per labour market demands and social aspirations of people. It shall affiliate private

colleges. The Royal Government shall promote an integrated medical college that will offer undergraduate and postgraduate courses in the allopathic system. The goal of accreditation is to ensure that education provided by the institutions meets the set standards. An autonomous accreditation body shall be established by the Ministry of Education (MoE) with responsibility for ensuring quality standards in all types of higher education institutions.

- R) Relevance, quality, and demand shall be the salient features of technical and vocational education and training in Bhutan. Vocational education shall be planned in line with the labour market demands. In addition, the competencies of the students shall be developed in sync with industry requirements. The existing TTIs shall introduce new courses that have market demand as well as that are attractive enough for the students. The TTIs shall also offer short-term, pre-service courses conducive for employment. Some of the courses shall be targeted at the specific needs of women students. Vocational education and training providers in both government and private sectors shall be accredited.
- S) Life-long learning is as important as higher education. Scientific and technological advances are very fast today. They lead to rapid changes in administrative systems and skill sets. Thus, an individual has to continuously learn to cope with exploding knowledge and emerging skill demands. All government, large private and corporate organisations shall be encouraged to provide 40 hour of training per employee per year. In the civil service, participation in an identified management development programmes shall be linked with career development of civil servants.
- T) Entrepreneurship development capacity shall be developed and different entrepreneurship development programmes shall be launched. Potential entrepreneurs shall be scientifically identified. They shall be facilitated in recognising business opportunity and creating new enterprises. The TTI graduates shall also be trained for self-employment.
- U) Human resource development cannot thrive unless there are competent and committed HRD professionals. An HRD Network consisting of professionals from the private and corporate, government and non-government organisations shall be established. The HRD Network shall play a critical role in imbuing professionalism among new HRD personnel. The HRD Network shall associate with regional and international HRD professional bodies.
- V) To assure high quality in technical and vocational education and in-service training, the highest priority shall be given to the recruitment and development of faculty for Technical Training Institutes. They shall be provided with adequate academic resources. Both the MoLHR and RCSC shall play important roles in implementing ex-country training programmes for training HRD professionals.
- W) Bhutan, being a small country, would not like to build capacities in all the areas of HRD. It shall judiciously use ex-country education and training to develop competencies of its people, especially in higher and specialised education. Professional education and training offered by friendly countries shall be continued as it will provide cutting-edge knowledge and skills as well as cross-cultural exposure to the Bhutanese youth.

- X) Coordination among different stakeholders is the key to successful implementation of the National HRD policy. An inter-ministerial National HRD Committee shall be set up to coordinate the tasks and efforts of different ministries, agencies, and organisations. The coordination responsibility for the National HRD Committee shall be with MoLHR. A monitoring and evaluation system shall be set up to assess the outcomes and impact of HRD institutions and services. Achievement targets and performance indicators shall be evolved and periodic evaluation surveys shall be conducted.

- Y) Finally, resources for HRD in any country are limited. Thus, there is a need to decide priorities. Prioritisation of the different HRD services has been done as Highest priority, Moderate Priority, and priority. Professional, technical and vocational education is the Highest priority, while science, architecture and paramedical education is Priority. Finally, humanities and social science education is of Moderate priority. The various action steps are delineated within three time frames: Short-term (2-3 years), medium-term (4-5 years) and long-term (6 years onwards).

CHAPTER ONE

Bhutan: Background, Gross National Happiness and the Socio-economic Development

1.1.0 Country Background

- 1.1.1 Bhutan is a small country situated along the Southern slope of the Himalayan range. It is a land-locked country bordering the Tibetan region of China in the North and India in the West, South and East. It covers an area of 38,394 square kilometres roughly measuring 140 km North to South and 275 km East to West. It is estimated that over 72 per cent of the land is under forest cover. The country has large rugged-terrains and small agricultural land.
- 1.1.2 Bhutan has three distinct geographical zones: Southern, Central and Northern. Industrial towns, like Phuentsholing, Samtse, and Gelephu are situated in the Southern zone and they predominantly have manufacturing and mining industries. The Central zone has fertile valleys and comprises majority of country's renewable natural resources. Services and tourism industries operate here. The Northern zone is situated in the Great Himalayas. It is thinly populated and only a few economic activities take place in this region.
- 1.1.3 In 1907, Ugyen Wangchuck was elected as the first King of Bhutan by the representatives of monastic community, civil servants and people. The third King Jigme Dorji Wangchuck, popularly known as the father of modern Bhutan, initiated several measures to industrialise, modernise and internationalise the Bhutanese economy and society. The fourth King, His Majesty Jigme Singye Wangchuck became the King in 1974. He not only focussed on modernisation of the country but also substantially invested in education and health of the Bhutanese people. He stressed cultural integrity and environmental conservation. In 1998, he authorised the National Assembly to make all legislative decisions.
- 1.1.4 In 2008, a democratically elected government was installed. Further, a new constitution was adopted and Bhutan became a democratic constitutional monarchy. The political transition was peaceful and smooth. People have freedom of expression and media is free. People have free access to Internet.

1.2.0 Population and Demographics

- 1.2.1 According to the Population and Housing Census of Bhutan (PHCB) 2005, the total population of Bhutan was 672,425 out of which 37,443 was floating population. The male population was 52.5 per cent, while the female population was 47.5 per cent. Out of the twenty *Dzongkhags*, Thimphu (98,676) was the most populated, followed by Chhukha (74,387) and Samtse (60,100). The median age of the population was 22.3 years. The ageing index of Bhutan was 14.2. In other words, there are 14 elderly persons (over 65 years) for every 100 persons below the age of 15 years. It implies that the Bhutanese population is relatively young. Further, the PHCB 2005 shows that 30.9 per cent population is urban, whereas 69.1 per cent population is rural.

- 1.2.2 People in Bhutan are thinly spread. The population density is 16 persons per square kilometre. Thimphu has a population density of 54 persons per square kilometre, while Gasa has a population density of 1 person per square kilometre.
- 1.2.3 The national literacy rate of Bhutan in 2005 was 59.5%. For the male population it was 69.1 per cent, while it was 48.7 per cent for the female population. Upto Class VIII, there is not much difference in education between the male and female population. However, after this level it increases in favour of male population.
- 1.2.4 In 2007, 4,096 students completed Class XII. Out of them, 45.2 per cent got access to tertiary education through Royal University of Bhutan, government scholarship for studying abroad, and self-financing for studying abroad. However, only 1,216 students gained access to the different colleges of the Royal University of Bhutan. Out of this number, 12.62 per cent constitutes the 18 year old age cohort¹.

1.3.0 An Overview of the Economy

- 1.3.1 Bhutan started opening up its economy and paying attention to industrial development since the early sixties. Its economy has grown fast in the last four decades. National statistics are available since 1980. Between 1980 and 2004, the Gross Domestic Product (GDP) grew at an average rate of 7.0 per cent per annum². Further, the real GDP grew at an average rate of 9.6 per cent per annum between 2003 and 2007, which is really creditable³. The GDP per capita in 2006 was estimated at US\$ 1,414.01 as compared to US\$ 835 in 2002. By regional standards, it is indeed laudable. Inflation was under control during the Ninth Plan remaining below 6 per cent and averaging around 3.5 per cent annually.
- 1.3.2 Wealth generation is also on rise. The current generation of the Bhutanese people is on an average, two and a half times richer than immediately preceding generation⁴. These strong economic trends did not result in fast growing manufacturing. The main reason was that Bhutan wanted clean manufacturing industries. The Royal Government does not encourage industries that may cause damage to the environment. Rather it emphasises and encourages tertiary sector of the economy. Promotion of tourism is a high priority area. ICT and education are also being encouraged; however, they are still nascent industries.
- 1.3.3 Between 1981 and 2003, gross domestic capital formation grew at an average rate of 10 per cent per annum, while GDP grew at an average rate of 7 per cent per annum. This might have occurred because Bhutan was investing heavily in hydropower projects⁵. Between 2002 and 2007, savings grew at the rate of 22 per cent. It was mainly due to higher corporate savings. In the Ninth Five Year Plan (FYP) period, investment grew at 9.4 per cent. Again incremental capital-output ratio (ICOR) is rising and the explanation remains the same.

¹ *Annual Report 2007, the Royal University of Bhutan, the Royal Government of Bhutan*

² *Macroeconomics of Poverty Reduction, UNDP, April 2006*

³ *Draft Tenth Five Year Plan*

⁴ *Macroeconomics of Poverty Reduction, UNDP, April 2006*

⁵ *Ibid*

- 1.3.4 The macroeconomic environment in Bhutan is characterised by low budget deficit, low and stable inflation, open trade, and current account surplus. In the Ninth FYP, the balance of payment was positive averaging around 5 per cent of the GDP. Official Development Assistance (ODA) in the Ninth FYP was around 19 per cent of the GDP. It has significantly gone down compared to 70 per cent and 60 per cent in the Seventh and Eighth Plans, respectively. The Foreign Direct Investment (FDI) was less than half a per cent and it was mostly in the tourism sector.
- 1.3.5 The major economic sectors of the economy are electricity and construction. In fact, most construction activities precede commissioning of large hydropower plants. Most of power produced and mineral products are exported to India. Tourism is another important economic sector. Bhutan is a major attraction for eco- and cultural tourism. This sector is a vital source of hard currency and a major contributor to employment generation.

1.4.0 An Overview of Social Development

- 1.4.1 Bhutan made substantial investment in social development. In 1998, the Human Development Index (HDI) of Bhutan was .550. It rose to .613 in 2006 pushing Bhutan into the group of medium human development countries. Bhutan's population growth was 1.33 per cent at the end of the Ninth Plan. It was considerably low compared to the previous two plans. Life expectancy has also gone up. In the Ninth Plan, there was 50 per cent increase in hospital beds.
- 1.4.2 School education and health services are provided free of cost by the Royal Government. The Royal University of Bhutan (RUB) was established in 2003 with a view to give impetus to tertiary education. Education is given the status of industry and private investment in education is encouraged. The Tertiary Education Policy approved by the government and the general education policy under preparation are likely to give further boost to private education in Bhutan. As of now, all students in the tertiary and vocational education are given free education. They are also given stipend to take care of food, lodging and out-of-pocket expenses. A large number of students, however, go abroad for higher education on their own.

1.5.0 Gross National Happiness

- 1.5.1 Gross National Happiness (GNH) is the overriding philosophy of the Bhutanese socio-economic development, social welfare and governance. Creating enabling conditions for happiness of people is the mandate for the Royal Government of Bhutan (RGoB) and its different agencies. GNH is an indigenous concept developed by the fourth King, His Majesty Jigme Singye Wangchuck. The philosophy of GNH proposes that once basic material needs of people are met there is a need for emotional and spiritual growth. In other words, there has to be a balance between material and non-material components of development. The concept of GNH is a counterpart of Gross National Product (GNP) which solely emphasises materialistic development. GNH includes the essence of GNP. However, it goes beyond the notion of materialistic pursuit and prosperity. It is more inclusive and holistic in nature.

- 1.5.2 The philosophy and practice of GNH propounds that there is a need to go beyond material development and focus on issues of equity, environment, good governance and spiritual development. As a result, the focus of development in Bhutan is on maximising GNH. GNH is not a static concept. It is a dynamic conceptualisation that adjusts with the fast changing domestic and international realities.
- 1.5.3 The four pillars of GNH are: Sustainable and equitable socio-economic development; environmental conservation; preservation and promotion of culture; and, good governance. The Planning Commission of Bhutan is now known as the Gross National Happiness Commission (GNHC). In 1999, the Commission produced a landmark document *Bhutan 2020: A vision for peace, prosperity and happiness* which is a vision statement, giving a twenty year perspective on development and growth of Bhutan. The vision document succinctly states that it is an integration of “development and environment, modernisation and tradition, values and technology, immediate and long-term, individuals and society, and realism and aspirations.”
- 1.6.0 Five Year Plans**
- 1.6.1 Bhutan lived in self-imposed isolation for a long time. Only in the early sixties, she decided to integrate with the modern world. Since then she has progressed with fast speed. Bhutan started working on its Five Year Plans in 1961. This exercise led to systematic development of agriculture, industries, education and healthcare. The initial plans concentrated on developing basic infrastructure, such as roads, education, health and the agriculture sector. The Royal Government initially had to perform both social and commercial roles. It functioned as the policy maker, planner, regulator and implementer in both social and commercial sectors.
- 1.6.2 The Fifth Plan (1981-1987) played an important role in national development by emphasising economic self-reliance and focussing on growth of hydropower, mining and industry. During this period, various state-owned enterprises were corporatized and privatised. The Bhutan Chamber of Commerce and Industry (BCCI) was established in 1980 with a view to promote and support the private sector. Privatisation was further pursued in the nineties in Bhutan.
- 1.6.3 The Ninth Five Year Plan was directed by the principles and policies set in *Bhutan 2020*. It focussed on improving quality of life; ensuring good governance; promoting private sector growth and employment generation; promoting cultural heritage and preserving environment; and, achieving rapid economic growth. The Ninth FYP commenced in 2002 and was extended by one year so that it is synchronised with the inauguration of the new democratic government and launching of the constitution.
- 1.6.4 The Ninth Plan witnessed swift economic growth, while preserving cultural heritage and environment. The real GDP in the Ninth FYP was 9 per cent, which was above the set target. Further, consumption grew by 10 per cent, while investment grew at 9.4 per cent. Savings in the Ninth Plan was around 32 per cent. Inflation was around 2.5 per cent

annually, which is quite low. There was reasonably high Foreign Direct Investment (FDI) compared to the Eighth FYP.

- 1.6.5 Enrolment in higher secondary schools rose by 25 per cent and several new schools were opened. The teacher-student ratio improved. The Royal University of Bhutan was established during this period. In addition, several Technical Training Institutions (TTIs) were opened, leading to development of a pool of trained workers. The number of doctors per 10,000 persons also grew and various health statistics improved. Human Development Index (HDI) improved during this period and Bhutan moved up from low human development country category to medium human development country category.

1.7.0 Highlights of the Tenth Five Year Plan

- 1.7.1 The Tenth Plan also derives its direction from *Bhutan 2020* and aims to achieve the vision that endeavours to “maximise the happiness of all Bhutanese and to enable them to achieve their full and innate potential as human beings.” The major objective of the Tenth Five Year Plan of Bhutan is to alleviate poverty. Poverty Analysis Report (PAR) 2007 states that 23.3 per cent of the population lives under poverty. The incidence of poverty is greater in rural area, i.e., 30.9 per cent compared to urban area, i.e., 1.7 per cent. As a result, the Tenth FYP, therefore, focuses on promoting economic opportunities through broad based growth. The following strategies are identified for poverty alleviation:
- Vitalising industry
 - National spatial planning
 - Synergising integrated rural-urban development
 - Expanding strategic infrastructure
 - Investment in human capital
 - Fostering an enabling environment through good governance
- 1.7.2 The targets of the Tenth Plan are set in the backdrop of *Bhutan 2020* goals, the Millennium Development Goals (MDGs) and the SAARC Development Goals (SDGs). The Plan envisions achieving 8.9 per cent growth per annum in Gross Domestic Product (GDP). It also estimates the population growth to stabilise at about 1.3 per cent. The Plan has an ambitious target of annual growth of 3.4 per cent in agriculture, with a view to reduce poverty incidence less than 20 per cent at national level and less than 20 per cent in rural area. In line with the core objective of poverty reduction, the agriculture sector will receive 10 per cent of capital outlay, while the social sector will get 24 per cent of capital outlay.
- 1.7.3 It is estimated that about 93,000 jobs will be generated in the Tenth FYP. This number is slightly more than total number of people employed in the formal sector in 2008, hence a daunting task. Unemployment has been on rise. It has increased to 3.7 per cent in 2007 from 1.4 per cent in 2001. Between 50- 60 per cent unemployed population is youth. Rise in unemployment has been attributed to capital intensive sectors that have low employment elasticity. Hence, the growth of cottage and small enterprises is stressed.

This sector has small capital requirement and generates more jobs. Further, it is reported that many youths do not have the requisite knowledge, skills and attitudes that can get them right jobs. This is further compounded by a situation where there is a mismatch between expectations of the youth and labour market realities. Technical and Vocational Education and Training (TVET) is seen as a major tool to address the unemployment issue. The Tenth FYP, thus, aims that 70 per cent of school leavers should have access to TVET. Further, 12,500 job seekers should be engaged in some training activities. The Tenth Plan aims to develop 400 entrepreneurs, who will not only take care of themselves but also provide jobs to others.

Table 1.1: Macro-economic Growth Estimates by Different Sectors in the Tenth FYP

Sector	Tenth Five Year Plan (%) Annual Sectoral Growth
Real GDP Growth (%)	8.8
Agriculture, Livestock and Forestry	3.4
Mining	13.4
Electricity	11.9
Construction	10.9
Manufacturing	5.2
Trade, Financial and Other Related Services	12.3
Public Administration and Social Services	4.2
Transport and Communications	8.8

Source: The Tenth FYP

Human Capital and Human Resource Development in the Tenth FYP

- 1.7.4 In the last three Five Year Plans, Bhutan has been heavily investing in the education and health of the populace. The trend continues in the Tenth Five Year Plan which stresses the development of human capital for achieving socio-economic goals. The Tenth Plan takes note that there is a close interrelationship between educational attainment and poverty incidence in the country. Considering that future development opportunities hinges greatly on productivity levels and the knowledge and technological skills base of the national labour force, the Royal Government's long term pro-poor strategy can also be best and sustainably served by working towards the creation of a knowledge based society. It is clear that the Tenth Plan uses human resource development as the means and end to poverty alleviation. Further, it stresses that human resources should be developed in such a way so that people become active contributors to the knowledge economy. Consequently, investment in human capital is one of major strategies of the Tenth Plan.
- 1.7.5 The knowledge economy is characterised by higher technical education, intellectual cap-

ital generation and know-how. Human capital - competencies - is a key component of value in a knowledge based economy. The knowledge economy focuses more on knowledge generating institutions and use of knowledge and information for solving people's problems. Human capital is a prerequisite of national development. There is an impending need for higher knowledge and skills among people so that they can produce more value and help the nation tackle with the problems of poverty and backwardness.

1.8.0 General Observations

- 1.8.1 Bhutan is a mountainous country with large forest cover and small agricultural land. It has small population that is thinly spread. The economy of Bhutan is small. Her domestic market is small and there is a faster saturation of manpower demands in almost all fields. Transportation cost is high. Besides, there is limited availability of land for industry.
- 1.8.2 Agriculture is still a major contributor to the GDP with almost 69 per cent of the Bhutanese population engaged in the renewable natural resources (RNR) sector. The productivity of agriculture sector has not been growing fast. Increased mechanisation and commercialisation will increase productivity in this sector. There is swift migration from rural to urban areas due to availability of better educational and employment opportunities in the urban areas.
- 1.8.3 Hydropower and construction are major economic sectors. They are also closely related. Hydropower is the major source of foreign revenue. India is a major market for electricity. Further, revenue generated through hydropower sector is ploughed back into the economy. In the future, this sector will grow fast. Cheap electricity is also conducive to establishment of industries. However, industrial growth is at best moderate.
- 1.8.4 The Royal Government promoted several business organisations in the past. Many of these organisations are now corporatized and privatised. The private and corporate sector organisations are viewed as the engines of growth. But there are not many medium and large organisations in the private sector. There is lack of entrepreneurial culture. Most people prefer to work for the Royal Government rather than starting their own enterprises. There is a need to further encourage and promote private organisations.
- 1.8.5 The Royal Government was the biggest employment provider in the past. However, jobs in the civil service are not likely to grow much. The corporations will also not be major providers of employment. Hence, jobs have to be generated more aggressively in the private sector. Entrepreneurship has to be encouraged so that people start cottage, small and medium organisations.
- 1.8.6 Employment and skill development are intricately related. Skilling and re-skilling of people will lead to employability. Development of human capital is one of the most impor-

tant factors of national development. Bhutan has recently started focussing more on vocational education. Technical education caters to the development of low competencies. Further, available slots are less and academic standards need to be raised.

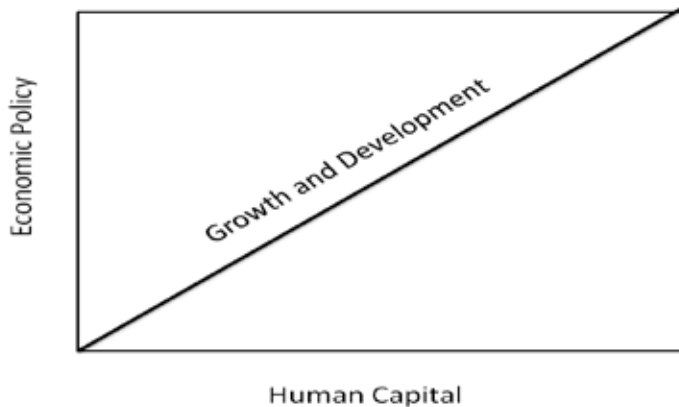
- 1.8.7 The private sector organisations require better trained and skilled manpower to increase productivity and effectiveness. Additionally, they need to continuously enhance competencies of their employees so that they are able to meet business challenges and enhance competitiveness. In the past, there has been high reliance on ex-country education and training to develop higher knowledge and skills. It is high time that Bhutan starts focussing on development of HRD institutions that can provide higher knowledge and skills to its youth.

CHAPTER TWO

National Human Resource Development Policy: Conceptualisation and Methodological Approach

2.1.0 Human Capital Imperative

- 2.1.1 Human capital (HC) is a cross-sector phenomenon. Human resource is developed in several domains in Bhutan. The Royal Civil Service Commission (RCSC) is responsible for recruitment, career planning, deployment, and in-service training of the civil servants. The Ministry of Education (MoE) is entrusted with the overall responsibility of primary, secondary and tertiary education as a regulatory and funding agency. The Royal University of Bhutan is responsible for the provision of tertiary education within the country. On the other hand, the Ministry of Labour and Human Resources (MoLHR) is responsible for technical and vocational education and training (TVET). It is also responsible for the human resource development of private and corporate sector organisations. Royal Institute of Management (RIM) is a major institution that offers various educational courses and management development programmes to the government employees. Finally, other ministries, agencies and private institutions also have their separate HRD policies and plans for implementing pre-service and in-service education, learning and development programmes.
- 2.1.2 HRD efforts should lead to employability on the one hand and enhancement of productivity and competitiveness of enterprises on the other. Education that results in unemployment and training and development that is not conducive to superior performance are not only futile but also have deleterious impact on people and organisations. There are many agencies involved in HRD endeavours in Bhutan, often resulting in lack of overall direction and co-ordination. Hence, a need for development of national human resource development policy was felt. It is expected to be proactive, dynamic, inclusive and comprehensive. Further, it aims at providing guidance to HRD policies and plans in the different sectors of the economy.
- 2.1.3 Human resource development and human capital are intricately related. HRD is the process, whereas HC is the outcome. Human capital results from human resource development efforts over a period of time. Generation of human capital is a long-term process and takes anywhere from one to two decades. In contrast, one can mobilise financial capital much faster. Human capital, along with financial capital, technology, and physical resources, is critical for achievement of economic growth and development targets.
- 2.1.4 The economic policy of a country decides the direction of economy and lays down rules, procedures, incentives, and disincentives for various economic activities. However, economic policy has to be supplemented and complemented by human capital of the country. If there is lack of professional and occupational skills to match economic plans, the goals of the economic policy cannot be achieved. Consequently, policy makers need to work hand in hand on the economic policy and HRD policy. Figure 2.1 shows the relationship between economic policy and human capital. It illustrates that a match between the two is conducive to economic growth and social development.

Figure 2.1: Relationship between the Economic Policy and Human Capital

2.1.5 Human Resource Development (HRD) involves creation and enhancement of knowledge, skills and attitude (KSA) of people to effectively perform certain tasks. The KSA is also known as competency. The rationale of HRD is to increase productivity and effectiveness of people. In the knowledge economy, human capital has become vital, as financial resources and technology are easily available. People, their education, knowledge, skills, and exposure, or their competencies have emerged as the differentiating factor of success of organisations and nations. In the context of governments, HRD is critical for socio-economic development and poverty alleviation. This calls for a strategic and integrated policy that promotes professional and occupational competencies and performance enhancement. The major components of HRD are:

- Education (Long-term, generic)
- Technical/Vocational Education (Long-term, specific)
- Training (Short-term, specific)
- Development (Short-term, generic)

2.1.6 Generally, education (General, professional, technical and vocational) component is related to pre-service HRD, while training and development are concerned with in-service HRD. However, there is no hard and fast rule. Employees may opt for educational programmes, whereas students may decide to undergo short-term programmes to equip themselves with certain skills. Therefore, any HRD policy should focus on all the four components of HRD. For national development and competitiveness, both education and training, and development are equally important.

2.1.7 National human resource development entails creation and enhancement of knowledge, skills and attitude (KSA) of people for different job profiles across the different sectors of the economy to help a country achieve its vision and economic goals. The purpose of national human resource development policy is to achieve goals envisioned in the Constitution of the Kingdom of Bhutan, *Bhutan 2020* and targets set in the Tenth Five Year Plan. The National HRD policy is a long-term framework for meeting the various HRD needs of the different sectors of the economy to actualise the national vision of GNH and sustainable socio-economic development.

2.1.8 In this section, we examine the overall supply and demand sides of labour market. The

Royal University of Bhutan (RUB) has set a target to admit close to 10% of students completing standard XII by 2012. A total of 3,494 students completed standard XII in 2005. Out of this, about 50 per cent applied for college education and about 65 per cent of the students who applied for college education were given admission inside Bhutan. In 2009, about 900 privately funded students returned to Bhutan after graduating from abroad. This number is based on membership of the Bhutanese Student Association (BSA) and does not include those who are non-members of the BSAs. The Ministry of Education estimates that the figure may be over 3,000 students studying abroad at any point in time, and therefore, graduates' number from abroad may be higher than 900 as given. The details of their specialisation are given in Table 2.1.

Table 2.1: Bhutanese Students (Private Funding) Graduating from Abroad in 2009

Course	Number of students (Private Funding)
	2009
Arts and Humanities	415
Biological Science & Agriculture	4
Computer Sciences and IT related Courses	180
Engineering	53
Environmental Science	2
General Course	230
Law Course	9
Medicine Course	5
Science Course	2
Total	900

Source: Labour Market Information Bulletin, 2008 & 2009

Table 2.2 shows estimation of students studying abroad between 2009 and 2012. It points out that the total number of students studying abroad will increase from 938 in 2009 to 2,114 in 2012. At this rate, a large number of Bhutanese students will be going abroad for further studies. Table 2.3 shows the projected number of students completing standard X and XII till 2015 and entering labour force. Thus, it is evident that tertiary and vocational education needs to be revamped to cater to the needs of the Bhutanese youth. In addition, 81 students on government and bi-lateral scholarships will be graduating in 2009 (DAHE, MoE).

In 2007, 4,096 students completed Class XII. Out of them, 45.2 per cent got access to tertiary education through Royal University of Bhutan, government scholarship for studying abroad, and self-financing for studying abroad. However, only 1,216 students gained access to the different colleges of the Royal University of Bhutan. Out of this number, 12.62 per cent constitutes the 18 year old age cohort⁶.

⁶ Annual Report 2007, the Royal University of Bhutan, the Royal Government of Bhutan

Table 2.2: Enrolment Growth of Students Studying Outside Bhutan

Year	Male	Female	Total
2009	412	526	938
2010	474	744	1,218
2011	545	1,052	1,597
2012	626	1,488	2,114

Source: Labour Market Information Bulletin, 2008

Table 2.3: Projected Number of Standard X and XII Students Entering Labour Force

Year	2009	2010	2011	2012	2013	2014	2015
Class X Graduates	1,974	2,199	2364	2559	2805	3046	3310
Class XII Graduates							
Arts	1,037	1,098	1,216	1,306	1,410	1,541	1,671
Commerce	2,185	2,314	2,563	2,753	2,971	3,248	3,521
Science	1,774	1,879	2,081	2,236	2,413	2,637	2,860

Source: PPD, Ministry of Education, 2009

2.1.9 A recent study revealed that in the future there will be substantial gap between the requirements and availability of manpower. There will be surplus in humanities and social sciences, physical sciences, biology and agriculture, teaching, business education (B.Com & BBA). On the other hand, technical and professional education fields, such as civil, mechanical, and electrical engineers, vocationally trained IT engineers, nurses and paramedics, hotel management personnel, etc. will be in short supply. For the teaching category, although the report indicates that there will be a manpower surplus, MoE and policy makers alike have clearly indicated that this cannot be true. Hence, national HRD policy is required to cater to the needs of the Bhutanese youth and to plan for future needs of different sectors of the economy.

Table 2.4: Gap Analysis of Requirements and Availability of Skilled Manpower between 2009 and 2020

Manpower Over Surplus	Manpower Surplus	Manpower Deficiency	Manpower Severe Deficiency
Humanities and social sciences	Teaching	Vocationally trained civil, mechanical and electrical engineers	Hotel management
Physical sciences	General engineers	Vocationally trained computer engineers	Nurses and paramedics
Business management (B.Com & BBA)	Journalists	Medical doctors	
Biology and agriculture	Engineers		

Based on Projections of Bhutan Labour Market Study, 2009, REC

2.1.10 Table 2.5 reveals that a large number of foreigners are employed in the different occupational categories in the private and corporate sector in 2008. Almost 21.83 per cent of total employees of the private and corporate sector are foreigners. Figures in Table 2.5 do not include employees of the tourism and construction sectors, where again a large number of foreigners are employed. Such a large number of foreigners in the various occupations can at best be explained in terms of lack of occupational skills amongst Bhutanese workers.

Table 2.5: Number of Employees by Major Occupation and Nationality in the Private and Corporate Sector, 2008

Sl. No.	Occupation	Bhutanese			Foreigner		
		Regular	Casual	Contract	Regular	Casual	Contract
1	Legislators, Sr. Officials, & Managers	7,992	86	38	517	48	200
2	Professionals	1,984	25	49	169	25	117
3	Technicians & Professional Associates	2,690	116	57	152	41	69
4	Clerks	1,899	30	5	75	15	64
5	Service Workers & Shop and Market Sales Workers	3,875	147	74	762	408	70

6	Skilled Agricultural & Fishery Workers	5	0	0	2	0	0
7	Craft & Related Trade Workers	2,127	109	136	551	395	199
8	Plant & Machine Operators & Assemblers	2,429	153	42	187	60	152
9	Elementary Occupations	3,562	1,835	294	549	2,705	775
	Total	26,563	2,501	695	2,964	3,697	1,646
	Category Total	29,759			8,307		
	Percentage of Grand Total	78.17%			21.83%		

Source: Labour Market Information Bulletin, 2008

2.2.0 The Objectives of the National HRD Policy

2.2.1 The overall purpose of the national human resource development (NHRD) policy is to cater to the long-term human capital needs of different sectors of economy through supply of qualified and employable manpower at various levels; upgradation of knowledge, skills and attitudes among both pre-service and in-service people; and, development of entrepreneurs. Specifically, the national HRD policy has the following objectives:

- To create human capital to realise development of Bhutan as a knowledge-based society;
- To strengthen the existing HRD institutions;
- To plan for required HRD institutions;
- To support agencies in planning and developing their sectoral HRD needs by providing broad directions to them;
- To promote coordination among different HRD agencies in implementing various HRD activities;
- To develop HRD professionals;
- To study labour market periodically and to make projections of future labour market scenario; and,
- To increase employability of, and employment for the Bhutanese youth.

2.2.2 Table 2.6 depicts the focus of the National HRD policy where it aims to support the country to move from an agrarian economy to a knowledge based economy. Hence, the nation has to reposition from skills and knowledge that are relevant to an agrarian economy to the skills and knowledge that are part of the knowledge based economy. Further, the policy intends to steer the educational system from low and middle skills and knowledge to medium and high skills and knowledge. HRD in Bhutan has been pre-

dominantly a responsibility of the State. People have been dependent on the Royal Government for all types of HRD interventions. The National HRD policy will endeavour to lead to a condition where HRD is a shared responsibility among the State, organisations and individuals. It is also observed that HRD profession is weak in Bhutan. The policy will endeavour to develop the HRD profession and professionals.

Table 2.6: The Focus of the National Human Resource Development Policy

From	To
Agrarian economy	Knowledge economy
Low and middle level knowledge and skills	Medium and high level knowledge and skills
Predominantly certificate and diploma institutions	Certificate, diploma and degree institutions
Young and inexperienced HRD professionals	Qualified and experienced HRD professionals
Non-existent professional body	Vibrant HRD professional body

2.3.0 An Approach to the Development of the National HRD Policy

- 2.3.1 The study of National HRD starts with the diagnosis of the economy and its different sectors. Various policy documents and background materials were examined. Field visits were made to different educational and HRD institutions. The economic policy is the main mandate for the development of the national HRD policy. Subsequently, the major sectors and their sub-sectors are examined in terms of their long-term vision and short-term targets on the basis of available documents, the Tenth Five Year Plan and interviews with important stakeholders.
- 2.3.2 Once a sector is analysed, an effort is made to assess the HRD needs in terms of education and training and development. Subsequently, the availability of various HRD services and institutions is examined. If there are gaps, then the required HRD institutions are proposed. The following chapters of this report focus on the study of HRD needs in the different sectors in Bhutan.
- 2.3.3 Finally, the report suggests some strategies to implement the national HRD policy. There is no denying of the fact that each sector is complex and has its unique educational and learning requirements. Therefore, the report has restricted itself to developing a broad framework and left sector level planning to concerned ministries, agencies and organisations.
- 2.3.4 The different ministries and agencies have worked on their HRD policies and plans in the past. They have examined educational requirements and training needs for their employees. We have gone through these plans and learned from them.
- 2.3.5 The National HRD policy has to be dynamic. The world is changing very fast. The estab-

lished paradigms, models and approaches of the world economy are under a continuous flux. Nobody knows for sure what are going to be the new megatrends and realities. Therefore, while there is a need of planning for the future, there is also a necessity to review any policy from time to time.

- 2.3.6 HRD is a multi-sectoral subject. Various ministries and agencies are involved in it. They have their own roles and responsibilities. The MoLHR has the responsibility for the development of the National HRD policy. Further, it has the responsibility for implementing and monitoring HRD domains falling under its purview.

2.4.0 Activities

- 2.4.1 Study of documents listed in Appendix one
- 2.4.2 Interviews with stakeholders in relevant ministries, corporations, associations, agencies, etc. listed in Appendix two
- 2.4.3 Study of websites of different ministries and agencies
- 2.4.4 Field visits to some educational and HRD institutions
- 2.4.5 Presentations of the approach and notes to the different officials of the MoLHR
- 2.4.6 Identification of education and T&D needs for the different sectors of the economy
- 2.4.7 Identification of needs for upgradation of the existing HRD institutions and establishment of the required HRD institutions
- 2.4.8 Conduct of consultative workshops
- 2.4.9 Development of the draft National HRD policy

2.5.0 Outcomes

- Study of the context and development of the approach
- National Human Resource Development Policy report presenting information on sector analysis, HRD imperatives, available HRD services, required HRD services, improvement of the existing HRD institutions and the need for establishment of new HRD institutions, strategies for HRD Policy implementation in sectors like,
 - » Renewable Natural Resources
 - » Private and corporate
 - » Tourism
 - » Hydropower
 - » Construction
 - » Financial services
 - » Social sectors
 - » Civil service
 - »
- National HRD policy
- Strategies for implementation of the National HRD policy

CHAPTER THREE

HRD Needs in the Renewable Natural Resources Sector

3.1.0 The Renewable Natural Resources: An Analysis

- 3.1.1 Bhutan is an agrarian country. Agriculture, forestry and livestock constitute the renewable natural resources (RNR) sector, the primary sector of the Bhutanese economy. The population of Bhutan is small and thinly scattered. Bhutan is plentiful in biodiversity. She has a policy to maintain at least 60 per cent of land under forest cover. Forests are important sources of wood and non-wood products for her people. The country is rich in tropical and sub-tropical fruits and produces several cereals. It has around 8 per cent land area available for agriculture. Owing to its location, Bhutan's 45 per cent land is above 3,000 meters. Thus, traditional agriculture has limited scope here. At the same time, there is a prospect for horticultural products which are more beneficial for farmers.
- 3.1.2 The share of the primary sector declined from 29 per cent of the GDP in 2002 to 19 per cent in 2007. In 1997, the share of primary sector in the GDP was almost one third. In 2008, the primary sector had share of 19.5 per cent, while the secondary and tertiary sectors constituted 45.5 per cent and 35 per cent of the GDP, respectively. However, it does not mean that it is a less important sector of the economy. Most Bhutanese people live in villages and depend on agriculture and renewable natural resources for their living. Food security is important for any country and continuous efforts should be made to sustain it.
- 3.1.3 The main objective of the Tenth Five Year Plan is poverty alleviation. The incidence of poverty is widespread. Most of the poor people live in rural areas. Many of them are engaged in subsistence farming which is characterised by low productivity on the one hand and hardship for farmers on the other. In certain areas, crops are partially destroyed by wild animals. The RNR sector purports to increase employment in both on-farm and off-farm activities. On-farm activities are concerned with core agriculture activities. On the other hand, off-farm activities are related to construction of farm roads, their maintenance, technical services to farmers, etc. The whole endeavour is that there should be sufficient job opportunities in the rural areas so that the school leavers are gainfully employed over there and they do not rush to cities. In addition, rural youth should have rewarding work, which is free of drudgery. The Royal Government plans to provide them with more facilities and support so that they find agriculture and livestock activities attractive.
- 3.1.4 Table 3.1 shows that 79 per cent population still live in villages. It further depicts that population density is quite thin in Bhutan. People live in far flung places. Information provided by the Ministry of Agriculture (MoA) indicates that about 69 per cent of total employed population is working in the RNR sector. Hence, the relative contribution of the RNR sector to the GDP may be less, but it is an important contributor to employment

generation. It is also crucial for meeting the basic needs of people.

- 3.1.5 The forest coverage in Bhutan is 72 per cent which is a great asset to the country and enriches its bio-diversity. Timber and wood-based products are important sources of export earnings. The Tenth FYP focuses on harnessing of non-wood forest products (NWFP) as an important source of economic activity. It will increase income of people who are dependent on the forest as well as enhance sustainability of natural resources.

Table 3.1: Demographic Profile of Bhutan

Total population	634,982
Urban population (%)	21.0
Rural population (%)	79.0
Population Density (person/sq.km)	16.0
Regular households	126,115
Regular households' population	580,336
Average household size	4.6

Source: PHCB 2005

- 3.1.6 Table 3.2 depicts that while only 1.7 per cent population was living under poverty in urban areas, 30.9 per cent population was poor in rural areas. Hence, one can conclude that if poverty alleviation strategy has to succeed, its focus should be on the RNR sector. In the past, weak growth in the RNR sector severely reduced the impact of poverty alleviation strategies. The RNR has a multiplier effect on the other sectors of the economy. In addition, it has implications for improving quality of life and conservation of the natural environment.

Table 3.2: Population and Households below the Poverty Line

Area	Population (%)		Households (%)	
	Poor	Subsistence poor	Poor	Subsistence poor
Urban	1.7	0.16	1.1	0.11
Rural	30.9	8	23.8	5.4
Bhutan	23.2	5.9	16.9	3.8
Poor = Households (and their members) consuming (in real terms) less than the total poverty line of Nu. 1,096 per person per month.				
Subsistence poor = Households (and their members) consuming (in real terms) less than the total poverty line of Nu. 688.96 per person per month. This amount is estimated to meet the cost of food basket providing the nutritional requirement of 2,124 Kcal per day.				

Source: Poverty Analysis Report 2007, NSB

3.1.7 The Tenth Five Year Plan emphasises enhancing production, promoting accessibility and improving marketing of agricultural products. The Ministry of Agriculture has adopted Triple Gem (PAM) approach to poverty reduction. Production is to be increased through use of best practices and appropriate technology, while accessibility is to be enhanced with farm roads and power tiller tracks in rural areas. Marketing will be supported through augmenting links with domestic and foreign markets, ensuring quality standards and promoting exportable organic and high-value low-volume products. The Tenth FYP focuses on commercialisation and mechanisation of agriculture so that farm productivity is enhanced and farming becomes more attractive for the rural youth. Export of horticulture products, development of niche organic products, and spotlight on non-wood forest products are the new strategies for the development of the RNR sector. The major targets for RNR sectors in the Tenth Plan are listed in Table 3.3.

Table 3.3: Major Targets of the Tenth Five Year Plan for the RNR Sector

- | |
|---|
| <ul style="list-style-type: none"> • Rural poverty less than 20 per cent • 70 farmer groups to be set up • 25 per cent of farmers engaged in horticulture export cropping • 15 per cent of farmers certified in organic foods • 4 per cent of forest areas to be management as community or private forestry |
|---|

3.2.0 The HRD Imperative

- 3.2.1 The HRD intervention in the RNR sector has two focal points: development of farmers and rural folks by the employees of the MoA and education and development of employees of the MoA, related divisions and agencies. This study does not focus on the development of farmers which is the direct responsibility of the MoA. Rather it concentrates on the employees, the Ministry of Agriculture and its various divisions and agencies.
- 3.2.2 The quality of service to farmers and villagers by the personnel of the MoA substantially depends on their education and on-going training. Almost 71 per cent personnel of the MoA are employed in Agriculture, Forestry and Livestock departments. The centre of the RNR activities is at regional, *Dzongkhag* and *Gewog* levels. About 82 per cent of employees are posted at regional centres and *Dzongkhags*. The Ministry of Agriculture has various programmes and projects where some people are posted. Over 97 per cent of the field staff members hold certificates and diplomas. Table 3.4 describes the number of civil servants in the RNR sector in different categories. It shows that the largest number of staff members is in support staff category. Professionals comprise the second largest category.

Table 3.4: Strength of the Civil Servants in the RNR Sector, December 2007

Categories	Numbers
Executives	8
Specialists	2
Professionals	608
Support staff	2,254
Operational staff	255
Total	3,127

Source: Vital Statistics, MoA, March 2008

- 3.2.3 Position Classification System (PCS) is now operational in all Royal Government institutions. This system necessitates a certain qualification for any given position. In the Ministry of Agriculture, there are many individuals who have higher positional responsibilities but lack the prescribed academic qualifications. Thus, there are a large number of people who need to upgrade their qualifications, from certificate to diploma and from diploma to undergraduate degree and from undergraduate degree to masters degree. Obtaining requisite qualification is not only important from the perspective of the organisation but also from the perspective of the individual as it has ramification for promotion and career development. However, it is not an easy task because there is lack of higher education institutions in the country. Further, as there are a large number of people without requisite qualifications, they have to be sent for upgrading their qualifications in different batches. Availability of funds to train a large number of people will also be problematic.
- 3.2.4 Training for the employees is on moderate level. A survey conducted by the Royal Institute of Management (RIM) reveals that only 46 per cent employees received some kind of training in the last five years. These programmes were held at the College of Natural Resources (CRN) and the RIM. Many training programmes were conducted through donor agencies. Generally, they were ad hoc in nature and were more supply driven than demand driven.
- 3.2.5 The RIM survey shows that of those who availed training, 28 per cent comprised of Secretariat and Headquarter staff, 48 per cent from the regional/zonal centres and the rest 24 per cent from the *Dzongkhags* and *Gewogs*. It shows that field personnel are less exposed to HRD interventions. Further, the survey shows that 38 per cent respondents stated that they do not have adequate job knowledge and skills. It implies that there is a great need for HRD efforts in the RNR sector.
- 3.2.6 Based on review of literature and interaction with stakeholders, we identify the following HRD needs of employees, in five main areas:

Management Field

- » Project management
- » Planning and management
- » Project evaluation and monitoring
- » Facilitation skills
- » Accounts and audit in government
- » Export of horticulture products
- » Logistics and supply chain management
- » Food safety management
- » Lab management
- » Store management
- » Communication skills
- » Government rules and regulations
- » Extension services
- » Human resource management
- » Computer skills

Forestry Management

- » Forest management
- » Forest fire management
- » Development of non-wood forest products
- » Water resource management
- » Plant protection and plant pest management
- » Wild life management
- » Environment management system and audit
- » Environment impact assessment
- » Self-help group facilitation
- » Nursery and plantation technology
- » Wood preservation
- » Genetic engineering for enhancing productivity
- » Bamboo development

Agriculture and Horticulture

- » Highland crop production
- » Agriculture economics
- » Cooperative formation and management
- » Paddy crop management
- » Organic farming
- » Post harvest technology
- » Citrus management
- » Geographical information system
- » Entomology and apiculture
- » Toxicology

- » Mechanisation
- » Processing of fruits
- » Export of fruits
- » Tissue culture
- » Pest control and management

Livestock

- » Poultry management
- » Feeds and feeding practices in dairy animals
- » Food technology
- » Hatchery management
- » Livestock health and disease control
- » Fishery management
- Piggery management

Others

- » Survey methods and statistical analysis
- » Soil testing and management
- » Quarantine
- » Bacteriology

3.3.0 HRD Services

Education

- 3.3.1 In this section, we examine HRD services available in the RNR sector. There are three important institutions providing HRD services: College of Natural Resources (CNR), Lobesa; Ugyen Wangchuck Institute of Forestry and Environmental Studies (UWIFES), Bumthang; and, Rural Development Training Centre (RDTC), Zhemgang.
- 3.3.2 The College of Natural Resources (CNR), Lobesa is the major educational institution in the RNR sector. It has three diploma programmes in Agriculture, Forestry and Animal Husbandry. The programmes have, 25, 27 and 25 slots, respectively every year. For degree and masters courses, a certain number of students are sent abroad. The Ministry of Agriculture absorbs almost all graduates of the CNR. There is a possibility of saturation of demand by the MoA. However, it is very difficult to predict anything with certainty at this stage because the demand may arise in the future. The MoA is now considering having an independent relationship with the CNR where it will recruit the graduates as per its needs rather than on the basis of supply by the CNR.
- 3.3.3 The CNR plans to start undergraduate degree course for the in-service employees so that they can upgrade their qualifications. In addition, some employees can do post graduate diploma and then do M.Sc. from institutions and universities recognised by the Royal Civil Service Commission (RCSC).

3.3.4 The Ugyen Wangchuck Institute of Forestry and Environmental Studies, Bumthang is a new institution aimed at forestry and environment management education. To begin with it provided certificate course for guards. Earlier this course was conducted by Bhutan Forestry Institute, which was closed down about five years ago. It started a diploma course in forestry in 2008. Rural Development Training Centre (RDTC), Zhemgang is an institution committed to training of school leavers and farmers. It conducts certificate courses varying from two weeks to six months. It is a counterpart of Technical Training Institute (TTI) in the industrial sector.

Training and Development

3.3.5 Training and development needs of personnel of the MoA, its agencies and divisions are planned by departments, agencies and projects of the MoA. Some programmes are conducted by internal faculty members of different departments, while a few programmes are conducted at the CNR. A few employees are sent outside the country depending on the available scholarships from donor agencies. Training needs are also “projectised”. In other words, they are in-built in the projects. Managerial and administrative programmes are conducted by the RIM. However, the RIM is at a nascent stage as regards the conduct of management development programmes.

3.3.6 Table 3.5 examines HRD services in the short-term and long-term horizon in the RNR Sector. It shows that the country has education up to diploma level education only. Table 3.6 describes HRD institutions in the RNR sector and courses offered by them. These two tables reveal that only medium level skills and knowledge are available in the RNR sector and there is a strong need for introducing higher education.

Table 3.5: HRD Services in the Short- and Long-term Horizon for the RNR Sector

HRD Services		Time Horizon			
		Short-term Availability		Long-term Availability	
Place of HRD Service		In-country	Ex-country	In-country	Ex-country
Education	Ph.D.	No	Yes	Yes	yes
	Masters	No	Yes	Yes	Yes
	Degree	No	Yes	Yes	No
	Diploma	Yes	No	Yes	No
	Certificate	Yes	No	Yes	No
Training and Development (T&D)	Technical	Scant	Ad hoc	Yes	No
	Managerial	Some	Ad hoc	Yes	No

Table 3:6: The RNR Educational Institutions and their Courses

Institution	Courses		
College of Natural Resources, Lobesa	Diploma course in Agriculture	Diploma course in Forestry (To be discontinued)	Diploma course in Animal Husbandry
Ugyen Wangchuck Institute of Forestry and Environmental Studies, Bumthang	Certificate course in Guarding	Diploma course in Forestry	
Rural Development Training Centre, Zhemgang	Short-term vocational certificate courses for school leavers and farmers		

3.4.0 Strategies for Implementation

- 3.4.1 The foregoing analysis shows that the highest level of education in the RNR sector is that of diploma. In future, there will be a strong need for degree, masters and doctoral education. Although the College of Natural Resources plans to start a modular in-service degree course, it has limited purpose and is likely to become redundant soon. Bhutan needs regular higher education in agriculture and forestry areas. As this sector is crucial for the Bhutanese economy, the requisite investment in education has to be made by the Royal Government in the long run.
- 3.4.2 There are two major institutions in the RNR sector: College of Natural Resources and Ugyen Wangchuck Institute of Forestry and Environmental Studies. They should specialise in agriculture sciences and forestry and environment management, respectively. Specialisation will help them in achieving academic excellence and maximising teaching and non-teaching resources. While both institutions need to emerge as important centres of learning and focus on higher education, the CNR should concentrate on degree, masters and doctoral education for the Bhutanese as well as regional students. It will also solve the problem of limited demand of agriculture graduates and help Bhutan emerge as an educational destination. The Royal University of Bhutan (RUB) should play an important role in helping these institutions to start higher level programmes.
- 3.4.3 The institutions should be highly market-oriented and have strong interface with their clients. They need to be innovative in their course offerings and short-term management development programmes. They should have international outlook in their marketing, curricula, training, research and student activities. The Ministry of Foreign Affairs should help not only these institutions but all educational institutions of Bhutan that want to offer education to foreign students.
- 3.4.4 The faculty members should be trained in the best institutions and universities through-

out the world. They should be trained in advanced research and given sufficient opportunities to contribute to intellectual capital. Academic collaboration with leading academic institutions is also highly desirable. These programmes will assist faculty members in keeping touch with ground realities and emerging challenges. They will be motivated to go beyond typical classroom teaching, to develop instructional materials and to experiment with new teaching-learning methodologies. These two institutions should be encouraged to offer training programmes to the employees of the MoA. In addition, they can later conduct management development programmes for international participants.

- 3.4.5 The Royal Institute of Management presently conducts management development programmes for civil servants, including the personnel of the MoA. It should continue to do so. We shall discuss the role of the RIM in greater detail in the chapter dedicated to the HRD in the civil service sector.
- 3.4.6 Table 3.7 summarises the recommendations made above. It shows that there is a need for upgradation of existing institutions into the institutions of higher education and research. The CNR should diversify its courses and offer new courses that are in demand by the labour market. These institutions should also develop capabilities for training and development of in-country and foreign participants.

Table 3.7: The Existing and Required HRD Institutions

Existing HRD Institutions	Required Educational Courses
College of Natural Resources, Lobesa	College of Natural Resources (With degree, masters and doctoral courses and capacity for in-service training). Should be able to offer innovative courses like food technology, agro-business management, bioinformatics, biotechnology, etc.
Ugyen Wangchuck Institute of Forestry and Environmental Studies, Bumthang	Ugyen Wangchuck Institute of Forestry and Environmental Studies, Bumthang (With degree, masters and doctoral courses and capacity for in-service training)
Rural Development Training Centre, Zhemgang (Certificate level courses for school leavers and farmers)	Rural Development Training Centre, Zhemgang (Certificate courses for school leavers and farmers). More focus on rural entrepreneurship
No private institution in the sector	Private institutions are not likely to enter this field of HRD

CHAPTER FOUR

HRD Needs in the Private and Corporate Sector

4.1.0 The Private and Corporate Sector: An Analysis

- 4.1.1 Bhutan was isolated from the global economy for a long time. In the early sixties, she decided to open up to the economy and integrate with the rest of world. The first step was to integrate with the neighbouring countries. Bhutan started working on the Five Year Plans in 1961. This exercise led to systematic development of agriculture, industries, education and healthcare. The initial Plans concentrated on developing basic infrastructure, such as roads, education, health and agriculture. The Royal Government had to perform both social and commercial functions. It has been the policy maker, planner, regulator and implementer in both the social and commercial sectors. During the sixties and seventies, institutions like Bank of Bhutan, State Trading Corporation of Bhutan and the Royal Insurance Corporation of Bhutan were established.
- 4.1.2 The Fifth Plan (1981-1987) played an important role in national development by emphasising economic self-reliance and focussing on growth of hydropower, mining and industry. During this period, various state-owned enterprises were corporatized and privatised. The Bhutan Chamber of Commerce and Industry (BCCI) was established in 1980 with a view to promote and support the private sector. Privatisation was further pursued in the nineties in Bhutan. The Royal Government disinvested its shares in Bhutan Tourism Corporation Limited, Penden Cement Authority Limited, Bhutan Carbide and Chemicals Limited, Bhutan Board Products Limited and Gedu Wood Manufacturing Corporation. Moreover, various construction and road maintenance establishments were privatised.
- 4.1.3 In the 1980s and 1990s, the Royal Government established large organisations because there was lack of capital in the private sector to establish large and strategic organisations. It also promoted joint venture organisations with the private sector where the private partner was given favourable terms, such as the management of the enterprises with an investment of 20 per cent of total equity. In the Ninth Five Year Plan, the secondary and tertiary sectors of the economy grew much faster than the primary sector. The share of the primary sector declined from 29 per cent of the GDP in 2002 to 19 per cent in 2007. In 1997, the share of primary sector in the GDP was almost one third. Thus, Bhutan is steadily moving towards modernisation and industrial development.
- 4.1.4 The private and corporate sector has been identified as the main engine of economic growth. *Bhutan 2020: A Vision for Peace, Prosperity and Happiness* clearly states that the private and corporate sector will be the mainstay of national development. Further, this sector is envisioned to be the major provider of employment for the Bhutanese youth. *Bhutan 2020* projects that Bhutan's hydropower sector will be the prime mover of industrialisation, supported by clean manufacturing and fast growing tourism sector.
- 4.1.5 The Tenth Five Year Plan (2008-2013) emphasises strengthening of industry. Industry in

the Bhutanese context not only includes manufacturing but also other sectors like hydropower, tourism, cultural industries and Information and Communication Technology. These sectors will be core to economic growth. Market orientation and engagement of the private sector organisations will be crucial for the success of the Tenth Plan. The Plan stresses that the country needs to increase the knowledge content of the economy and to enhance productivity of its industrial base through innovation, creativity, and enterprise. In other words, existing organisations have to be more creative and innovative on the one hand and a need for new entrepreneurs in the various sectors of the economy on the other. Specifically the Tenth Plan states, “The importance of the Micro, Small and Medium Enterprises (MSMEs) sub-sector from an employment and income generation perspective cannot be overemphasised. With relative low levels of capital investment required, the sector offers decent employment and income generation opportunities, particularly for Bhutanese youth and other weaker sections of Bhutanese society”. In this direction, the Ministry of Economic Affairs (MoEA) plans to establish a Department of MSMEs to give greater attention to this sector of the economy. The Bhutan Development Finance Corporation (BDFC) has a scheme to lend loans to the MSMEs in the country.

- 4.1.6 The Economic Development Policy, 2009 has identified various areas of economic opportunities. High quality green services are one such area. It consists of high- end education and medical services, ICT, data centres, tourism, financial services, consulting services, BPOs and KPOs, and Meeting, Incentives, Conferences and Expositions (MICE). Thus, education is given the status of industry. It will help the educational sector to have similar financial and economic benefits as other industries enjoy. The draft policy also visualises Bhutan to be a hub of general education and for specialised study on technical skills, environmental conservation, Buddhism, GNH and renewable energy. It proposes that general and specialised colleges, such as in the field of ICT, architecture, engineering, medical and law shall be allowed and be encouraged to open franchise/campus in the country. The draft foreign direct investment policy, 2008 states that FDI is defined in terms of convertible foreign exchange, unless specified in bilateral agreements. Hence, the Kingdom of Bhutan has to enter into bilateral agreement with neighbouring countries to attract foreign direct investment in other currencies.
- 4.1.7 The Bhutanese industry has low level of productivity due to, among others, lack of advanced technology and low level of human capital. Foreign Direct Investment (FDI) and joint ventures are important ways to enhance productivity and create wealth. As the economic policy of the country is under preparation, it should take steps to promote FDI and to incentivise use of superior technology in different business organisations. It is important that FDI leads to creation of jobs. Till now FDI has been mostly in the tourism sector.
- 4.1.8 The private and corporate sector consists of a large number of sub-sectors. Business enterprises are classified as corporate sector or private sector. Those organisations where the Royal Government’s equity is greater than 50 per cent are known as corporate sector

enterprises (or corporations), while those organisations which are wholly owned by private individuals and institutions are known as private sector organisations. Some of the important private and corporate sub-sectors for the Bhutanese economy are as follows:

- Hydropower
- Construction
- Tourism
- Information and Communication Technology
- Financial services
- Manufacturing and mining
- Trade and services

4.1.9 Druk Holdings and Investment (DHI) was created in November 2007 under the Royal Charter as a Government-owned holding company. It has taken over various functions as regards management of government owned companies earlier performed by the Ministry of Finance. It also has other functions responsible for transforming the Bhutanese economy. The holding company aims at ensuring good corporate governance among companies under its hold and improving performance of linked companies. It has a major responsibility for raising funds and making investment for the Royal Government. It is expected to develop a new corporate culture in the country. Very importantly, the DHI has a duty to lead and complement the private sector growth. The Royal Charter for Druk Holdings and Investment states that one of its functions is to “Promote and encourage entrepreneurship and business development through venture capital and other required institutional support” (P. 3 function number f). Out of 22 companies earlier owned by the Royal Government, 14 companies were transferred to the DHI. Table 4.1 lists companies owned by and linked to the DHI.

Table 4.1: Companies under the DHI

DHI Owned Companies	DHI Linked Companies
Basochu Hydro Power Corporation Ltd.	Bank of Bhutan Ltd.
Kurichu Hydro Power Corporation Ltd.	Royal Insurance Corporation Ltd.
Chukha Hydro Power Corporation Ltd.	State Trading Corporation of Bhutan
Bhutan Power Corporation Ltd.	Penden Cement Authority Ltd.
Bhutan Telecom Ltd.	Bhutan Board Products Ltd.
Druk Air Corporation Ltd.	Bhutan National Bank Ltd.
Natural Resources Development Corporation Ltd.	Bhutan Ferro Alloys Ltd.

4.1.10 A census survey conducted by the Department of Employment, the MoLHR shows that there are 6,935 establishments in 2008 (Table 4.2). However, a limitation of the survey was that it could not include many, say 80 per cent industrial establishments in the construction and tourism sectors, which are main sources of employment. The size of the organisation was decided on the basis of amount of investment. There were a total of 136 large organisations, while there were 58 medium size organisations as per this census.

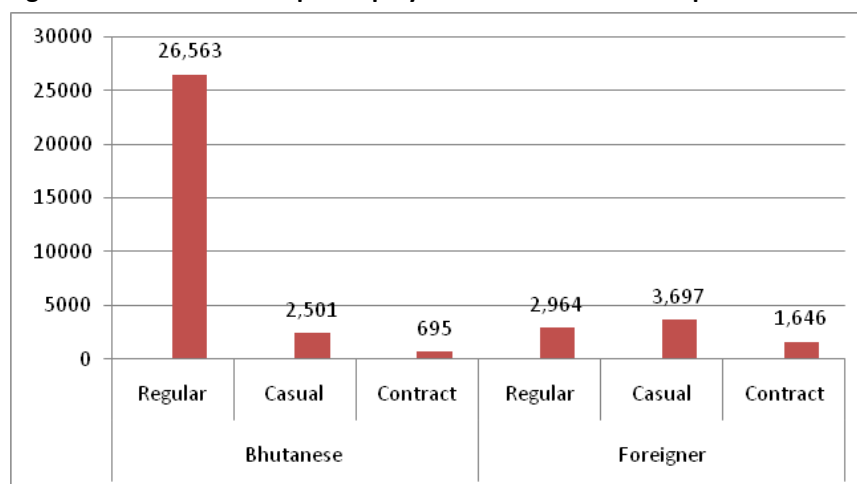
Table 4.2: Distribution of Establishments by Size of Investments, 2008

Sl. No.	Ownership	Investment				Total
		Micro/Cottage	Small	Medium	Large	
1	Corporation			5	38	43
2	Private	6,561	170	53	96	6,880
3	Joint venture between Bhutanese and Foreigner	8	2	0	2	12
	Total	6,777	191	58	136	6,935

Source: Modified from Establishment Census, 2008

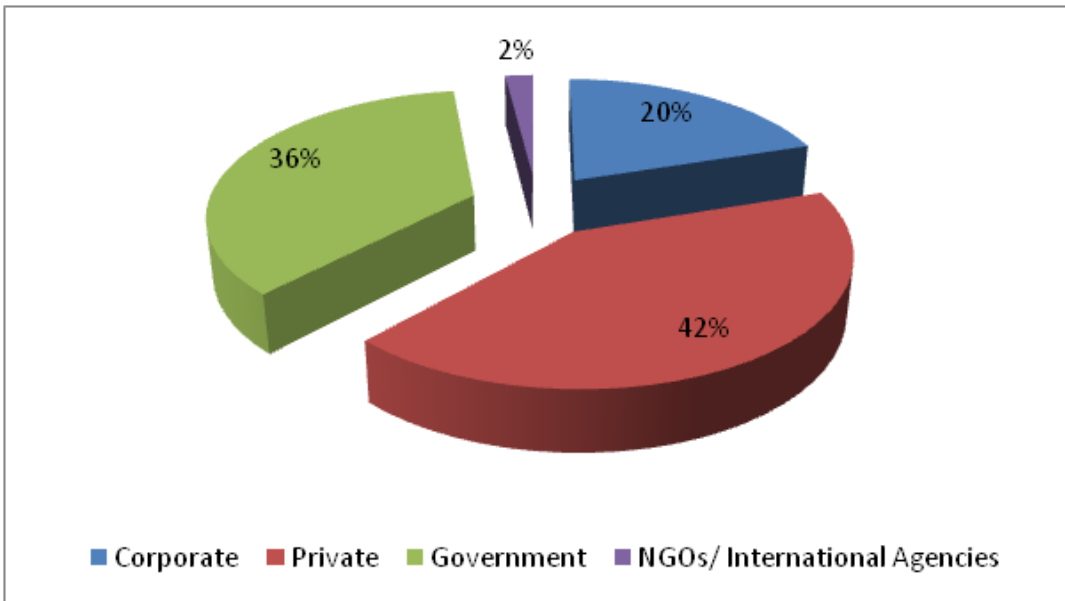
4.1.11 Figure 4.1 shows number of the Bhutanese and foreigner employees in regular, casual and contract employment categories. There were a total of 38,066 individuals employed in this sector. This number includes only about 20 per cent people working in construction and tourism sector. There were 29,527 regular employed people, which is much larger than people working in the civil service sector (Source: Establishment Census, 2008).

4.1.12 Figure 4.2 shows that more jobs were created in the private and corporate sector compared to the civil service sector. This analysis is based on advertisements published in the different newspapers. It is evident from Figure 4.2 that only 36 per cent jobs were created in the civil service. This shows a definite shift in employment generation from the civil service to the private and corporate sector. Therefore, there is a strong need to confer commensurate HRD benefits to the private and corporate sector organisations.

Figure 4.1: Number of People Employed in the Private and Corporate Sector

Source: Establishment Census, 2008

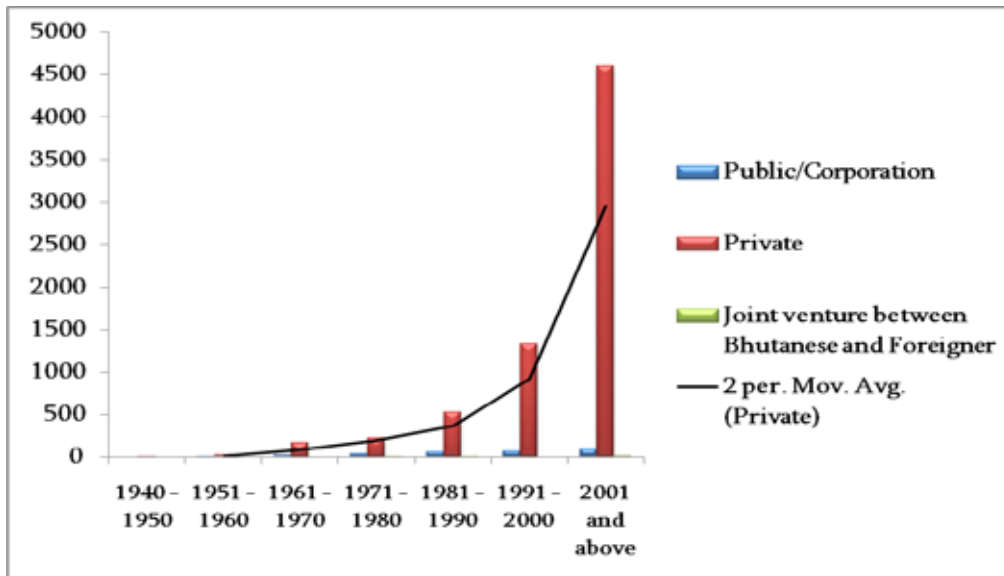
Figure 4.2: Percentage of Jobs Created in the Different Sectors, 2009



Source: Labour Market Information Bulletin, 2009 (Jan- December 2009)

4.1.13 Figure 4.3 shows that private sector establishments have increased rapidly in the last one decade compared to corporations. Hence, they are also contributing more to creation of jobs.

Figure 4.3: Establishments by Ownership and Year



Source: Establishment Census, 2008

4.2.0 HRD Imperative

4.2.1 Development of human capital is a *sine qua non* for the socio-economic development of the country. The private and corporate sector is constrained by availability of qualified and trained manpower. The HRD services have to be reinforced to help the sector achieve its goals and become competitive. The first job preference of the Bhutanese youth is the Royal Government. Government jobs are considered to be more prestigious and decent compared to the private sector jobs. The young job seekers perceive government jobs as secure, of good quality and with greater career potential. The second preference of the Bhutanese youth is corporations. They think that working for the corporations is as good as working for the Royal Government. Today the second rung of talent opts for private sector employment at worker and junior management levels. The private and corporate sector organisations desperately need high quality manpower both at worker and managerial levels. Importantly, managers, supervisors and technicians need to be trained on a regular basis to maintain their edge. There has to be provision for life-long learning and development.

4.2.2 In 2001, an extensive survey of 100 private sector organisations was conducted by the Ministry of Trade & Industry, Bhutan Chamber of Commerce and Industry, UNDP and the World Bank. Although the survey is a bit old, its findings are still relevant for the private and corporate sector. The survey shows that there is a shortage of skills at worker as well as managerial levels. The productivity of labour force is lower. Further, most employees did not receive any kind of in-service training. The Bhutanese managers had limited exposure to best practices and modern management tools and techniques. The following reasons were cited for poor HRD efforts:

- Lack of incentives from the Royal Government
- High turnover of the Bhutanese workers
- Contract nature of foreign workers
- Availability of trained workers from neighbouring countries

The private sector respondents felt that it is the responsibility of the Royal Government to provide support for HRD. It is also possible that as most organisations were new, they lacked fund and trainers and more importantly the awareness about the need for effective training. Probably most employers were first generation entrepreneurs and their understanding of modern management was inadequate. They could not have realised that training and development of their employees can help in developing right kind of skills and attitudes which, in turn, will increase productivity and profitability.

4.2.3 An analysis of HRD interventions in the Eighth Plan (Source: HRD Master Plan for Private and Corporate Sectors 2002-2007, Pp. 33-34) shows that there was lack of a comprehensive HRD plan for the private and corporate sector. Further, training needs were not assessed in relation to their objectives. Consequently, there was apparently not much relationship between training needs and HRD programmes supplied. A few programmes

were offered and the quality of the programmes could not be ensured due to unavailability of qualified trainers. There was indeed lack of awareness about importance of HRD for organisational effectiveness among some of the top managers of private and corporate sector organisations. HRD interventions were less effective because of improper co-ordination among different stakeholders.

- 4.2.4 In the Ninth Plan, equal amount of budget for HRD was earmarked for government and non-government (the private and corporate) sectors. It gave a clear message that the Royal Government is equally committed to HRD in both the sectors.
- 4.2.5 An internal analysis of HRD interventions in the Ninth Plan states that there was a lack of funds to support HRD in the private and corporate sector organisations. In fact, majority of the HRD programmes were implemented through donors' ad hoc offers. There was no systematic training needs assessment done by the organisations to nominate their employees for different training programmes. Almost all private companies and most corporations did not have HRD plans. More than 90 per cent private sector companies are small and medium sized in nature. These companies did not want to share training cost.
- 4.2.6 In 2003, the Ministry of Labour and Human Resources (MoLHR) was created to pay greater heed to employment, labour relations, and human resource development in the private and corporate sector organisations. The private and corporate sector has been identified as the engine of growth. Therefore, it is imperative that human capital is developed to help the sector achieve its business objectives. Further, the private sector is at a nascent stage and most organisations are cottage and small enterprises. Their capacity to invest in human resource development is limited. Hence, the Royal Government of Bhutan decided that it had to play an important role for the HRD of private and corporate sector organisations at least for some time.
- 4.2.7 Bhutan receives good amount of aid for HRD from friendly countries in forms of scholarships for both long-term educational courses and short-term training programmes. They are meant for both government and private and corporate sector employees. However, most scholarships go to employees from the government. The main reason is that most MoUs for scholarships are generally signed between the donor agency and the RCSC. If the private and corporate sector organisations have to be the engines of growth in true sense, the Royal Government must help the sector by providing it with more scholarships and fellowships.
- 4.2.8 At the same time, the private organisations will have to invest more in their human resources. It is high time that the private and corporate organisations, especially large ones, come forward and develop HRD culture to enhance productivity and engagement of employees. There are a good number of HR managers in corporations, large organisations and government. They work in isolation and are not networked. Some of these organisations are doing commendable work in HRD which needs to be shared with the

HR community. HRD issues need to be discussed and debated continuously among professionals to enhance international competitiveness of enterprises. There is thus a need for an association of HRD professionals and practitioners. This association will help them learn from one another and also integrate with HRD professionals throughout the world. The association can also publish its newsletter and other literature from time to time.

- 4.2.9 There are 58 and 136 medium and large organisations, respectively in Bhutan in 2008. Their numbers are likely to grow in the Tenth Plan. However, no estimate is available for the increase and there is no likelihood of a dramatic increase. It is estimated that a large organisation on an average has 250 employees. Hence, 34,000 employees are likely to be employed in large organisations. About 10 per cent of employees are likely to occupy managerial positions. Therefore, the managerial population is estimated to be 3,400 in large organisations. Further, there will be some managers in medium organisations. It is assumed that there are at least 5 managers in a medium size organisation. Therefore, 290 managers are estimated in medium size organisations. Hence, 3,690 managerial personnel are estimated in medium and large private and corporate sector organisations in Bhutan.
- 4.2.10 There are 6,777 micro/cottage and 191 small establishments in Bhutan. The dynamics and functioning of small organisations are very different compared to medium and large organisations. Their organisational structure is simple and differentiation among functions is less. They are more centralised and dependent on the top manager or the entrepreneur. While these organisations respond rapidly to the environment, credit availability, market accessibility and business development are always difficult for them. As they operate on low budget, any disturbance in market demand hurts them badly. Most managers in small sector organisations do not have formal management education. The HRD culture in such organisations is determined by the values and knowledge of the top manager. In fact, he holds numerous roles, that of marketing, finance and HR manager in the company. As a result, training and development needs of these organisations are quite different from the need of medium and large organisations. Equating HRD needs of these two types of organisations is not appropriate. Thus, HRD needs of small sector organisations should be treated and addressed separately. The focus on training and development in small organisations should be the Head or number two in the organisation.
- 4.2.11 The Tenth Plan has a target of producing 400 entrepreneurs by 2013. A report on Basic Entrepreneurship Course in March, 2008 reported that 42 per cent trained graduates started their own businesses. By most conservative measure, to develop one successful entrepreneur, at least two persons need to be trained. Hence, 800 applicants should be trained in the Tenth Plan. Thus, 160 persons need to be trained every year. One batch of trainees consists of 20 persons. Hence, 8 entrepreneurship development programmes should be conducted every year. The duration of typical entrepreneurship development programme is one month. Hence, it is a yearlong activity.

Identification of Training and Development Needs

- 4.2.12 Managers have two kinds of HRD needs: managerial and technical. Most of the managerial HRD needs are common across organisations and sectors. Technical HRD needs, however, are usually organisation or sector specific. These needs should be addressed by organisations concerned either through in-house training programmes, or through other development programmes either in-country or ex-country.
- 4.2.13 Based on review of literature and interaction with stakeholders, we identify the following critical managerial T&D needs of managers in the large and medium organisations:
- Achieving sustainable competitive advantage
 - Corporate governance and social responsibility
 - Business ethics
 - Leadership and people management
 - Team building and conflict management
 - Negotiation
 - Change management
 - Time and stress management
 - Personal growth and development
 - Communication and Interpersonal relationships
 - Presentation skills
 - Creativity and innovation
 - Performance planning and management
 - Human resource management
 - Labour laws and employee relations
 - Business to business marketing
 - Basics of marketing
 - Sales management
 - Customer focus
 - Marketing research
 - New product launch
 - Finance for non-finance
 - Basics of financial management
 - Advanced financial management
 - Business process reengineering
 - Enterprise resource planning
 - Knowledge management
 - Quality management and six sigma
 - Supply chain management
 - Operations management
 - Project management

4.2.14 In the backdrop of review of literature and interaction with stakeholders, we identify the following T&D needs of Small Enterprises and Entrepreneurship:

- Entrepreneurial motivation training
- Enterprise launching and management
- Project formulation and appraisal
- Working capital assessment & management
- Opportunity identification & guidance
- Managing & controlling small business accounts
- Marketing strategies for small entrepreneurs
- Managing finance
- Book keeping and accounting
- Enhancing productivity
- Creative selling & promotion for small enterprises
- Marketing survey methods
- TQM for small business
- Business forecasting techniques
- Export marketing for small enterprises
- Strategic management for small entrepreneurs
- Effective business communication for small business owners
- Leadership & team building skills for small business owners
- Computers for small entrepreneurs
- Expansion, diversification & modernisation of small enterprises

4.3.0 HRD Services

4.3.1 In this section, we examine the availability of HRD services, for both education and training, and development. Table 4.3 describes HRD services in general, technical, vocational education and training and development domains and their availability in terms of in-country and ex-country and by short- and long-term period. It is evident from Table 4.3 that certificate level vocational education for the private and corporate sector is available. Degree education is available in civil, electrical and IT areas. However, many important degree courses are not available within the country. For example, courses in mechanical engineering, architecture, pharmacy, etc. are not available. Moreover, no masters course is offered. In short-term perspective, Bhutan will depend on ex-country educational institutions for some degree and all masters education. Certain vocational trades, like electrical, plumbing, construction, masonry, etc., education services are available. In-service training and development support for workers in both technical and behavioural areas does not exist. On the other hand, managerial and technical training and development for managers is scanty. More importantly, the educational base for entrepreneurship development is weak.

Table 4.3: HRD Services in the Short- and Long-term Horizon for the Private and Corporate Sector

HRD Services		Time Horizon			
		Short-Term Availability		Long-Term Availability	
Place of HRD Service		In-country	Ex-country	In-country	Ex-country
Professional Education	Ph.D.	No	No	Yes	Yes
	Masters	No	Yes	Yes	Yes
	Degree	In some fields	Yes	Yes for most fields	Yes for a few fields
	Diploma	Yes	No	No	No
	Certificate	Yes	No	Yes	No
Vocational Education	Certificate	Yes	No	Yes	No
In-Service T&D for Workers	Technical	No	A little	Yes	No
	Behavioural	No	No	Yes	No
In-Service T&D for Managers	Technical	A little	A little	Yes	Yes for a few fields
	Managerial	A little	A little	Yes	Yes for a few fields
Entrepreneurship Development		Yes	No	Yes	No

General Observations

- 4.3.2 In this section, in-country institutions in terms of HRD services are studied. Bhutan has several institutions that provide general, technical, and vocational education. In addition, large numbers of school leavers go abroad for tertiary education. A few of these students study abroad either through the Royal Government scholarships or foreign government scholarships. These scholarships are generally based on specific economic needs of the country. Many parents send their wards for tertiary education abroad, sometimes using educational loan. Most of these students opt for liberal arts and humanities courses. Thus, they are unable to enhance their employability. Consequently, there are more than sufficient arts and humanities graduates. However, there is a shortage of technical skills.
- 4.3.3 Various studies and surveys in the past have shown that the standards of maths and science education in Bhutan need improvement. As students are not sufficiently proficient in science and maths at school level, they do not prefer technical education. Of course,

there is shortage of technical education institutions, a topic that shall be dealt with later. So far vocational education is concerned; it is the last priority for school leavers. They do not see vocational education leading to decent jobs and good income generation. They would rather opt for liberal arts education which might be conducive to white collar jobs. Further, the Bhutanese youth want to work on high skill jobs but they are unable to acquire them as there are limited slots in higher technical institutions. Most decent jobs require high technical skills in engineering, ICT, pharmacy, architecture, banking and insurance, and management. These skills are in short supply. On the other hand, liberal arts and humanities graduates are in over supply. However, demand for such graduates in the labour market is low. Many students opt for BCA and BBA courses considering them as technical courses. But the skills imparted through these courses are inadequate and there is poor demand for them.

Higher General and Technical Education

- 4.3.4 Royal University of Bhutan is responsible for providing tertiary education (undergraduate, diploma and above) both in general and technical education. In some cases, it also awards certificates. The university is itself young. It was established under the Royal Charter in 2003 with a view to provide all types of tertiary education in Bhutan. It is a federal university. Sherubtse College, College of Science and Technology, Royal Institute of Management, and Jigme Namgyel Polytechnic (JNP) are its important institutions for technical education. The Royal Institute of Management has historically offered educational courses for the civil servants. Its focus was more on public administration. However, it has plans to play an important role in management education and development.
- 4.3.5 Table 4.4 describes colleges under the Royal University of Bhutan and the technical courses offered by them. The College of Science and Technology started offering technical degree courses since 2001. Earlier it was a diploma granting institution. It offers only civil and electrical engineering courses. Its diploma courses were phased out in 2007. Sherubtse College offers a degree course in computer science and its intake is only 30 students. As the country wishes to be an IT destination, there is hardly any education infrastructure for IT education. Gaeddu College of Business Studies started a 4-year BBA programme in 2008 and also absorbed students of the Sherubtse College where the programme was being offered earlier. It plans to offer B.Com courses in the near future.

Table 4.4: Technical Education Institutions and their Courses (Relevant for the Private and Corporate Sector)

Institution	Courses		
College of Science and Technology (Degree courses since 2001)	Civil Engineering	Electrical Engineering	
Jigme Namgyel Polytechnic (JNP)	Civil Engineering	Electrical Engineering	Mechanical Engineering
Sherubtse College	B.Sc. Computer Science (3 Yrs.)		
Gedu College of Business Studies	BBA (4 Yrs.)		
Hotel Tourism Management and Training Institute (Proposed)	Diploma	Degree	

4.3.6 One reason behind lack of courses and institutions of technical education in Bhutan is that the saturation of demand takes place very fast. As the Bhutanese economy is small, its requirement for technical professionals is limited. If a large number of students are trained, there may be widespread unemployment. Further, most of the tertiary technical institutions are new and will take some time to grow and mature. Tertiary education is capital intensive and expensive. The Bhutanese youth go abroad for higher education. It entails outflow of large amount of capital from the country. However, students have no avenues for higher studies in-country and are compelled to study ex-country. All the same, the Royal Government can offer free higher education to only some of its people. The Bhutanese technical education cannot just achieve scale and be efficient only on the basis of its students. There is thus a need for vision and innovation in the educational sector to make its products saleable and attractive to the foreign students.

Vocational Education

4.3.7 Technical Training Institutes (TTIs) and Institutes of Zorig Chusum (IZCs) are the major providers of vocational education in Bhutan. Most TTIs were established from 2002 onwards. There are total six TTIs and two IZCs. Table 4.5 presents major targets for vocational education in the Tenth FYP. The target is that 70 per cent of school leavers will have access to vocational education and training. Other targets show that vocational education has to play a pivotal role in the Tenth Five Year Plan. In the year 2006-2007, 1,731 Class X graduates were not continuing into Class XI (General Statistics, 2007, Policy and Planning Division, Ministry of Education, P. 25).

Table 4.5: Major Targets for Vocational Education and Training in the Tenth Plan

- 70 per cent of school leavers will have access to vocational education and training
- 80 per cent of village level skills in various trades are addressed
- 100 per cent of courses conducted in TTIs in line with the labour market demands
- 12,500 job seekers are kept engaged in some training activities
- Competence of skilled workers in priority trades tested and certified

- 4.3.8 From August 2010, vocational training delivery has been changed from the conventional training mode to a Competency Based Training (CBT) mode wherein modular programmes are being followed. Following this change, enrolment of trainees into the various vocational institutes have been decentralised to respective institutes. The adoption of modular training delivery allows enrolment of trainees into various programmes to be staggered over a period of time.
- 4.3.9 In 2010, a total of 2055 students registered with the MoLHR for all types of technical training institutions. Further, there were a total of 662 slots available in the TTIs but only 540 students opted for available slots. Thus, 122 slots were vacant. There are construction courses in the TTIs where only 50 per cent slots were filled. Slots in courses like electrical engineering were easily filled. Similarly, some courses are well-subscribed in the IZCs. These courses are painting, tailoring and wood crafts. For other courses, there is generally a problem of availability of students. Table 4.6 depicts various Technical Training Institutes, their courses and their duration.

Table 4.6: Different TTIs and IZCs and their Courses

Institute and Courses	Duration
Technical Training Institute - Samthang	
Light Vehicle Driving	6 months
Auto-mechanic	2 years
Heavy Vehicle Driving	6 months
Technical Training Institute - Khuruthang	
Electrical Engineering	CBT
IT & Office Applications	2 years
Mechanical Engineering	2 years
Technical Training Institute – Rangjung	
Electrical Engineering	CBT
Computer Hardware	2 years
Furniture Making	2 years
Technical Training Institute – Chumey	
Masonry	CBT
Construction carpentry	CBT
Plumbing	CBT
House wiring	CBT
Technical Training Institute – Sershong	
Certificate in Civil Engineering	CBT
Thimphu Institute of Automobile Engineering	
Automobile	2 years
Trashiyangtse Institute of Zorig Chusum	
Lhadi	2 to 6 years
Patra	2 to 4 years
Treazo	4 years
Jimzo	6 years
Shagzo	2 years
Tshemzo	2 to 4 years
National Institute of Zorig Chusum	
Lhadi (Painting)	6 years
Jimzo (Sculptor)	6 years
Patra (Wood & slate carving)	4 years
Lugzo	4 years
Shazo (Wood turning & lacquering)	4 years
Troezo/Chagzo (Smithy)	4 years
Tailoring	1 year
Doll Making	2 years
Silk Screen Printing	2 years
Leather Craft	2 years
Ceramic making	2 years
Tsemzo (Textiles)	4 years
Debri/Mural Painting	4 years
Souvenir making	2 years

4.3.10 There are several reasons behind poor enrolment in TTIs, especially in construction-related courses. First, students in general do not find these courses attractive enough. They feel that these courses do not lead to decent jobs. Second, there is no bridge between vocational and tertiary education. The tertiary education policy needs to look into this issue. Third, they are unaware of their importance for employability. Finally, the TTIs have not been creative and innovative enough to link education with the labour market demands.

Entrepreneurship Promotion Centre

4.3.11 The responsibility of entrepreneurship development was earlier entrusted with the Entrepreneurship Promotion Centre (EPC), the Ministry of Economic Affairs. In 1990, Business Opportunity Information Centre was established in Bhutan with the help of the UNIDO. Subsequently, Entrepreneurship Promotion Centre (EPC) was set up in 1993. The main objectives of the EPC were as follows:

- To provide training in entrepreneurship and small business management to prospective entrepreneurs
- To provide training in entrepreneurship and small business management to unemployed youth so that they can take up small business based on their skills for self-employment
- To provide assistance to walk-in-clients
- To disseminate business information

4.3.12 The EPC offered two main programmes: Comprehensive Entrepreneurship Course (CEC) and Basic Entrepreneurship Course (BEC). The former course was open for everybody, whereas the latter course was meant for people with vocational skills. Their duration was 21 and 20 days, respectively. The batch size of both programmes was around 20 participants as the programmes were quite intensive and a close interaction between the faculty and participants was required. The EPC also conducted training programmes for small enterprises and provided consulting in areas of feasibility study and technical support. Entrepreneurship Development Institute of India, Ahmedabad helped the EPC in developing internal capacities in the mid 90s. In the beginning of this millennium, the EPC then had eight trained staff members. However, only one trainer was left in the EPC after most of the team members were transferred to different departments and ministries. The Entrepreneurship Promotion Centre was transferred to the Department of Employment, the Ministry of Labour and Human Resources in early 2009 where it exists at present as the Entrepreneurship Promotion Division (EPD). However, trained staff members have not been transferred along with the transfer of responsibility. Consequently, there is an acute shortage of capacity in this area.

The Ministry of Labour and Human Resources (MoLHR)

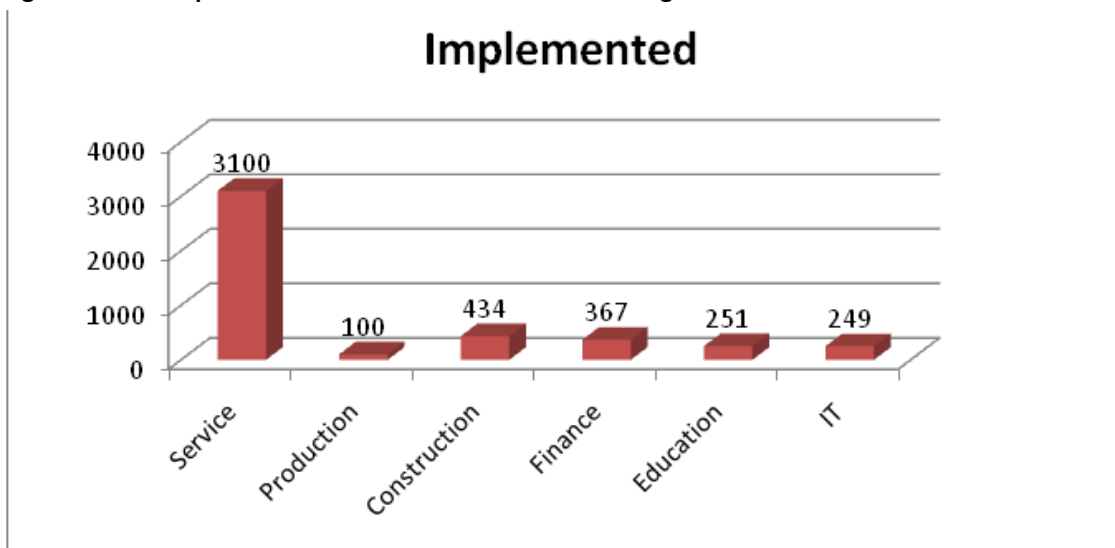
4.3.13 The Department of Employment (DoE) now has responsibility for entrepreneurship education and development. Since the private and corporate sector is considered the engine of economic growth, the development of human capital is vital for the success and com-

petitiveness of the sector. Vocational education falls under the purview of the Department of Human Resources (DHR) within the Ministry of Labour and Human Resources. The Department of Human Resources (DHR) is entrusted with the responsibility to help the private and corporate sector organisations in HRD. It acts as the HRD policy maker, planner, implementer, and monitoring agency. It is also expected to create an enabling environment for HRD in the private and corporate sector.

- 4.3.14 The DHR works closely with the Bhutan Chamber of Commerce and Industry (BCCI) to assist the private and corporate sector organisations in terms of their HR development. The DHR conducts several in-country HRD programmes for the participants from small, medium and large organisations. They are based on needs felt by various organisations from the two sectors. Most HRD interventions serve the needs of small organisations because they are large in number and they do not have capacity to invest in training and development. Further, the DHR sends participants from the private and corporate sector organisations for short- and long-term training and education. Ex-country HRD interventions are generally based on support from donor agencies.
- 4.3.15 In the period 2002-2008, a total of 4,501 participants, from the private and corporate sector were trained through in-country and ex-country programmes, out of which 64.8 per cent participants were funded by the Royal Government of Bhutan, 7.9 per cent by the Government of India and 9.9 per cent through Sustainable Development Secretariat funding. An analysis of in-country and ex-country HRD programmes in the Ninth Five Year shows that most of the programmes were for the participants of small enterprises.

Figure 4.4 shows the number of participants trained in different areas of management during 2006-08.

Figure 4.4: Participants Trained from Different Sectors during 2002-2008



4.4.0 Strategies for Implementation

This section discusses various strategies for HRD implementation in the private and corporate sector. As discussed earlier, this sector consists of various sub-sectors and each one of them needs separate treatment. However, they have certain common HRD needs that will be addressed here. This section is divided into two parts. The first is related to educational domain of HRD; the second part is concerned with training and development services.

Technical Education

- 4.4.1 The general education requirements in the civil and private sectors are more or less the same. Most civil service jobs do not entail professional degrees. On the other hand, the private and corporate sector organisations generally require professional and technical degrees, such as engineering, ICT, management, tourism, architecture, etc. The civil services require more graduates, while there is greater demand for diplomas in the private and corporate sector organisations. There is a need for degree courses in mechanical, electronics and communication, information technology, etc. In addition, masters courses in different areas of engineering and technology are also required. The JNP offers diploma courses. As there is a need for more diploma holders in the economy, it should increase seats in its existing courses as well as new courses. As banking, insurance and financial sector is growing quite fast, there is a need for masters course in business administration. The specific needs of the financial services sector shall be discussed in the chapter on HRD in the financial services sector.
- 4.4.2 The gaps in technical education can be filled through the provision of new government supported institutions and private institutions and strengthening the existing technical education institutions. Bhutan can develop itself as an education destination in the long-term. Its neighbouring countries have a huge market for education in different fields of technical education. Bhutan can offer a variety of technical courses which will not only meet its human capital needs but also help the students from other countries. However, the proviso is that technical education has to be of high quality and in line with the educational system of the neighbouring countries. Moreover, educational institutions have to prepare themselves to meet the needs of international students.
- 4.4.3 Utmost attention must be given to quality of faculty in technical institutions. If needed, expatriate faculty members should be recruited to reinforce faculty base. The faculty members should devote fifty per cent of their time for research and development. The technical institutions should interact actively with business organisations in the country and involve them in governance, teaching and research.
- 4.4.4 The Ministry of Foreign Affairs (MoFA) should play an important role in supporting the marketing effort of educational institutions. It should do general marketing and also work through educational consultants to sell various educational products. The MoFA should also assist them in developing international linkages and mobilising international aid for their development.

- 4.4.5 At the same time, domestic and international private institutions should be encouraged to establish their campuses in Bhutan. These should also have to be international in their character because the Bhutanese market is small. Bhutan should have two types of institutions as follows:
- a) Government universities & institutions
 - b) Private institutions
- 4.4.6 The funding for the government/public university will of course come from the Royal Government, while the funding for the other type of the institutions will come from private sources, fees, endowments, etc.
- 4.4.7 There is also a need for separate accreditation body which will be responsible for quality assurance in all types of universities and colleges. This accreditation body should network with regional and international accreditation bodies. All courses and programmes of the universities and colleges should be accredited within three years of producing their first batch of graduates.
- 4.4.8 The Tertiary Education Policy (TEP) needs to encourage private educational institutions in the country. Further, it should ensure delivery of quality education in both public and private institutions through accreditation and other monitoring systems. It should also establish systems for quality assurance. The policy should also give incentives for FDI in this sector.
- 4.4.9 The Royal University of Bhutan has to strengthen the existing colleges and help them introduce new courses as per the economic and social demands of the country. It can also affiliate private colleges which do not have affiliation with international universities. The RUB should also focus on enhancing quality of faculty. It should provide sufficient resources and time for creating intellectual capital.
- 4.4.10 The Royal Institute of Management needs to transform itself to cater to the needs of the private and corporate sector. It has to build competencies in business administration and management development. As it has traditionally focussed on public administration and pre-service education, reorientation will necessitate lot of efforts and culture change. It needs to become much more international in its character and network with international institutions and agencies. The RIM has to also emphasise entrepreneurship development for wealth and employment generation. Consequently, it has to build capacity in this area.

Vocational Education

- 4.4.11 Vocational skills play an important role in economic growth and generation of jobs. Large organisations require substantial number of skilled manpower. Further, people with vocational skills can start small enterprises by being trained in entrepreneurship. Most enterprises in Bhutan are micro and small in nature. The Royal Government has the plan to strengthen this sector in the future. It is recommended that the existing TTIs need to be strengthened by providing them with more training equipment and academic manpower.

- 4.4.12 The existing TTIs should introduce new courses that have demands from the labour market as well as are attractive enough for school leavers. These courses can be like electronics, heavy machine engineering and operations, etc. Some of the courses, such as interior design, dress design, ticketing and tourism, and office management can be targeted at the specific need of women students. The component of On-the-Job-Training (OJT) should be enhanced in the national certificate courses so that they become practical and the students develop right aptitude and attitudes. More importantly, the OJT should be implemented and monitored with utmost rigour. Faculty involvement in OJT should be intense. Some soft subjects like personality development and communication should be introduced to help students improve their interpersonal behaviour. There is a need for strong industry-institute interaction to make vocational education practical. As the TTIs are away from large and industrial towns, they are unable to closely interact with industries. The Labour Market Information (LMI) should be made more valid and efficient to help them understand market requirements. Further, MoLHR should network with industries to help TTIs understand the trends in labour market. The MoLHR should also seek support of large organisations to support different TTIs through technical and financial support.
- 4.4.13 Public private partnership should be fostered to offer relevant and high quality vocational training. The partnership should cover various areas, such as curriculum development, faculty support, testing resources, internship support, cost sharing, financial support, etc.
- 4.4.14 It has been observed that construction courses in the TTIs are not fully subscribed. As pointed out earlier, these courses might have been seen by the high school leavers as conducive to low wages and drudgery. However, the reality is that there are ample jobs in the construction industry and the Bhutanese youth is easily not available for such jobs. In this direction, four things need to be done. First high school students should be counselled about the importance of construction courses. Second, construction courses should focus on mechanisation of construction activities so that productivity of Bhutanese workers can be enhanced. For this purpose, the TTIs should be given relevant equipment and construction curriculum must also be revised. Third, specialisation needs to be introduced in construction courses. Bhutanese workers need to have certain skills that are not easily available in the market. Fourth, entrepreneurship education needs to be given to graduates so that they can act as an agency rather than as a worker alone.
- 4.4.15 The TTIs should offer short-term pre-service courses which are conducive for employment. They may be in electronics, and other areas. Bhutan National Human Development Report 2007 has suggested several short-term courses and some of the important ones can be commenced by the TTIs at the earliest.
- 4.4.16 There are some private TTIs in information technology area. A few of them also provide skills in office management. There is a need to encourage more institutions so that more job-oriented courses can be introduced. The private sector institutions are likely to offer

more job-oriented courses as they are nimble in their response to the market needs. The Royal Government of Bhutan can also take help of the National Institute of Open Schooling, India (a distance learning institution) which offers some courses in vocational education. Right now, there is no recognition for such certificates in Bhutan.

- 4.4.17 The Ministry of Education should have a cell for granting equivalence and recognition of external certificate, diplomas and degrees. At present, it does not exist, leading to confusion and ambivalence. The Ministry of Education should establish a cell to fill this void.
- 4.4.18 While the private sector vocational education and training institutes need to be encouraged, quality assurance should be given full attention. The Department of Occupational Standards (DOS) has responsibility for it and is preparing norms for accreditation. The same can also be made responsible for the conduct of accreditation for the TTIs. Any course that exceeds duration of six months is required to be accredited. Accreditation should be done for both public and private TTIs, without any bias towards government TTIs.

Training & Development

- 4.4.19 Most private organisations, by the virtue of possessing a license, are members of the BCCI. While the main responsibility of BCCI is to represent the interests of the private sector to the Royal Government, one of its main goals is the development of people. The BCCI today feels that it should play an active role in training and development of managers and entrepreneurs.
- 4.4.20 The corporate sector organisations do not have their training establishments. As training requirements are limited for any one organisation, there is a strong need to pool resources. It is also evident that DHR cannot provide HRD support on a long-term basis because it does not have trained HRD professionals and it outsources various HRD programmes. The Royal Government is committed to HRD in the private and corporate sector at least for a short period of time. It is also not advisable that the Royal Government take up the full responsibility for HRD of the private and corporate sector.
- 4.4.21 HRD is indeed the main responsibility of an organisation. There is a need for adopting a systematic approach to HRD, which is based on need identification, implementation and evaluation. All large organisations should have their HRD policy and plan. They should have well defined HRD structure and roles. They need to have specific targets for HRD of their employees, both workers and managers. The DHR should incentivise those organisations that are proactive in HRD. In other words, those organisations that invest in their employees can be given preference in nominating their employees for ex-country HRD. There should be an HRD Committee consisting of senior managers who monitor HRD activities in the organisation.
- 4.4.22 The input of Training and development should be 40 hour per employee per annum. It does not include long-term education and training. The international benchmark is that progressive organisations on an average spend 3 per cent of their sales on HRD.

- 4.4.23 Managers also have technical and functional training needs. However, as discussed earlier, these needs are very specific. They are organisation and position specific. Hence, each organisation has to take care of them. Sometimes a sector association can initiate actions to meet such needs. As Bhutan is a small economy, people with specific technical/functional needs will be few and their development has to be planned separately. It can be done through internal HRD professionals, technical experts, ex-country trainers or ex-country training.
- 4.4.24 While the managerial development needs will be largely addressed by the RIM, the training needs of workers should be addressed by the Technical Training Institutes (TTIs). As of now, the TTIs are new, understaffed and lack skills for development of workers. Further, they are not incentivised to stretch and commence innovative programmes for training and development of workers. It is recommended that the MoLHR should work on policies and procedures to encourage the TTIs to conduct training and development for workers of the private and corporate sector organisations. Two things can be done in this regard. First, the TTIs should be allowed to retain the surplus generated through sale of by-products for institutional development. Second, the surplus generated through training and development programmes should be matched by MoLHR and the amount should be invested in institutional development. It is also possible to identify two TTIs as the centres of excellence.
- 4.4.25 Development of HRD professionals is critical for evolving HRD culture. As of now, most trainers are young and inexperienced. Their international exposure is limited. They do not have access to good library and Internet facilities. It has earlier been argued that there is a need for greater in-country training and development in the future. It will be possible only when there is a pool of competent, capable, committed and connected HRD professionals. Hence, when new institutions are being developed and the existing institutions are being upgraded, attention should not only be given to development of physical infrastructure but also to the advancement of intellectual capital. It is recommended that the Department of Human Resources, the MoLHR should pay more attention to the training and development of HRD professionals through ex-country HRD. It should also ask donor agencies to focus on training of trainers so that in-country capacities are developed.
- 4.4.26 There is also a strong need to have an HRD Network consisting of professionals from private and corporate sector, government sector and non-government organisations. This Network will help its members to deliberate upon issues facing the profession, to develop strategies for people development and to organise conferences and seminars. They will contribute towards the development of professionals and act as an advocacy group. The Network can also associate with other HRD networks in the region and with other international organisations.
- 4.4.27 Bhutan has a small non-government organisation sector. Presently, there are only four organisations and their employee strength is quite less. They do not have fund to train their people. In the past, the DHR has helped them in their HRD efforts and it should continue to do so in the future.

4.4.28 Table 4.7 summarises the above recommendations as regards the existing HRD institutions and the required HRD institutions. At present, Royal Institute of Management focuses only on public administration. It also needs to concentrate on business administration and management development. The Royal University of Bhutan is a federated type university for different tertiary education institutions. The existing TTIs need strengthening. The DHR, the MoLHR should continue to manage ex-country training for the private and corporate sector. Additionally, it should concentrate more on training of trainers. In the tourism sector, the HTMTI is under development and it shall be offering diploma and degree courses. It is proposed that a Tourism Vocational Institute (TTI) be established which will offer certificate courses.

Table 4.7: The Existing and Required HRD Institutions

Existing HRD Institutions	Required HRD Institutions
Royal Institute of Management (Basically an institution for the civil services)	Royal Institute of Management (With greater focus on business administration and management development)
No degree courses in IT, mechanical engineering, electronics and communication and subjects in the CST	Degree courses should be added in the existing educational institution and in new institutions
No MBA programme	MBA programme in the RIM
No master courses in IT, mechanical, electrical and civil engineering	Masters and doctoral level IT, mechanical, electrical and civil engineering courses to be added in the existing institutions
Royal University of Bhutan	Royal University of Bhutan Private institutions
TTIs and IZCs Some private IT institutions	Strengthened TTIs and IZCs Tourism Vocational Institute Private TTIs offering national certificate courses
Entrepreneurship Promotion Centre, Department of Industry, Ministry of Economic Affairs	Advanced entrepreneurship programmes by the RIM Basic entrepreneurship programmes by the private sector institutions and the TTIS
Tourism Council of Bhutan (Certificate courses)	HTMTI (Under development)
Department of Human Resources, MoLHR (Implementation of HRD programme, policy development and implementation)	Department of Human Resources, MoLHR (Development of HRD faculty, Policy implementation and ex-country training, with greater focus on training of trainers)

CHAPTER FIVE

HRD Needs in the Tourism Sector

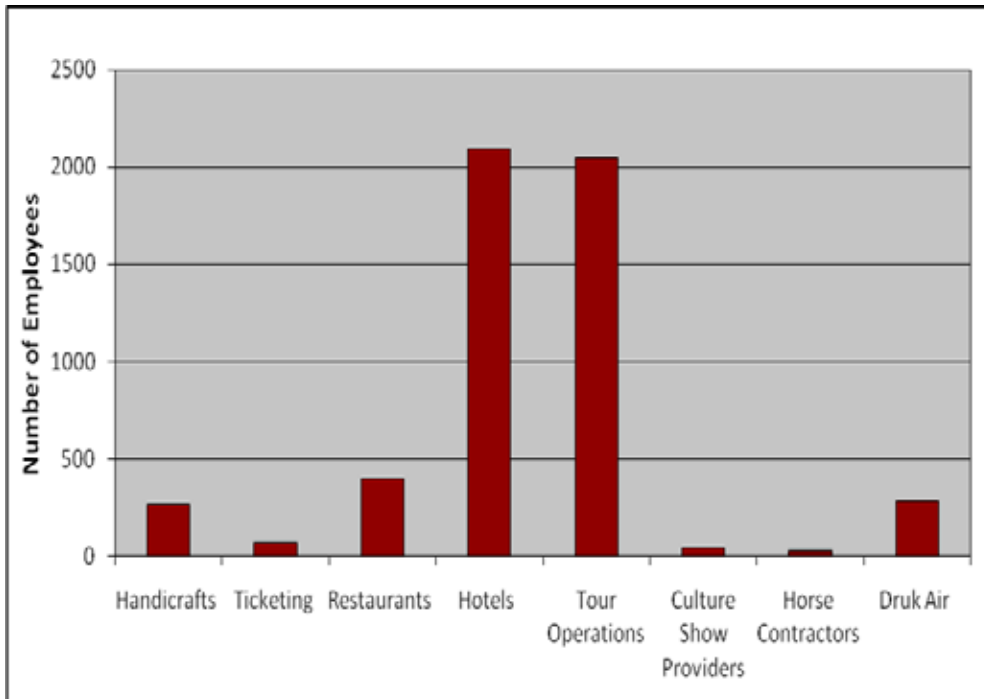
5.1.0 The Tourism Sector: An Analysis

- 5.1.1 This sector includes tour operations, hotels, restaurants and handicrafts. It is not only an important contributor to convertible foreign exchange but also one of the largest providers of employment in the country. It generates lots of indirect employment. As Bhutan strongly believes in environmental conservation, she cannot allow industries that will cause damage to environment. Bhutan is one of the ten countries with the highest biodiversity in the world. Tourism and hospitality is one such sector that has minimal threat to environment. Further, preservation and promotion of culture is an important goal of *Bhutan 2020*. Tourism gives an opportunity to the nation to share its rich cultural heritage with visitors and to project Bhutan as environment protective country. It also helps rural communities economically to some extent.
- 5.1.2 Tourism has been continuously growing in Bhutan. In 1997, the total arrival of tourists was 5,363 which jumped to 9,249 in the year 2004. About 1,217 employees were working in hotels and restaurants in 1997, while about 1,520 employees were working in the tour operator sector in 2004. In 2007, a total of 21,094 tourists arrived in Bhutan and the sector earned US\$ 29.85 million. By 2008, 27,636 tourists visited Bhutan.
- 5.1.3 Bhutan is an exotic and beautiful Buddhist country with its unique appeal and singular image. It is full of rich flora and fauna. Its cultural charm is mesmerising. Its architecture has uniformity as well as distinctiveness. People in Bhutan are courteous, hospitable, honest and friendly. There is political stability and social harmony. A new generation of the educated Bhutanese youth is on its way. The exclusivity and environmental diversity of Bhutan are conducive to sustainable competitive advantage. Tourism is one industry where Bhutan must constantly invest, both in infrastructure and in human capital. It will give rich dividends to the country in the long-term.
- 5.1.4 The tourism policy of the country is characterised by “high value - low impact” where revenue per tourist is high but mass tourism is not encouraged. The underlying philosophy is that the tourist should have a high value experience. In turn, it necessitates that tourism services are of high quality. It is important to note that almost 50 per cent of the tourists to Bhutan arrive from North America, Western Europe and Japan. They may not expect comfort and luxury of developed countries in Bhutan. However, they definitely look forward to high standards of hygiene and sanitation and high quality of food.
- 5.1.5 The focus of the industry is on nature, culture and wellness tourism serving the needs of top segment of internationally experienced, well-educated and informed tourists. Till now, tourism is guided by fixed tariff rule where a tourist is required to pay a certain fixed amount in US\$ 250. However, there is some flexibility in tariff during peak and off-seasons. A small number of tourists also visit Bhutan for trek and adventure tourism.

Records of regional tourists are not maintained by the Royal Government. However, they are also a good source of revenue and employment generation.

- 5.1.6 Tourism is an employment intensive sector, creating a large number of direct and indirect jobs. Figure 5.1 depicts direct employment in different domains of tourism in 2007. It shows that most people are working for hotels and tour operations, followed by restaurants, Druk Air, and handicrafts.

Figure 5.1: Employment in Different Domains of Tourism in 2007



Source: *International Tourism Monitor, Annual Report- 2007, Bhutan*

- 5.1.7 Tourism in Bhutan, however, is fraught with several problems. First, Bhutan being a landlocked mountainous country, access is a big issue. There are limited land entry points. Paro is the only city with an international airport. Druk Air is the only Airline that flies to Bhutan. As a result, only a limited number of international tourists can visit Bhutan. Second, there is a lack of skilled manpower in the tourism industry. Most of the employees have low level of education. Third, the country just cannot scale up tourism due to its concerns for environmental fragility and cultural integrity. Fourth, tourism is seasonal and arrival of tourists in off-season is quite low. Hence, a large number of people in this sector have seasonal employment.
- 5.1.8 The Tenth Plan proposes significant increase in hotels and restaurants. Development of new tourist spots is also under consideration. There is a plan to introduce off-season products. Further, flexible pricing policy is also being considered with a view to cater

to the needs of different segments of tourists. However, all care is taken to prevent any damage to the cultural and environmental integrity of Bhutan due to high influx of tourists. Earlier there was official focus on international tourism. However, a need is now felt that all types of tourists, including regional tourists, business travellers, domestic tourists, etc. should be taken into consideration while developing plans.

5.1.9 The Tenth Five Year Plan has the following targets for the tourism industry:

- Increase tourism contribution to 9% of national revenue
- Increase employment growth to 5%
- Total number of employed people by 2013 will be 25,000 (As estimated by TCB)

5.1.10 Tables 5.1 and Table 5.2 show that there will be substantial growth in hotel and tour operating industries till 2020. As a result, skill development in this sector is of critical importance. Bhutan Labour Market Study, 2009 estimated that the tourism industry will create 11,800 new jobs between 2009 and 2020. Therefore, this industry is of crucial importance for employment creation.

Table 5.1: Estimated Incremental Manpower Requirements in the Hotel Industry till 2020

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Managers	29	33	36	41	45	50	56	63	70	78	87	97
Accountants	13	14	16	17	19	22	24	27	30	33	37	41
Front office	29	32	36	40	44	49	54	60	67	75	83	93
Housekeeping	45	50	55	62	68	76	85	94	105	117	130	145
Waiters	56	62	69	77	85	95	105	117	130	145	161	179
Cooks	46	51	57	63	71	78	87	97	108	120	133	148
Others	68	75	83	93	103	114	127	141	156	174	193	215

Source: Bhutan Labour Market Study, 2009

Table 5.2: Estimated Incremental Manpower Requirements in the Tour Operating Industry till 2020

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Managers	59	66	75	84	95	107	121	136	153	173	195	220
Accountants	20	22	25	28	32	36	40	45	51	58	65	73
Ticket Officers	39	44	50	56	63	71	81	91	102	115	130	147
Guides	91	102	115	130	146	165	186	210	236	266	300	338

Source: Bhutan Labour Market Study, 2009

5.2.0 HRD Imperative

5.2.1 If this sector has to be a vibrant and vital sector of the economy, it must be supported by qualified, professional and competent human resources. Educational qualification of people working in hotels and restaurants is on lower side. There is a strong need to

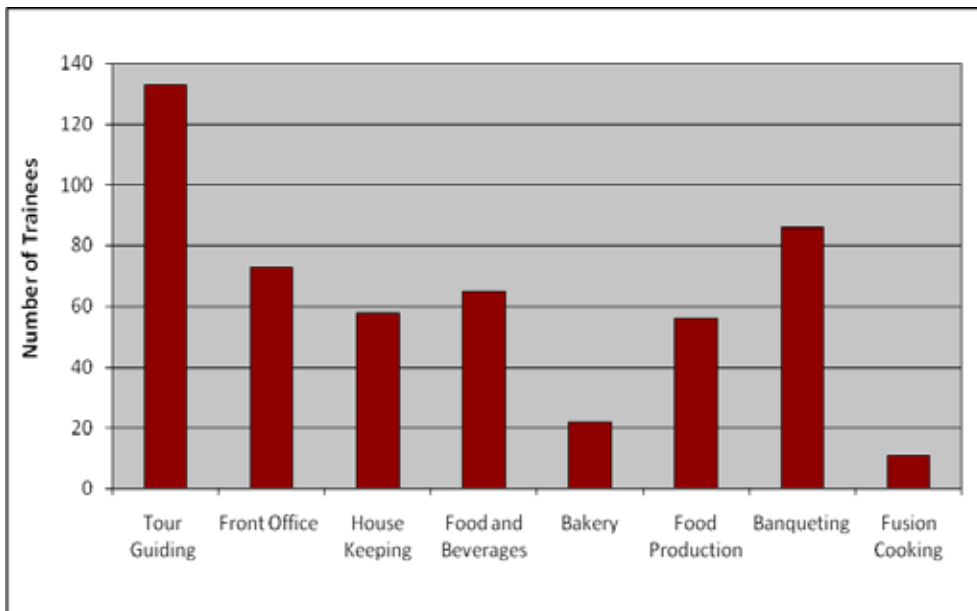
upgrade education and skills among people as international tourists visiting Bhutan are highly qualified and well-educated. Table 5.3 shows that almost 80% people have maximum education of junior high school, while none has first year degree qualification. As a result, there is a need for providing basic education to job seekers.

Table 5.3: Level of Education (In Percentage)

Level of Education	Percentage
No Education	42.90
Non-formal	0.0
Lama/ Gaylong/ Gomchen	7.1
Primary	14.3
Junior	14.3
High	14.3
High Secondary	7.1
First Year Degree And Above	0.0

Source: Sustainable Tourism Development Strategy Bhutan, October 2005

- 5.2.2 Information collected from tourists shows that they would like to have greater variation in food, better and cleaner toilets and improvement in hotel standards among other things. This clearly shows that more workers need to be trained in the areas of cooking, housekeeping, front-desk services and customer service.
- 5.2.3 Tourism Council of Bhutan (TCB) is the main agency responsible for development and promotion of tourism in Bhutan. The TCB is involved in development of curricula for different diploma programmes. It has a Training Unit that conducts diploma level training. The Royal Government in collaboration with the Austrian Government plans to set up the Hotel Tourism Management and Training Institute (HTMTI). It is under construction but has already started functioning beginning 2010. Initially, it is starting off with provision of diploma education and is likely to also offer degree level education in future. The problem with the instructors of the Training Unit of TCB, who will later be transferred to the HTMTI, is that although they have general bachelor's degree but they possess only diplomas in tourism and hospitality field.
- 5.2.4 Figure 5.2 shows training programmes conducted by the Training Unit of Tourism Council of Bhutan. The Training Unit trained most people in tour guiding area, followed by banqueting. As most tourists visit Bhutan for eco- and cultural tourism, availability of tour guides is critical. Other training courses conducted by the Training Unit fall in the areas of food and beverages, housekeeping and front desk.

Figure 5.2: Number of Trainees by Different Training Programmes Conducted by the TCB

Source: *International Tourism Monitor, Annual Report- 2007, Bhutan*

5.2.5 Based on perusal of documents, review of literature and interviews, the following HRD needs of the tourism sector are identified:

- Hotel management
- Tour operations and guiding
- Food production
- Beverages
- Banqueting
- Hygiene and sanitation
- Equipment management
- Housekeeping
- Office administration
- Front office management
- Bakery and confectionary
- Cultural knowledge & Bhutanese iconography
- English language competence
- Host service training for immigration, police, and others
- Safety and emergency medical care
- Environmental sensitivity and knowledge of local laws
- Traditional handicrafts
- HRM in hospitality and tourism
- Sales and marketing
- Finance and accounts
- Various management skills (see HRD needs in the previous chapter)
- Tourism entrepreneurship

5.3.0 HRD Services

5.3.1 Once HRD needs are identified, it is important to explore the availability of HRD services. Table 5.4 describes HRD services in general and professional education, vocational education and training and development domains and their availability in terms of in-country and ex-country and over short- and long-term period. It is evident from Table 5.4 that only certificate level vocational education is available in the tourism sector. It is expected that diploma education will also be available by the middle of the Tenth Plan. In short-term perspective, Bhutan will depend on ex-country educational institutions for diploma and degree education. Table 5.4 also shows that for certain technical trades, like electrical, plumbing, etc., HRD services are available through the TTIs. In-service training and development support for both workers and managers is not available. More importantly, educational base for entrepreneurship development is absent. Table 5.4 also shows that in the long term requisite HRD service should be available if certain HRD institutions are established.

Table 5.4: HRD Services in Short- and Long-term Horizon for the Tourism Sector

HRD Services		Time Horizon			
		Short-term Availability		Long-term Availability	
Place of HRD Service		In-country	Ex-country	In-country	Ex-country
Education	Degree	No	Yes	Yes	No
	Diploma	No	Yes	Yes	No
	Certificate	Yes	Yes	Yes	No
Vocational Education (TTIs)	Certificate	Yes	No	Yes	No
In-Service T&D for Workers	Technical	No	No	Yes	No
	Behavioural	No	No	Yes	No
In-Service T&D for Managers	Technical	No	Yes for some	Yes	Yes for some
	Managerial	No	Yes for some	Yes	Yes for some
Entrepreneurship Development		Yes for some	No	Yes	

5.4.0 Strategies for Implementation

General and Technical Education

- 5.4.1 This section focuses on strategies for meeting the HRD needs identified in both education and training & development domains for the tourism sector. The Hotel Tourism Management and Training Institute (HTMTI) should be the main institution for providing professional education at diploma and degree level. It should be developed as the centre of excellence and requisite resources should be provided to it so that it can emerge as one of the important educational institutions in South Asia region. The Institute should be affiliated to an international university with a view to have the highest academic standards. Or else it should seek accreditation from an international accreditation body at its earliest. This will help the Institute in sustaining high academic quality. It will also increase the employability of its graduates across different countries.
- 5.4.2 The number of slots in the diploma and degree courses of HTMTI should be at par with international benchmark so that the economy of scale can be achieved. It is desirable that a good number of slots in HTMTI should be allocated to international students so that it develops international character on the one hand and is able to generate additional revenue on the other. Intake of international students will help in increasing quality and providing cross-cultural experience to the Bhutanese students.
- 5.4.3 The quality of instruction in any academic institution chiefly depends on quality, experience and exposure of its faculty. Therefore, faculty development should be one of the top priorities of the Institute. Wherever in-country quality faculty is not available, ex-country faculty should be hired on contract basis. As the Institute will grow, some of its own graduates will be able to enter the faculty body. Those faculty members who need additional qualifications should be sent for upgradation to eminent institutions and universities. Over a period of time, the Institute will be able to develop full in-country capacities. Faculty members should also be sent for international seminars, conferences and advanced training programmes to learn about recent trends in their areas of expertise. They should also be given generous allowance to buy books and journals for their academic use.
- 5.4.4 The marketing of courses should be done aggressively. As discussed in the previous chapters, the Ministry of Foreign Affairs (MoFA) should help the Institute in marketing in the target countries. Further, the Institute needs to create an Office of International Students to cater to the specific needs of foreign students and to provide them support.
- ##### *Training and Development*
- 5.4.5 Right now vocational training is being provided by the Training Unit, the Tourism Council of Bhutan. Most of the training programmes are short in duration, varying from two weeks to six months. The HTMTI is likely to be ready in 2010. Initially, it will offer diploma courses. Realistically it seems that it will be able to launch degree courses towards the end of the Tenth Five Year Plan.
- 5.4.6 It is recommended that a Tourism Vocational Institute (TVI) should be established, preferably by the Ministry of Labour and Human Resources, as it is responsible for vocational

education in Bhutan. This Institute should be established either in Paro or Thimphu so that there is substantive industry-institute interaction. It should offer national certificate courses as well as short-term, pre-service certificate courses for job seekers.

- 5.4.7 In the long-term perspective, it is likely that the private sector institutions will enter certificate and diploma education to cater to the educational requirements of job seekers. These institutions should be encouraged. They can also be given some incentives for a certain period of time. However, they should be accredited for their National Certificate courses by the appropriate agency of Ministry of Labour and Human Resources so that quality education is available to students.
- 5.4.8 In-service training and development for the employees of the tourism sector is equally important. A few large and joint venture hotels take care of training and development of their employees by organising in-house programmes and by sending their employees for on-the-job training to their other properties. By and large, training and development is not a priority for most of the hotels and restaurants because they do not have resources nor their top managers have belief in training and development as a driver of productivity and effectiveness. In short-term perspective, the condition of training and development in this sector is not likely to be rosy. The Training Unit of the TCB should do as much as possible by conducting in-service programmes on no-profit no-loss basis.
- 5.4.9 In the long term, HTMTI should emerge as the apex body for in-service training of managerial and supervisory employees in technical area, while the responsibility of management and leadership training can be taken over by the RIM. Large and joint venture organisations may continue to provide in-house training to their own staff members.
- 5.4.10 Training and development of workers should be done by the proposed Tourism Vocational Institute. Such programmes can be conducted on the basis of nominal cost. However, it is assumed that it will take about three years to establish the institute and its initial focus shall be on certificate courses. Thus, worker training can be implemented only after the completion of the 10th FYP. The development of instructors of the Tourism Vocational Institute should be the responsibility of the HTMTI. As a centre of excellence in education in the tourism sector, the HTMTI should be equipped with the best equipment, library, and human resources.
- 5.4.11 Entrepreneurship education is critical for the growth and development of the tourism sector. As the Royal Government proposes to open new areas for tourism and as the tourist arrival will multiply in the near future, there is a compelling need for availability of entrepreneurs who can promptly respond to these challenges. As of now there is no agency responsible for development of tourism entrepreneurship. Of late, entrepreneurship development role has been shifted from the Ministry of Economic Affairs to the Ministry of Labour and Human Resources. Hence, the MoLHR is the key agency for entrepreneurship development.

5.4.12 Table 5.5 summarises the above recommendations by describing the existing and required HRD institutions. It shows that HTMTI is required at the earliest. Further, there is no institute in the country to offer two year national certificate course in food craft. Hence a new Tourism Vocational Institute is required. Further, there is a need to strengthen Technical Training Institutes. The development of TTIs has already been discussed in the previous chapter. Finally, certificate and diploma institutions in the private sector are likely to come up in long-term as the demand for manpower in the industry will grow. Training and development needs of this sector can be catered to by the HTMTI and the Tourism Vocational Institute in the future.

Table 5.5: The Existing and Required HRD Institutions

Existing HRD Institutions	Required HRD Institutions
Training Unit (Tourism Council of Bhutan)	Hotel Tourism Management & Training Institute (HTMTI)
Training Unit (Tourism Council of Bhutan)	Tourism Vocational Institute (TVI)
TTIs	Strengthened TTIs
No private institution in the tourism sector	A few private institutions offering certificate and diploma courses

CHAPTER SIX

HRD Needs in the Hydropower Sector

6.1.0 The Hydropower Sector: An Analysis

- 6.1.1 Energy is probably the most important factor of national development. It enhances the standard of living and leads to industrialisation in any country. Bhutan, owing to her fast running perennial rivers, mountainous topography and climatic characteristics, has great potential for hydropower energy. With rugged terrain and scattered population, Bhutan does not have competitive advantage in several industries. However, she has plenty of water resources. Further, run-of-the-river technologies used in hydropower generation have minimal negative impact on environment. Hence, hydropower is one sector where she has sustainable competitive advantage and can use this source of energy for its own purpose and earn foreign exchange by exporting it to India, which has a huge market for electricity. It is estimated that the country has hydropower potential of 30,000 MW, of which 23,760 MW is technically feasible. This may result in production of around 100,000 GWh per annum. Bhutan Labour Market Study, 2009 points out that the energy sector is expected to contribute close to half of country's GDP by 2020.
- 6.1.2 There are two types of hydropower projects: bi-lateral (between Bhutan and India) and Bhutanese. Micro hydropower projects fall within the purview of Bhutan Power Corporation (BPC). Large hydropower projects are constructed by the Royal Government and then corporatized and transferred to the Druk Green Power Corporation Limited, which, in turn, is a subsidiary of the Druk Holding and Investments Limited. The Royal Government also encourages FDI in the energy sector. The Tata Group, for instance, has acquired 26% equity in Dagachhu hydroelectric power project. Such strategic partnership not only helps in funding the project but also bringing state-of-the-art technical and managerial know-how into the country.
- 6.1.3 Table 6.1 describes share of different sectors in the GDP between years 2001 and 2006. It is evident that after the RNR sector, electricity and construction are the most important sectors of the economy.

Table 6.1: Share (In Percentage) of Gross Domestic Product in the Years 2001 and 2006

Sector	2001	2006
Agriculture, livestock & forestry (RNR)	26.4	21.4
Mining and quarrying	1.8	2.3
Manufacturing	8.1	7.1
Electricity and water	10	12.4
Construction	16.7	14.5
Wholesale and retail trade	4.6	5.7
Hotels and restaurants	0.5	0.7
Transport, storage and communication	9.1	10.8
Finance and Insurance	4	5.4
Real estate and dwellings	2.8	2.8
Community and social services		
Public administration	9.9	9.1
Education and health	3.4	3
Private social, personal services	0.4	0.5
Plus: Taxes net of subsidies	2.4	4.3

Source: Statistical Yearbook of Bhutan 2007

- 6.1.4 By 2007, installed power capacity of Bhutan was 1,489 MW and it is likely to reach 6,000 MW by 2020. Hydropower shall be the largest contributor to the economy in the Tenth FYP. Employment opportunities in the hydropower sector are limited. Once a power station is commissioned, only a few people are required to operate and maintain it. Nonetheless, a power station creates many indirect jobs and enriches the economic lives of local people.
- 6.1.5 The Tenth Five Year Plan has the following major targets for the hydropower industry:
- Increase energy sector share of GDP to 30%
 - Enhance revenues derived from electricity to 60% of total national revenue
 - Expand national electrification coverage to 85%
 - Expand rural electrification coverage to 84%
 - Expand hydropower installed capacity to 2,705 MW
- 6.1.6 Tables 6.2 and 6.3 show manpower requirements in hydropower sector till 2020. As there is no major power project starting till 2015, there will be hardly any new manpower requirements between 2010 and 2014. However, some manpower requirements will be in the power transmission and distribution sector.

Table 6.2: Estimated Incremental Manpower Requirements in Power Generation till 2020

	2009	2015	2016	2017	2018	2018	2019	2020
Engineers	75	75	75	75	75	75	75	75
Supervisors	15	15	15	15	15	15	15	15
Workmen	135	135	135	135	135	135	135	135

Source: Bhutan Labour Market Study, 2009

Table 6.3: Estimated Incremental Manpower Requirements in Power Transmission and Distribution till 2013

	2008	2009	2010	2011	2012	2013
Engineers	19	19	19	19	19	19
Supervisors	29	29	29	29	29	29
Workmen	49	49	49	49	49	49

Source: Bhutan Labour Market Study, 2009

6.2.0 HRD Imperative

6.2.1 Hydropower companies are large organisations. They conduct some HRD programmes for their employees. However, they do not have regular facilities or an institution for training and development.

6.2.2 Based on review of documents, literature and interviews, the technical needs of the hydropower sector are identified. The common managerial needs have already been identified in the fourth chapter. The technical needs are listed below:

- Hydropower execution
- Renewable energy and distributed generation
- Micro hydropower
- Water resource management
- Disaster management
- Hydrological analysis and planning
- Hydrological modelling
- Geomatics engineering applications

6.3.0 HRD Services

6.3.1 In this section, the availability of HRD services in the hydropower sector is examined. Table 6.4 describes HRD services in technical and vocational education and training, and development domains and their availability in terms of in-country and ex-country and over short- and long-term period. It is evident from Table 6.4 that certificate, diploma and limited degree level education is available. Doctoral and masters education is conspicuous by its absence.

- 6.3.2 Degree education is offered only in civil and electrical engineering areas. Business administration undergraduate degree is offered by the Gaeddu College of Business Studies. Diploma education is available in electrical, mechanical and civil areas. Certificate education is available in construction, electric and automobile engineering areas. However, there is lack of courses in heavy vehicle operations and maintenance in the TTIs. Such courses are quite important for the construction industry.

Table 6.4: HRD Services in the Short- and Long-term Horizon for the Hydropower Sector

HRD Services		Time Horizon			
		Short-Term Availability		Long-Term Availability	
Place of HRD Service		In-country	Ex-country	In-country	Ex-country
Education	Ph.D.	No	Yes	Yes	Yes
	Masters	No	Yes	Yes	Yes
	Degree	No	Yes	Yes	No
	Diploma	No	Yes	Yes	No
	Certificate	Yes	No	Yes	No
In-Service T&D for Workers	Technical	No	No	Yes	No
	Behavioural	No	No	Yes	No
In-Service T&D for Managers	Technical	No	Few	Yes	Few
	Managerial	No	Few	Yes	Few

6.4.0 Strategies for Implementation

Technical Education

- 6.4.1 The College of Science and Technology (CST) and the JNP are major providers of tertiary technical education. The JNP needs to increase the slots in the existing courses as there will be a greater demand for junior engineers in the future. The CST should diversify and offer more courses, such as electronics and communication and instrumentation and control. It should also offer masters and doctoral level courses relevant for the hydropower sector. It can also attract international students in its degree and masters courses to ward off the problem of limited domestic demand for technical graduates.

Training and Development

- 6.4.2 The CST is mainly engaged in technical education. It conducts some training programmes for in-service civil servants. However, it does not have hostel facility for the participants. Student hostel is sometimes used for training during vacation. It can significantly help hydropower sector managers by conducting more training and development programmes.
- 6.4.3 The CST should also collaborate with international academic and training institutions in civil engineering field to offer executive development courses. Presently CST has a few

faculty members and their experience in training and development is limited. Therefore, the college has to build its capacity over a period of time. It should closely interact with the hydropower organisations to build a mutually rewarding relationship. The managerial needs can be met by RIM.

- 6.4.4 Table 6.5 summarises the recommendations made above. It depicts that CST needs to diversify its courses and also commence masters courses relevant for the hydropower sector. The CST should gear up to offer more short-term training programmes alone and in collaboration with international institutions and training organisations. The management graduates for the sector will be available from the Gaeddu College of Business Studies and the RIM.

Table 6.5: The Existing and Required HRD Institutions

Existing HRD Institutions	Required HRD Institutions
No degree courses in mechanical engineering, instrumentation and control subjects in the CST No course in architecture and urban planning	Degree, masters, and doctoral courses should be added in the CST
JNP (Diploma courses in civil, electrical and mechanical engineering)	More slots and new courses
No MBA programme BBA at Gedu College of Business Studies	MBA programme at the RIM
Technical Training Institutes (TTIs)	Strengthened TTIs Construction machinery courses
Entrepreneurship Promotion Centre, Department of Industry, Ministry of Economic Affairs	MoLHR, private institutions and the RIM

CHAPTER SEVEN

HRD Needs in the Construction Sector

7.1.0 The Construction Sector: An Analysis

- 7.1.1 Most of the construction work in Bhutan is done for the Royal Government. Before 1988, construction was directly done by the Royal Government. Now it is totally privatised. The Construction Development Board (CDB), the Ministry of Work and Human Settlement, is the regulatory body for the construction industry. The CDB is involved in registration, classification and monitoring of contract firms. There were 9,775 contract firms engaged in construction in 2006. Out of these contract firms, 204 firms were Class A, 163 firms were Class B and 1,224 firms were Class C. The rest were petty contract firms. The construction work is related to four categories: Roads and bridges; Bhutanese painting; buildings; and, power and telecom. Almost all contract firms register for all four types of the construction activities. Large hydropower station construction is mainly done by international construction companies. Several sub-contract works are done by Bhutanese contract firms. Further, there are about 25 construction consulting firms in Bhutan. They are also registered and regulated by the CDB.
- 7.1.2 There are a large number of people employed in the construction sector. However, most of the workers in this sector are foreigners. Foreign workers are allowed to work in urban areas only. There is a large temporary population of foreign workers. Several factors contribute to this phenomenon. First, Bhutanese people do not want to do low skill, laborious jobs that are low paying. Second, skilled workers in this sector are not available in large numbers in Bhutan. Finally, contract firms find it easier to employ foreign workers whom they can use at their will. Table 7.1 shows that there are 18,183 foreign workers employed in the construction industry. These data are based on labour net information which is dynamic in nature. This information keeps on changing from time to time. Most of these workers were non-skilled workers. However, a substantial number of workers were skilled who can be replaced by Bhutanese workers

Table 7.1: Distribution of Workers by Occupation in the Construction Industry in August, 2008

Occupation	Number
Binder	12
Blaster	39
Blaster helper	45
Carpenter	2685
Concrete worker	8561
Floor layer	10
Mason	5689
Painter	116
Plasterer	40
Plumber	77
Rigger	155
Rod Binder	719
Roofer	35
Total	18,183

Source: Labour Net, June 2009

- 7.1.3 High-end design and engineering works are done by foreigners, while middle level works like supervision and administration are done by Bhutanese. Low skilled work is again done by foreigners. The industry is facing a skills-crunch. Further, quality foreign engineers are also difficult to get while local talent is unavailable. The employment trend in this sector shows that professionals as well as skilled workers can find lucrative opportunities in the construction sector. The Tenth FYP has aggressive targets for the construction sector. The annual growth target for construction sector is 10.9%.
- 7.1.4 The Tenth Five Year Plan has the following major targets for the roads and bridges sector:
- Ensure that 75% of rural population live within half-day's walk from the nearest road
 - Construction and upgradation of 247 km of southern east-west highway
 - Construction of 20 southern east-west highway bridges
 - Construction of 145 km of national highway
 - Construction of 20 national highway bridges
 - Double-laning of 40 km of national highway
- 7.1.5 Bhutan Labour Market Study, 2009 created three scenarios for incremental manpower requirements in the construction industry. These scenarios were: optimistic, most like and worst case. We provide their estimates for the most likely scenario in Table 7.2. It is evident from Table 7.2 that there will be substantial manpower requirements in the construction sector till 2020.

Table 7.2: Estimated Incremental Manpower Requirements in the Construction Industry (Most Likely Scenario) till 2020

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Engineers	129	133	137	141	146	151	156	161	167	173	179	185
Managers	57	59	62	64	67	70	73	76	79	82	86	89
Accountants	34	35	36	37	39	40	42	43	45	46	48	50
Site Supervisors	121	126	131	136	141	147	152	158	165	171	178	185

Source: Bhutan Labour Market Study, 2009

7.2.0 HRD Imperative

7.2.1 The Tenth FYP document remarks, “There is an acute shortage of qualified and trained engineers in the areas such as structural engineering, engineering geology, environment management, survey and design, contract management, quality control, etc.” In the context of urban development, there is dearth of qualified manpower, such as urban planners, architects, sociologists and economists. As the construction sector is pivotal for the Bhutanese economy, the shortage of manpower can be perilous for the economic growth. In addition, there is a need for life-long learning by people as the construction technologies are continuously changing.

7.1.2 In Bhutan, Class A and B contract firms are large ones. However, Class C and petty contract firms are run by small entrepreneurs. Managers and supervisors in Class A and B contract firms need training support, while Class C and petty contract firms require training for their managers as well as entrepreneurs in the managerial and technical areas. Within Class A and B categories, only those who are employed in high tech areas need regular training. Few contract firm owners have engineering education and only a few of them have commerce education. Anyway managers and workers engaged in regular construction have limited technical training needs.

7.2.3 Based on review of documents, literature and interviews, the technical needs of the construction sector are identified and listed below:

- Construction management of highway projects
- Structural engineering
- Contracts management
- Funding of construction projects
- Construction project management
- Computerised construction project management
- Building services and facilities management
- Quality, safety and productivity in construction projects
- Construction estimation and cost management

- Estimation and tendering
- Value engineering in construction
- Occupational health and safety hazards
- Land and property management
- Farm road construction
- Bridge engineering
- Geographical information system for road construction
- Effective dispute management/arbitration
- Technical auditing
- Construction material testing and calibration
- Condensed course on survey engineering
- Condensed course on electrical engineering
- Road feasibility and planning
- Road safety audit
- Embankment construction in soft soil
- Road traffic safety and demand management
- Design of steel and concrete bridges
- Stores management
- Tunnelling engineering
- Controlled blasting
- Environment management plan & bioengineering
- Geotechnical & spot hazard mapping
- Standardization in construction
- Building construction & maintenance supervision
- Building materials & construction
- Quality testing of electrical equipment & materials
- Environmental impact assessment
- Environmental monitoring/auditing

7.3.0 HRD Services

- 7.3.1 In this section, the availability of HRD services in the construction sector is examined. Table 7.3 describes HRD services in technical education, vocational education and training and development domains and their availability in terms of in-country and ex-country and over short- and long-term period. It is evident from Table 7.3 that certificate, diploma and limited degree level education is available.
- 7.3.2 Degree education is offered only in civil and electrical engineering areas. Diploma education is available in electrical, mechanical and civil areas. Certificate education is available in construction, electric and automobile engineering areas. However, there is lack of courses in heavy vehicle operations and maintenance in the TTIs. Such courses are quite important for the construction industry.
- 7.3.3 The CDB has conducted some workshops in tendering, procurement and quality areas in the last few years. However, they were very limited in number. The CDB itself is a young

organisation with limited capacity to help the construction industry in the HRD field. It is a regulatory and monitoring body, not an HRD organisation. The Construction Association of Bhutan (CAB) is the professional body of contract firms. Its main task is advocacy for the industry. It aims to support its members in HRD. In 2007-08, it conducted only one training programme in the area of construction management. Hence, it is evident that HRD efforts are insignificant in the construction industry.

Table 7.3: HRD Services in the Short- and Long-term Horizon for the Construction Sector

HRD Services		Time Horizon			
		Short-Term Availability		Long-Term Availability	
Place of HRD Service		In-country	Ex-country	In-country	Ex-country
Education	Ph.D.	No	Yes	Yes	Yes
	Masters	No	Yes	Yes	Yes
	Degree	No	Yes	Yes	No
	Diploma	No	Yes	Yes	No
	Certificate	Yes	No	Yes	No
In-Service T&D for Workers	Technical	No	No	Yes	No
	Behavioural	No	No	Yes	No
In-Service T&D for Managers	Technical	No	Few	Yes	Few
	Managerial	No	Few	Yes	Few
Entrepreneurship Development		No	No	Yes	

7.4.0 Strategies for Implementation

Technical Education

7.4.1 The College of Science and Technology (CST) and the JNP are major providers of tertiary technical education in this sector. JNP needs to increase the slots in the existing courses as there will be a greater demand for junior engineers in the future. CST should diversify and offer more courses.

Training and Development

7.4.2 CST is mainly engaged in technical education. It conducts some training programmes for in-service civil servants. It does not have hostel facility for the participants. It can significantly help construction sector managers and entrepreneurs by conducting more training and development programmes for them. CST should also collaborate with in-

ternational academic and training institutions in civil engineering field to offer executive development courses. Presently CST has a few faculty members and their experience in training and development is limited. Therefore, the college has to build its capacity over a period of time.

- 7.4.3 The Construction Association of Bhutan (CAB) should play a proactive role in human resource development and organise sector specific training programmes. RIM should focus on the development of entrepreneurs in the construction sector and also conduct training programmes to meet the needs of petty contractors.
- 7.4.4 The training and development needs of workers of the construction sector can be met by a TTI. Since construction sector is a major contributor to the economy, at least one TTI should be developed to specialise in this area. The training needs of construction sector are specialised. The construction organisations, therefore, should organise in-company training programmes for their employees.
- 7.4.5 Table 7.4 summarises the recommendations made above. It depicts that CST needs to diversify its courses and also commence masters courses relevant for the constructing sector. CST should gear up to offer more short-term training programmes alone as well as in collaboration with international institutions and training organisations. Further, RIM can meet managerial T&D needs and need for entrepreneurship development. Basic entrepreneurship training to skilled workers can be provided by the MoLHR.

Table 7.4: The Existing and Required HRD Institutions

Existing HRD Institutions	Required HRD Institutions
Few degree subjects in the CST No course in architecture and urban planning	Degree, masters, and doctoral courses should be added in the CST
JNP (Diploma courses in civil, electrical and mechanical engineering)	More slots and new courses
Weak role of the CAB in HRD interventions	Strong role of the CAB in HRD interventions
Technical Training Institutes (TTIs)	Strengthened TTIs Construction machinery courses
Entrepreneurship Promotion Centre, Department of Industry, Ministry of Economic Affairs	MoLHR, private institutions and the RIM

CHAPTER EIGHT

HRD Needs in the Information and Communication Technology (ICT) Sector

8.1.0 The ICT Sector: An Analysis

- 8.1.1 Human society has moved from an agrarian to industrial to knowledge society. Information and Communication Technology (ICT) has changed the face of the world in the last five decades. ICT is an amalgamation of computer technology and telecommunication. When the power of accelerating computing got combined with seamless telecommunication, information revolution occurred. The world is today much more integrated and there is seamless networking among countries, organisations, and individuals. ICT has not only contributed to high industrial productivity but also to poverty alleviation.
- 8.1.2 Digital revolution has led to reduction in the cost of computer and telecommunication and contributed to new industries that have added to higher standards of living. Internet is the pivot of information society. It has emerged as a platform for new ways of doing business. Moreover, it has become a better way for governments to deliver public services. Finally, it has emerged as the largest library of the world, enabling lifelong learning for many. The world will be tremendously affected in the future by the new trends in the ICT. Consequently, no country can afford to ignore it.
- 8.1.3 In 2004, Bhutan released her ICT policy known as Bhutan Information and Communications Technology Policy and Strategies (BIPS). The objectives of BIPS are to use ICT for Good Governance, to create info-culture and to develop high tech habitat. The policy not only emphasises the use of the ICT in the government but also the promotion of private ICT industry.
- 8.1.4 The BIPS, *inter alia*, identified infrastructure and human capacity as major challenges in the development of the ICT in the country. Due to limited availability of funds and tough terrains, infrastructure development is a daunting task. Further, there are only a small number of qualified and experienced personnel in this industry.
- 8.1.5 The development of the ICT can be viewed from two perspectives: ICT as an enabler and ICT as an industry. The enabling role of ICT aims at enhancing the productivity and effectiveness of business and government. For example, ICT can help the tourism industry to provide better services to the tourists through on-line reservation, payment, etc. Similarly, it can help the Royal Government to reach citizens in far-flung places, share relevant information with them and provide various services. ICT services can be taken to grassroots level through Community Information Centres (CICs). This can also help Bhutan develop herself as a knowledge-based information society.
- 8.1.6 ICT as an industry has two sub-sectors: IT products and applications and IT Enabled Services (ITES). Product development and applications are highly specialised and complex

businesses. As Bhutan has weak technical background, it does not have competitive advantage in this field. It may take a long time for her to compete in the IT industry.

- 8.1.7 The ITES is one area where Bhutan has some scope to compete. The country has young population. The proficiency of English among the Bhutanese youth is fair. Their accent is neutral. The Royal Government is making efforts to revamp communication infrastructure. The economic policy also aims at attracting FDI in call centre business by offering right incentives to the foreign ITES companies.
- 8.1.8 At present there are three small BPO organisations in Bhutan and one training institute providing BPO training. The major problem before the ITES industry is that BPO organisations in Bhutan are small. Their access to market is limited. Therefore, there is a need to encourage FDI in this sector. India is a major player in the ITES sector. Indian ITES companies will open their business in the country provided there is availability of requisite skill pool that will cater to their needs. Companies will open business not to cater to domestic market which is small but for international market. Bhutan will soon have an IT park in Thimphu that will cater to international market. Further, telecom infrastructure is also being revamped to meet the future demands.
- 8.1.9 Even ITES companies require IT professionals for the requisite technology support. The country needs to develop IT professionals to meet the demand of ITES companies. In addition, the Royal Government and the private and corporate sector organisations will also require competent and qualified IT professionals.
- 8.1.10 The goals for the ICT in the Tenth Plan are:
- Develop ICT infrastructure capable of delivering e-services to all *Gewogs*
 - Implement e-governance
 - Promote ICT industry growth
- 8.1.11 Table 8.1 shows estimated incremental manpower requirements in the ITES industry till 2020. The assumption behind such number is that the ITES industry will start functioning effectively from 2010 once adequate IT infrastructure is available in the country. It is also expected that most jobs will be in customer care and transaction areas. An additional manpower requirement of 1,200 personnel is expected till 2020 in Bhutan. A related sector is telecom which will also generate some manpower requirements. A good number of people, i.e., 372 will be required in e-governance project (Bhutan Labour Market Study, 2009).

Table 8.1: Estimated Incremental Manpower Requirements in the ITES Industry till 2020

	2012	2013	2014	2015	2016	2017	2018	2019	2020
Top Management	3	0	3	0	0	3	0	0	3
Agents	21	93	81	89	96	104	113	123	133
Team Leads	1	1	1	1	1	1	1	1	1
Accounting Staff	1	1	1	1	1	1	1	1	1
Administrative Staff	3	0	3	0	0	3	0	0	3

Source: *Bhutan Labour Market Study, 2009*

8.2.0 HRD Imperative

- 8.2.1 The number of students entering tertiary education is small. Further, few students opt for IT education. The BIPS report (2004) points out that Bhutan has limited HR capacity in the ICT area. Bhutan ICT HRD Master Plan (2007) further acknowledges that compared to the requirement, the supply of ICT professionals is less. The yawning gap is likely to grow in the future as there is lack of tertiary educational institutions providing ICT education.
- 8.2.2 One reason for the short supply of the ICT professionals is the small base of school pass outs. In 2006, 3,737 students passed out from Class XII⁷. Out of this, around 3,000 students entered the tertiary education⁸. Out of this, around 1,100 students can be available for the ICT sector (IT, telecommunication, BPO, general administration, etc.)⁹.
- 8.2.3 Students aspiring to work in the ITES industry need to have high proficiency in English language. Their exposure to the international scenario should also be high. They should be willing to work at odd hours (mostly in the late evenings and nights). They should also be able to cope with high stress associated with the BPO industry.

8.3.0 HRD Services

- 8.3.1 The tasks that BPOs perform are diverse: telemarketing, technical support service, customer support service, insurance processing, data entry and conversion services, book-keeping and accounting and online researching, and form processing. Thus the problem is that there can be no standardised training programme suitable to all the BPOs that can be given to the prospective employees before they are actually absorbed into the company. Education and technical training needs are already identified in Bhutan ICT HRD Master Plan and Strategies 2007 (BIHMPS) in Annexure 5.

⁷ General Statistics, 2007, Ministry of Education, the Royal Government of Bhutan

⁸ Bhutan ICT Master Plan, 2007, Ministry of Information and Communication, the Royal Government of Bhutan

⁹ Ibid

- 8.2.2 In this section, the availability of HRD services in the ICT sector is examined. Sherubtse College provides B.Sc. (Hons.) course in Computer Science. The Royal Institute of Management offers a diploma course. It is also a host for CISCO Networking Academy. There are around twenty odd private training institutions providing short-term vocational courses varying from one month to eighteen months. These institutions are mainly located in Thimphu and Phuentsholing. The Technical Training Institute, Khuruthang provides a two year certificate course in IT, while Technical Training Institute, Rangjung offers a two year certificate course in Computer Hardware and Networking.
- 8.2.3 Table 8.2 describes HRD services in general and professional education, vocational education and training and development domains and their availability in terms of in-country and ex-country and over short- and long-term period in the ICT sector. It shows that currently masters and doctoral education is not available. There is only one course in Computer Science. Diploma education is only for the civil servants. There are two TTIs providing certificate courses in hardware and networking areas. In addition, there are several private IT education institutions. However, they are local in nature and are not franchises of internationally recognised IT training companies. Nor are they accredited. As a result, their quality is debatable.

Table 8.2: HRD Services in the Short- and Long-term Horizon for the ICT Sector

HRD Services		Time Horizon			
		Short-Term Availability		Long-Term Availability	
Place of HRD Service		In-country	Ex-country	In-country	Ex-country
Education	Ph.D.	No	Yes	Yes	Yes
	Masters	No	Yes	Yes	Yes
	Degree	Yes	Yes	Yes	No
	Diploma	Yes	Yes	Yes	No
	Certificate	Yes	No	Yes	No
In-Service T&D for Professionals	Technical	Some	Few	Yes	Few
	Managerial	No	Few	Yes	Few
Entrepreneurship Development		No	No	Yes	

8.4.0 Strategies for Implementation

Technical Education

- 8.4.1 Sherubste College and Royal Institute of Management offer degree course in Computer Science and Diploma course in Information Management System (DIMS), respectively. Certificate courses are offered by the TTIs (Khuruthang and Rangjung) and private IT education institutions. Most of the graduates of Sherubtse College and the Royal Institute of Management are absorbed by the Royal Government. As a result, the availability of graduates for the private sector is small.
- 8.4.2 There is a strong need to introduce new courses in IT and telecommunication areas. These courses are: Information Technology, electronics and communication, and software engineering. The requirements of the agents in the ITES industry will be filled by general education graduates. However, as discussed earlier in this chapter, the ITES industry also needs IT professionals to support operations.
- 8.4.3 Courses in the mentioned fields are being taught in the tertiary educational institutes but they are not very specific to market needs and demand. Hence, training institutes should be focussed to impart practical skills with recognised international certificates (e.g., CCNA, Redhat, Oracle, etc.) which cater to the requirements of the market. Every graduate must undergo training in specific IT field and get certification that is internationally recognised.
- 8.4.4 Various studies^{10,11} have pointed out that the Bhutanese students do not show much interest in mathematics and science subjects. For IT and engineering courses, these two subjects are critical. If a student does not have in-depth knowledge and understanding of science and mathematics, he will not be able to master IT and engineering skills. Hence, the quality and rigour of higher secondary education in science and mathematics becomes very important as an input for tertiary technical education.

Training and Development

- 8.4.5 The technical training needs in the ICT sector are dynamic. Innovation in hardware and software are very fast. As a result, contents of training programme constantly change. The responsibility of technical training in ICT basically lies with the organisations.
- 8.4.6 Table 8.3 summarises recommendations made above. It shows that there is a need to introduce IT, electronics and communication and software engineering courses. Equally important, there is a need for masters courses. These courses can be offered by the CST. The Gaeddu College of Business Studies shall provide BBA graduates, while the RIM shall provide MBA graduates for high end ITES companies. The Department of Human Resources, the MoLHR should continue to support private IT & ITES companies and edu-

¹⁰ Bhutan ICT HRD Master Plan and Strategies 2007, Ministry of Information and Communication

¹¹ The Quality of School Education in Bhutan, Draft Report, iDiscoveri Education and the Royal Education Council, July 2008

ational institutions. It should focus more on the training of trainers so that internal HRD capacities are built.

Table 8.3: The Existing and Required HRD Institutions in the ICT Sector

Existing HRD Institutions	Required HRD Institutions
No degree courses in IT, Electronics and Communication, Software engineering subjects in the CST	Degree, masters, and doctoral courses in the ICT should be added in the CST
JNP (Diploma courses in civil, electrical and mechanical engineering)	More slots and a new course in Electronics and Communication
Sherubtse College B.Sc. (Hons.) Computer Science	Sherubtse College Private institutions
No MBA programme BBA at Gaeddu College of Business Studies	MBA programme in the RIM
TTIs Other IT education institutions	Stronger TTIs Some IT franchises of internationally recognised IT education companies
Department of Human Resources, the Ministry of Labour and Human Resources (Short-term and long-term education and training)	No change

CHAPTER NINE

HRD Needs in the Financial Services Sector

9.1.0 The Financial Services Sector: An Analysis

- 9.1.1 Financial sector consists of banks, investment funds, and insurance companies. It has less direct impact on an economy. However, its indirect impact is enormous. It mobilises savings and allocates credit across space and time. Moreover, it provides not only payment services, but more importantly products which enable firms and households to cope with economic uncertainties by hedging, pooling, sharing, and pricing risks. An efficient financial services sector reduces the cost and risk of producing and trading goods and services and thus makes an important contribution to raising standards of living in a country.
- 9.1.2 Table 9.1 shows that the contribution of financial sector to the GDP is on increase. The share of finance and insurance in the GDP increased from 4% to 5.4% from 2001 to 2006. Table 9.2 describes various financial organisations and their manpower in Bhutan. The Royal Monetary Authority is the central bank of Bhutan. Bhutan National Bank and Bank of Bhutan were the two major banks in the country till 2009. Tashi Bank Limited and Druk Punjab National Bank were established following liberalisation of the financial sector, which allowed both domestic and international players to enter the Bhutanese market. Royal Insurance Corporation of Bhutan Ltd. and the newly established Bhutan Insurance Limited are the two insurance companies currently operating in the country. Bhutan Development Finance Corporation Ltd. is mainly involved in giving loans to farmers and small entrepreneurs. Almost all organisations offer housing loan services, including National Pension and Provident Fund. Banks have their securities companies that do trading on the stock exchange. Further, with the consent of the Heads of State of all SAARC countries, the SAARC Development Fund Secretariat has been established in Thimphu in 2010. Hence, the financial services sector is poised for rapid growth.

Table 9.1: Contributions of Different Sectors of the Economy in the GDP

Sector	2001	2006
Agriculture, livestock & forestry	26.4	21.4
Mining and quarrying	1.8	2.3
Manufacturing	8.1	7.1
Electricity and water	10	12.4
Construction	16.7	14.5
Wholesale and retail trade	4.6	5.7
Hotels and restaurants	0.5	0.7
Transport, storage and communication	9.1	10.8
Finance and Insurance	4	5.4

Real estate and dwellings	2.8	2.8
Community and social services		
Public administration	9.9	9.1
Education and health	3.4	3
Private social, personal services	0.4	0.5
Plus: Taxes net of subsidies	2.4	4.3

Table 9.2: Organisations in the Financial Services Sector and Number of Employees

Sl. No.	Organisation	Number of Employees
1	Royal Monetary Authority	180
2	Bank of Bhutan Ltd.	600
3	Bhutan Development Finance Corporation Ltd.	206
4	Bhutan National Bank Ltd.	319
5	Royal Insurance Corporation of Bhutan Ltd.	190
6	National Pension and Provident Fund	99
7	SAARC Development Fund (Proposed)	Not Applicable

Source: Department of Employment, 2008

9.1.3 Bhutan Labour Market Study, 2009 projected that real GDP growth rate between 2007 and 2014 will be 9 per cent, while real GDP growth rate between 2015 and 2020 will be 7 per cent and thus projected the size of GDP over different years, as shown in Table 9.3. From these figures, the size of financial services assets was estimated. On the basis of financial services assets, manpower requirements for the financial services sector till 2015 is estimated as shown in Table 9.4.

Table 9.3: Estimated Financial Services Industry Size

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Current GDP (Nu Million)	61400	69996	79796	90967	103702	118221	134771	150944	169057	189344	212066	237513
Financial Services Assets (Nu Million)	46822	54252	62843	72778	84263	97536	112875	128306	145815	165679	188209	213762

Source: Bhutan Labour Market Study, 2009

Table 9.4: Estimated Incremental Manpower Requirements in the Financial Services Sector between 2013 and 2015

	2013	2014	2015
Management	4	3	3
Accountants	19	18	18
Support Staff	40	39	39

Source: Bhutan Labour Market Study, 2009

9.2.0 HRD Imperative

9.2.1 The financial services sector requires highly qualified and competent manpower. Almost in all financial institutions, the Royal Government has substantial equity. Financial corporations are preferred by job seekers over private organisations. However, proper government jobs remain the first preference of Bhutanese youth. The recruitment process of employees in the corporations is akin to the Royal Government. The level of skills in the financial services sector is on lower side compared to international standards. As most financial institutions plan to upgrade their technology infrastructure, there will be a need to upgrade IT skills of people. Most financial institutions are unable to pay sufficient attention to HRD and depend on the Royal Government for ex-country training. There is a strong need to professionalise manpower and to invest in human capital in this sector.

9.2.2 The following training and development needs are identified in this sector:

Banking

- Effective supervision
- Bank office operations
- Debt management
- Fraud and forgeries
- Letter of credit and collections
- Banking laws
- Development banking
- International banking
- Credit management
- Relationship management
- Financial derivatives
- Treasury management
- Financial statements
- Negotiation in banking services
- Marketing for branch managers
- Forex management
- Market risk management
- Project appraisal and financing
- Lending and recovery from farmers
- Financial markets

Insurance

- Underwriting
- Insurance fraud
- Actuarial sciences
- Motor insurance
- Effective claims management

9.3.0 HRD Services

9.3.1 The financial services sector basically requires commerce, management and engineering graduates. Table 9.5 shows that educational services up to degree level in commerce, management and engineering are available. However, masters degree in any discipline is not available. MBA education is critical for this sector. Chartered Accountants are also required by the financial services sector. Further, it is evident from the following Table that both in-country technical and managerial training service is inadequate.

Table 9.5: HRD Services in the Short- and Long-term Horizon for the Financial Services Sector

HRD Services		Time Horizon			
		Short-Term Availability		Long-Term Availability	
Place of HRD Service		In-country	Ex-country	In-country	Ex-country
Education	Ph.D.	No	Yes	Yes	Yes
	Masters	No	Yes	Yes	Yes
	Degree	Yes	Yes	Yes	No
In-Service T&D for Professionals	Technical	No	Few	Yes	Few
	Managerial	No	Few	Yes	Few

9.4.0 Strategies for Implementation

9.4.1 This section focuses on strategies for implementation of HRD needs identified in both education and training & development domains for the financial services sector. Gaeddu College of Business Studies is the main provider of commerce and management graduates. The College of Science and Technology is the only source of engineering graduates. Financial institutions basically depend on ex-country training for both technical and managerial requirements. The RIM will be a source of MBA graduates. The College of Science and Technology needs to diversify and increase its slots to meet greater needs of engineering graduates.

9.4.2 Managerial training needs will be served by RIM. For technical training needs, organisations will have to make in-house efforts or depend on ex-country training. Table 9.6 depicts the existing and required HRD institutions in the financial sector. The action plans for these institutions have already been discussed in chapter four.

Table 9.6: The Existing and Required HRD Institutions

Existing HRD Institutions	Required HRD Institutions
Only two degree engineering courses at the CST	More degree courses in the engineering should be added in the CST
Sherubtse College (B.Com.)	Gedu College of Business Studies Private institutions
No MBA programme BBA at Gedu College of Business Studies	MBA programme in the RIM

CHAPTER TEN

HRD Needs in the Social Sectors

10.1.0 The Social Sectors: An Analysis

10.1.1 Investment in education and health results in creation of human capital in a country. There is strong evidence that education leads to poverty reduction. In the same vein, poor access to affordable health care makes people more vulnerable to poverty. Good health not only leads to personal well-being but also to economic growth and industrial productivity. Bhutan in the past has substantially invested in social sectors, like education and health. Consequently, the nation has achieved the status of medium human development country. In the last Five Year Plan, the country performed well on different social sector indices. The Tenth Plan also emphasises the importance of social sectors and has earmarked substantial amount of budget outlay for them.

School Education

10.1.2 Article 9.15 of the Constitution of the Kingdom of Bhutan states, “The State shall endeavour to provide education for the purpose of improving and increasing knowledge, values and skills of the entire population with education being directed towards the full development of the human personality.” Further, Article 9.16 avows, “The State shall provide free education to all children of school going age up to tenth standard and ensure that technical and professional education is made generally available and that higher education is equally accessible to all on the basis of merit.”

10.1.3 Bhutan has three types of prevalent education systems: general education, monastic education and non-formal education (NFE). General education is further divided into basic education, higher secondary education and tertiary education. Basic education extends from pre-primary to Class X (11 years of education). The entry age for a child into pre-primary education is six years. Higher secondary education is of two years and tertiary education is of two years onwards.

10.1.4 In the school system, there is also a provision for Bhutanese private schools. Generally, the Bhutanese private schools follow the Bhutanese curricula and examination system. There are some private schools in Bhutan (Around seven). They mostly offer higher secondary education. As only 40 per cent of Class X graduates get admission into Class XI in the government schools, there is a demand for private higher secondary schooling. A few private schools (Around 16) also offer primary education.

10.1.5 The responsibility for tertiary education planning and regulation lies with the MoE, while implementation of tertiary education through the existing institutes and colleges is with the Royal University of Bhutan (RUB). This chapter deals with HRD issues in school education only. In 2008, Bhutan had 261 community primary schools (29,702 students and 1000 teachers), 94 primary schools (24,573 students and 922 teachers), 92 lower secondary schools (49,620 students and 1,691 teachers), 44 middle secondary schools

(32,292 students and 1,177 teachers) and 32 higher secondary schools (20,925 students and 955 teachers)¹².

- 10.1.6 In 2006, Bhutan Board of Examination (BBE) conducted examinations for Classes X and XII. Earlier, these examinations were conducted through an Indian School Examination System. Further, examinations for Classes VI and VIII which were earlier conducted centrally have been decentralised at school levels.
- 10.1.7 Having graduated from Class X, a student has an option to enter into the labour force, vocational education, or higher secondary education. Access to education after Class X, vocational or higher secondary, depends on academic performance in the Board Examination. Class X graduates can also opt for private higher secondary education. Vocational education falls under the Ministry of Labour and Human Resources (MoLHR) and it has already been dealt in chapter four.
- 10.1.8 The Ministry of Education (MoE) has the responsibility for policy development, planning, curriculum development, and implementation of school and continuing education of school teachers. The Department of School Education (DSE) is involved in activities related to school education. It has different divisions to perform various functions. Some of these important divisions are: Curriculum and Professional Services Division (CAPSD); Education Monitoring and Support Service (EMSSD); etc.
- 10.1.9 In the Tenth Plan, there is a focus on consolidation of schools for greater utilisation of resources. In far flung areas, more boarding schools will be encouraged, while day schools will be promoted in the urban and semi-urban areas. Owing to success in primary education, there is now more pressure on middle and higher secondary education infrastructure. Thus, vocational education is also under stress to absorb more students. All the same, quality of education will be the foremost issue in the Tenth Plan. The important targets for the education sector in the Tenth Five Year Plan are as follows:
- Enhance primary net enrolment to near 100 per cent
 - Enhance basic net enrolment to near 100 per cent
 - Enhance enrolment of girls in tertiary institutions to 80 girls for every 100 boys
 - Enhance literacy rate up to 80 per cent
 - Enhance the quality of education in languages, IT, mathematics and science to international levels

Health

- 10.1.10 The Article 9.21 of the Constitution of the Kingdom of Bhutan proclaims, “The State shall provide free access to basic public health services in both modern and traditional medicines.” The constitutional mandate entrusts an important responsibility with the Royal Government. Bhutan has been investing in the health sector considerably in the last four decades. Until 2003, health and education sectors were part of the Ministry of

¹² General Statistics 2008, Policy and Planning Division, Ministry of Education, the Royal Government of Bhutan

Health and Education. The Ministry of Health today has the Department of Public Health and the Department of Medical Services. The health system is decentralised and medical infrastructure is available even in the remote places. The physical infrastructure is a four-tiered network consisting of national referral hospital; regional referral hospitals; district hospitals and basic health units (BHUs). In 2008, there were 29 hospitals and 176 BHUs¹³.

10.1.11 Bhutan has both traditional medicine system, known as *sowa rigpa* (Wisdom of health) and the allopathic system. These two health systems are provided from common units and the citizens have a choice. The traditional medicine system uses golden and silver acupuncture, herbal application, bath and massage therapy. The allopathic system was started in the first Five Year Plan (1962-67). Bhutan became a signatory of the Alma Ata Declaration in 1978 and officially committed to implementation of health care through the primary health care system. In 2002, the Quality Assurance and Standardisation in Health Care Programmes was initiated. It was a major step towards quality delivery of health services.

10.1.12 Bhutan has several achievements to her credit in the field of healthcare. However, there are several challenges before the health system. *Annual Health Bulletin 2008*¹⁴ points out that a significant part of population in Bhutan is young at present and preparation should be made to take care of their health in the future. Further, there is a need to pay attention to the quality of health services. People are satisfied with free health services but they also have higher expectations from the health system. There is a shortage of doctors, super-specialists and nurses.

10.1.13 The Tenth Five Year Plan aims at achieving the health-related goals of MDG plus. It tries to develop healthcare facilities for which people go out of country at present. It intends to develop human capital in the healthcare sector, the lack of which poses a bottleneck in quality service delivery. There are plans to enhance primary health care (PHC) and strengthen secondary and tertiary health services. The important health targets for the Tenth Five Year Plan are as follows:

- Reduce infant mortality rate to 20 per thousand live births
- Reduce MMR to less than 100 per hundred thousand live births
- Enhance life expectancy to more than 70 years
- Bhutan Health Trust Fund (BHTF) to reach 30 million US\$
- Improve proportion of population within 3 hrs. walking distance of a health facility to more than 90 per cent

10.1.14 Table 10.1 shows incremental manpower requirements in the health sector. It shows that while doctors will be slightly in short supply in the long term, nurses and paramedics will be in acute short supply.

¹³ Annual Health Bulletin 2008: Century of Progress in Health, Ministry of Health, the Royal Government of Bhutan

¹⁴ Ibid

Table 10.1: Estimated Incremental Requirements for Doctors, Nurses and Paramedics till 2020

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Doctors	29	30	31	32	33	34	34	35	36	36	36	37
Nurses	57	58	60	62	63	65	66	67	68	68	69	69
Paramedics	153	160	167	175	182	189	195	202	207	213	217	221

Source: *Bhutan Labour Market Study, 2009*

10.2.0 HRD Imperative

10.2.1 The development of human capacity in the educational sector is vital. Primary schooling in Bhutan has produced good results. Consequently, the requirements for faculty and infrastructure for middle and higher secondary education have gone up. As the Tenth Plan has the target of achieving primary net enrolment to near 100 per cent, there will be an accelerating demand for primary teachers. In 2008, there were a total of 5,745 teachers in the school system out of which 91 per cent were trained in the teaching profession. Approximately 11 per cent of teachers in the school system were expatriates, with the majority of them in higher secondary and middle secondary levels¹⁵. These teachers had special skills, like English, maths and IT. Table 10.2 shows that the maximum numbers of people within the Royal Government are employed in the Ministry of Education. A large number of people are also employed with the Ministry of Health.

Table 10.2 Number of Employees in the Royal Government and in the Social Sectors

Sector	2003	2004	2005	2006
All Civil Servants	14,951	15,991	17,090	18,350
Ministry of Education	5,112	5,225	5,507	5,956
Ministry of Health	1,954	2,061	2,216	2,328

10.2.2 There is a shortage of school teachers in Bhutan. The Ministry of Education feels that the two Colleges of Education are not producing enough teachers, while the Colleges of Education believe that they do not get adequate information to plan student intake in different courses. Further, the school system is able to attract only the lowest third of higher secondary graduates. The reason is that the graduates do not see encouraging career paths in school education. A recent study¹⁶ shows that majority of school students are not gaining expected learning outcome. The important cited reasons were: under-prepared teachers lacking in belief, content, knowledge and pedagogical skills; poor instructional leadership and in-service training; command, control and compliance mindset; and, paucity of resources and implementation support.

10.2.3 There is a definite plan to increase the quantity and quality of healthcare. It involves

¹⁵ General statistics 2008, the Ministry of Education, the Royal Government of Bhutan, Thimphu

¹⁶ The Quality of School Education in Bhutan, iDiscoveri Education and the Royal Education Council, 2008

creation of necessary physical and medical infrastructure, accessibility of medicines, and availability of qualified and trained manpower. There is shortage of nurses, doctors and super-specialists. The Royal Institute of Health Sciences (RIHS) is underprovided on several dimensions, including physical and human resources.

10.3.0 HRD Services

School Education

- 10.3.1 Bhutan at present has two education colleges providing pre-service training. Samtse College of Education was established in 1968, while Paro College of Education was started in 1975. Both institutions offer B.Ed. course in which students enter after Class XII. B.Ed. course is a four-year programme, inclusive of one year apprenticeship. Samtse College of Education offers Post Graduate Certificate in Education (PGCE) meant for secondary teaching. Paro College of Education conducts part-time diploma and masters courses in School Leadership and Management. These courses are basically meant for school administrators. The diploma course is aimed at community school administrators, while the M.Ed. course is offered to secondary school administrators. Almost all graduates of the Colleges of Education are absorbed by the Royal Government as the intake of students in different courses is more or less planned on the basis of requirements of the various schools in Bhutan.
- 10.3.2 Table 10.3 describes school education courses offered by different institutions. It shows that Colleges of Education at Samtse and Paro are the major institutions. A part-time course in English teaching is offered by Sherubtse College.
- 10.3.3 In-service training of teachers in the civil service shall be carried out by the agency concerned in accordance with the Bhutan Civil Service Rules (BCSR) and under provision of the Civil Service Act of Bhutan, while for private school teachers, the Ministry of Labour and Human Resources is responsible. Short-term courses in school education are organised at national, *Dzongkhag* and school levels. A few teachers are also sent for ex-country training. Experienced teachers are identified to serve as trainers of teachers. Certain schools are identified as resource centres where local training is conducted. Part-time accredited courses (diploma and degree) are conducted at the Colleges of Education during their vacation period. Of late, the Bhutanese educational system is undergoing major changes in curriculum and teaching pedagogy. As a result, training requirements have also gone up. The existing institutions and human capacities are insufficient to cope with the emerging training and development demands.

Table 10.3: School Education Institutions and their Courses

Institution	Samtse College of Education	Paro College of Education	Sherubtse College
Courses	B.Ed. in Secondary Education	B.Ed. in Secondary Education	Post Graduate Certificate in English Studies (PT)
	B.Ed. in Primary Education	B.Ed. in Primary Dzongkha	
	Post Graduate Certificate in Education	Diploma and B.Ed. in Dzongkha (Distance Education)	
	Career Guidance and Counselling PT (Proposed)	Diploma in Leadership and Management (PT)	
		M.Ed. in School Management and Leadership (Part-time)	

Health Education

10.3.4 The Royal Institute of Health Sciences (RIHS) and National Institute of Traditional Medicine (NITM) are the two major providers of health education in Bhutan. The RIHS provides education in the allopathic system at certificate and diploma levels. It was established in January 1974. Over the years, it has moved from strength to strength. However, it has several challenges, such as lack of infrastructure, lab facilities, and paucity of instructors. For MBBS and super-specialities, the Royal Government sends its students abroad to countries like India, Sri Lanka, Thailand, etc. Table 10.4 depicts the two institutions of health education and their courses.

Table 10.4: Health Education Institutions and their Courses

Institution	Royal Institute of Health Sciences (RIHS)	National Institute of Traditional Medicine (NITM)
Courses	Diploma in General Nursery and Midwifery	B.Sc. in Traditional Medicine
	Certificate Course in Community Health	Diploma in Traditional Medicine
	Certificate Courses in Medical Technology (Ophthalmic, Operation Theatre, Pharmacy, Radiography, Laboratory, Dental Technician and Hygienist, and Orthopaedics)	Diploma and degree courses required

10.4.0 Strategies for Implementation

School Education

- 10.4.1 The two Colleges of Education do not offer a full-time course on counselling and career guidance. This is a specialised course and very useful for personality development, resolution of internal conflict and career management for students in schools. There is a need for Full-time Post Graduate Certificate Course in this area.
- 10.4.2 English teaching is of paramount importance in the Bhutanese context. Bhutan has been able to connect with the world and her neighbours through English. Today English has become a language of higher education and international business. Proficiency in English among students, *inter alia*, is dependent on the quality of English teachers. At present, Sherubtse College offers a part-time course in English teaching. There is also a need for a two-year full-time course in English teaching so that quality English education can be delivered. Other masters and doctoral courses in education are also required.
- 10.4.3 Similarly, Paro College of Education offers M.Ed. (Part-time) in School Leadership and Management. There is a need for full-time M.Ed. (General) which Samtse College of Education may commence and the present M.Ed. (Part-time) course may continue as it is. Later, doctoral programmes in education should also be started.
- 10.4.4 There should be a focus on qualification upgradation and training of teachers of the Colleges of Education. Most of the faculty members in these two colleges are at junior levels. They are not involved in research and development. Unless sufficient attention is given to the improvement of human capital in the Colleges of Education, one cannot expect high quality teaching graduates.

Health Education

- 10.4.5 The RIHS and NITM are the two health education institutions. The RIHS offers certificate and diploma courses in the allopathic system, while the NITM offers bachelor and diploma courses in the traditional medicine. Traditionally, Bhutan depended on other countries for tertiary medical education. The main reason behind this was that Bhutan's own requirements were very limited. Therefore, it did not make any sense to invest in higher medical education. This eventually led to the scarcity of doctors and super-specialists.
- 10.4.6 There is a strong need for degree and postgraduate medical education in Bhutan. It has to be international in character. It needs to have international students besides Bhutanese students as well as it needs to hire international faculty. Further, the country has to focus on both medical and paramedical education. They are complementary to each other. In addition, paramedical education should be started at a later stage. In other words, the whole panorama of medical education needs to be commenced. The Royal Government has been considering establishing an institution of medical science with a view to meet the country's medical needs. It is high time to do so.
- 10.4.7 There is a shortage of nurses in the country and it is going to be acute as some nursing professionals migrate to developed countries. Degree and postgraduate courses in nursing are the need of hour. There is also no degree course in pharmacy available. There is

a need for diploma, degree and masters courses in this area. An institution of pharmacy needs to be established at a later stage.

Training and Development **School Education**

- 10.4.8 We have earlier discussed that in-service training requirements have substantially gone up. Training interventions were implemented by the MoE. Some faculty members of the Colleges of Education are involved in the short-term teacher training programmes during their vacation period. However, the mandate of the Colleges is to focus on pre-service education.
- 10.4.9 The Ministry of Education has been considering establishing a dedicated institution for the training of teachers. Such an institution is very much needed.
- 10.4.10 Table 10.5 summarises the recommendations made above. Besides other recommendations discussed above, it proposes that Samtse College of Education should start a doctoral course in education. It can be a full-time as well as part-time programme. Doctoral education will help enhance academic standards in the educational field. It further suggests that training and development of principals can also be done at the RIM.

Table 10.5: The Existing and Required HRD Institutions and Courses in the Education Sector

Existing HRD Institutions	Required HRD Institutions
Samtse College of Education	Samtse College of Education (With degree, masters and doctoral courses) M.Ed. General (FT)
Paro College of Education	Paro College of Education (With degree and masters courses)
Sherubtse College	Masters in English Language Teaching (Both PT & FT)
Training of Principals and Administrators by the MoE	Royal Institute of Management

Health

10.4.11 Table 10.6 summarises the recommendations made above about health education. It proposes that various institutions of medical and paramedical sciences need to be established. There is also a need for science courses relevant for medical sciences like biotechnology and radiography.

Table 10.6: The Existing and Required HRD Institutions and Courses in the Health Sector

Existing HRD Institutions	Required HRD Institutions
Royal Institute of Health Sciences (RIHS)	Royal Institute of Health Sciences (RIHS)
National Institute of Traditional Medicine (NITM)	National Institute of Traditional Medicine (NITM)
	Bhutan Institute of Medical Sciences (Courses needed such as MBBS, MD, MS in all specialities, BDS, MDS, B.Sc. (Biotechnology) B.Sc. (Lab Technology, biotechnology, radiography, etc.), (B.Sc. & M.Sc. Nursing)
RIHS	Institute of Pharmacy

CHAPTER ELEVEN

HRD Needs in the Civil Service Sector

11.1.0 The Civil Service Sector: An Analysis

- 11.1.1 Bhutan is a democratic constitutional monarchy. There are three main bodies of democracy: Judiciary, legislative and executive. The Prime Minister is the head of the Royal Government. There are ten ministries and attendant agencies. In addition, there are some constitutional bodies, like Royal Audit Authority, Election Commission, Royal Civil Service Commission, and Anticorruption Commission. The government is considerably decentralised. It operates at three levels: Central, *Dzongkhag*, and *Gewog*. The civil service is the backbone of the Royal Government. It is responsible for implementing the Royal Government's policies and plans for the socio-economic development and welfare of people.
- 11.1.2 Till the early sixties, there were a large number of expatriates in the civil service. Gradual efforts were made to induct Bhutanese nationals into the civil service. Now the civil service is almost manned by Bhutanese nationals. In 1982, the Royal Civil Service Commission (RCSC) was established under the Royal Charter. The RCSC is the government's manpower planning, recruitment, development, and management agency. All employees of the Royal Government are governed by the rules and regulations of the RCSC. The Cadre System was introduced in 1989 in the civil service. Position Classification System (PCS) was introduced in 2006 as part of good governance initiative. It is based on the principles of professionalism, meritocracy, efficiency, fairness, transparency and accountability. The PCS is the pivot of various HRM systems, such as recruitment, selection and promotion; performance management; HRD; and remuneration and benefits. Under the PCS system, there are 19 major occupational groups and 70 sub-groups and over 500 positions.
- 11.1.3 The civil servants are categorised into four major positional categories: Executives/Specialists, Professional/Management, Supervisory/Support, and Operations. The Executive/Specialist (EX/ES) is top management category and it has authority over all other categories. This category has three hierarchical ladders (EX1, EX2, EX3/ES1, ES2, ES3), where EX1/ES1 level is the highest. Professional and management category is middle management group that deals with tactical issues. It has five rungs (P5 to P1, P5 being the lowest level). Supervisory and Support category is responsible for supervision and support of day-to-day tasks. This category has five ladders (S5 to S1, S5 being the lowest rank). Finally, operations category is responsible for routine jobs. It has four levels (O4 to O1, O4 being the lowest echelon). All civil service positions are grouped into one of these categories and their levels. The minimum educational requirements for Operations category is Class X, while it is diploma and certificate for Supervisory/Support category. Professional/Management category requires bachelors/masters degree. Finally, Executive category entails bachelors/masters degree, whereas Specialists category demands masters/Ph.D. degree.

11.1.4 Ministries/agencies/ and *Dzongkhags* are responsible for recruitment, transfer and promotion of all operations category employees, while only ministries and agencies have authority for selection, promotion and transfer of Supervisory/Support level employees. The RCSC is responsible for selection of Professional/Management category employees and above. It has authority for transfer and promotion of employees in P2 level and above.

11.1.5 Table 11.1 shows number of employees in different ministries and agencies. As of June 2010, there were a total of 22,018 employees in the Royal Government.¹⁷ The maximum number of employees is with the Ministry of Education, followed by the Ministry of Agriculture and the Ministry of Health. As education and health are State responsibilities in Bhutan, it is reasonable that the Ministries of Education and Health have the maximum number of employees.

Table 11.1: Total Number of Civil Servants by Parent Agency

Sl. No.		Number of Employees	% Against Total Civil Servants
	Others	811	3.68
	Ministries		
1	Ministry of Education	7,876	35.77
2	Ministry of Agriculture & Forest	3,197	14.52
3	Ministry of Health	2,710	12.31
4	Ministry of Works & Settlement	1,580	7.18
5	Ministry of Finance	1,555	7.06
6	Ministry of Home and Cultural Affairs	1,321	6.00
7	Ministry of Economic Affairs	547	2.48
8	Ministry of Information and Communications	355	1.61
9	Ministry of Labour and Human Resources	320	1.45
10	Ministry of Foreign Affairs	145	0.66
	Autonomous and Other Agencies		
1	Royal University of Bhutan	696	3.16
2	National Land Commission	320	1.45
3	Gross National Happiness Commission	103	0.47
4	Royal Institute of Management	67	0.30
5	National Environment Commission	65	0.30
6	National Statistical Bureau	63	0.29
7	Others	287	1.30
	Grand Total	22,018	

Source: Bi-Annual Report, Civil Service Statistics, June 2010

¹⁷ Bi-annual Report, Civil Service Statistics, Royal Civil Service Commission, Royal Government of Bhutan, June 2010

11.1.6 Table 11.2 shows the number of employees in the different positional categories. The top bureaucracy consists of Executives and Specialists. Executives are generalists, while Specialists are experts. Graduates selected through the Civil Service Examination enter in P5 (the entry position in Professional and Management Position Group). Diploma holders of the CNR, RIM and JNP and certificate holders from the RIHS enter in S2 (the entry level of Supervisory Position Group). Table 11.3 shows the number of civil servants by different occupational groups. Maximum number of employees is in the Education and Training Group, followed by the General Administration & Support Services Group. The Architectural and Engineering Services Group stands third. Other major groups in terms of manpower are: the Medical Services Group and the Forestry & Environment Services Group.

Table 11.2: Total Number of Civil Servants by Category

Sl. No.	Position	Number of Employees
1	Constitutional Offices*	15
2	Executive	180
3	Specialist	77
4	Professional /Management	11,083
5	Supervisory/Support	8,668
6	Operations	1,995
	Grand Total	22,018

(* As Chairpersons and members of the Constitutional Offices, and eminent members of the Parliament)

Source: Bi-Annual Report, Civil Service Statistics, June 2010

Table 11.3: Number of Civil Servants by Occupational Groups

Sl. No.	Major Occupational Group	Number of Civil Servants	% of Total Number
1	Agriculture and Livestock Services Group	1,058	4.80
2	Architectural and Engineering Services Group	2,268	10.30
3	Arts, Culture & Literary Services Group	90	0.40
4	Education and Training Services	7,248	32.92
5	Executive Services Group	195	0.89
6	Finance and Audit Services Group	1,425	6.47
7	Foreign Services Group	57	0.26
8	Forestry & Environment Protection Services Group	1,224	5.56
9	General Administration & Support Services Group	3,647	16.56
10	HR Development & Management Services Group	334	1.52
11	Information Communication & Technology Services Group	411	1.87

12	Laboratory and Technical Services Group	713	3.24
13	Legal, Judiciary and Legislative Services Group	346	1.57
14	Library, Archives & Museum Services Group	395	1.79
15	Medical Services Group	1,886	8.57
16	Planning & Research Services Group	418	1.90
17	Sports and Youth Services Group	27	0.12
18	Trade, Industry, and Tourism Services Group	103	0.47
19	Transportation & Aviation Services Group	173	0.79

Source: Bi-Annual Report, Civil Service Statistics, June 2010

11.2.0 HRD Imperative

- 11.2.1 Qualified, competent and committed employees are the fulcrum of any civil service. The Royal Government has been making efforts to upgrade the quality of manpower in the civil services. It has followed various best practices in the civil service administration and service delivery. It has also adopted practice of good governance. However, it should be noted that there was a shortage of educated people in the seventies and eighties. So many positions were given to people who did not have necessary educational qualifications. With the implementation of the PCS, a good number of employees do not have the requisite qualifications. There is a need to plug these educational gaps both by the employees and the RCSC through mutual efforts.
- 11.2.2 Many civil servants thus have HRD needs for long-term education to acquire the requisite qualifications. In addition, there is a need for life-long learning to continuously hone skills and gain cutting-edge knowledge. Thus, various short-term HRD interventions are needed. There has been more dependence on ex-country training. If most civil servants have to be covered under HRD interventions, in-country HRD institutions and high human capacity within them is a must.
- 11.2.3 At the same time, necessary HRD strategy, structure and systems are needed to strengthen training and development. HRD is often an ignored area and remains on the sidelines. If the civil service is required to be professional and efficient, HRD has to become a mainstream activity. A proper information management system about employees' HRD needs and training experience has to be maintained. It must also be ensured that the impact of HRD is evenly felt at both the *Dzongkhag* and *Gewog* levels. The HRD system has to indigenise course contents and instructional materials to reflect national realities, needs and challenges.

11.3.0 HRD Services

- 11.3.1 There are several institutions that exclusively meet the HRD demands of the Royal Government. Other institutions meet the HRD demands of the country in general. Table 11.4 describes various institutions of tertiary education in Bhutan supplying manpower to the Royal Government. Almost half of them are in pre-service training and their graduates

are directly absorbed by the Royal Government. Others serve the Royal Government, corporations and private sector organisations. Bhutanese students who have studied abroad are also a good source of manpower supply for the Royal Government.

11.3.2 The Royal Institute of Management (RIM) is the major institution for education and training in the civil services. It was established in 1986 and was upgraded as an autonomous institute under the Royal Charter in 1990. It is managed by a Board of Directors and funded by the Royal Government.

11.3.3 The RIM is also responsible for meeting the training needs of the Royal Government employees. The RIM has a Department of Management Development, consisting of two centres: Centre for Management Development and Centre for Legal Studies. The RIM also has a Centre of Private Sector Development. However, this centre's activities are very limited. Overall, currently the RIM is mainly engaged in pre-service training rather than in in-service training. Table 11.5 depicts the long-term courses offered by the RIM.

Table 11.4: Tertiary HRD Institutions in Bhutan

Sl. No.	Institute	Focus	Field	Level
1	Royal Institute of Management, Thimphu	Royal Government	Public Administration and Management	Certificate, Diploma and Degree
2	College of Natural Resources, Lobesa	Royal Government	Agriculture	Diploma
3	Paro College of Education, Paro	Royal Government	Education	Diploma, Degree and Masters
4	Samtse College of Education, Samtse	Royal Government	Education	Diploma, Degree and PGCE
5	Royal Institute of Health Sciences, Thimphu	Royal Government	Allopathic Medicine	Certificate and Diploma
6	National Institute of Traditional Medicine, Thimphu	Royal Government	Traditional Medicine	Diploma and Degree
7	Sherubtse College, Kanglung	General	Humanities and Social Sciences, IT	Degree and PGC
8	College of Science and Technology, Rinchending	General	Engineering	Degree
9	Jigme Namgyel Polytechnic, Dewathang	General	Engineering	Diploma
10	Institute of Language and Cultural Studies, Thimphu	General	Language and Culture	Degree
11	Gaeddu College of Business Studies	General	Management	Degree

Table 11.5: Courses Offered by the Royal Institute of Management

Sl. No.	Courses	Duration
1	Post Graduate Certificate in National Law	1 Year
2	Post Graduate Certificate in Public Administration	1 Year
3	Post Graduate Certificate in Financial Management	1 Year
4	Diploma in Information Management System	2 Years
5	Diploma in Financial Management	2 Years
6	Induction Course for Custom and Tax Inspectors	2 Years
7	Diploma in National Law	2 Years
8	Diploma in Financial Management (Geog)	2 Years
9	MBA in Finance (Proposed)	2 Years
10	MBA in Public Administration (Proposed)	2 Years

11.3.4 Table 11.6 shows different management development programmes conducted by the RIM. It shows that the RIM conducted three management development programmes in 2006, while it conducted four management development programmes in 2007. The Institute has already conducted five programmes in 2008. However, they were of very short duration.

11.3.5 The RIM is primarily engaged in pre-service education and training. It has 46 faculty members out of which, 20 of them have diploma and certificate education and only one faculty member has a Ph.D. degree. Thus, human capacity in RIM is limited.

Table 11.6: Management Development Programmes of the Royal Institute of Management

Table 11.6: Management Development Programmes of the Royal Institute of Management

Sl. No.	Nature of the Training	Name of the Course	Duration of course	Year of course
1	In Country	Procurement Management Training	12 days	18 - 29, September 2006
2	In Country	Project Appraisal	5 days	1 - 5, May 2006
3	In Country	Finance for Non-Finance	5 days	24 - 28, April 2006

4	In Country	Financial Analysis	5 days	2 - 6, July 2007
5	In Country	High Performance Leadership (Professional category)	5 days	21 - 25, May 2007
6	In Country	Customer Service (Professional category)	5 days	1 - 5, October 2007
7	In Country	Effective Supervision (Professional category)	5 days	5 - 9, November 2007
9	In Country	Politics and Governance (Executive programme)	1 day	19, June 2008
8	In Country	Research Supervision	2 days	3-4, July 2008
10	In Country	Public Sector Performance	3 days	8-11, July 2008
11	In Country	Public Sector Performance (Executive Programme)	1 day	14, July 2008
12	In Country	Leadership Course (Executive Programme)	1 day	6 August 2008
13	In Country	Project Management (Professional category)	5 days	September 2008
14	In Country	Strategic Management (Executive Programme)	1 day	23 September 2008
15	In Country	Strategic Management (Professional category)	5 days	25 Sept.-3 Oct. 2008
16	In Country	Management Communication (Professional category)	5 days	October 2008
17	In Country	Human Resource Management (Executive Programme)	1 day	10 November 2008
18	In Country	Human Resource Management (Professional category)	5 days	3 - 7, November 2008
19	In Country	Public Sector Leadership (Executive Programme)	1 day	November 2008
20	In Country	Public Sector Leadership (Professional category)	5 days	November 2008

In-service training of the civil servants is the responsibility of the RCSC. It is done through HR personnel posted in the different ministries and agencies. Almost all ministries prepare their HRD

master plans that detail long-term and short-term training needs both ex-country and in-country. The RCSC also prepares an HRD master plan for the civil servants. The plan is for a period of five years, including annual HRD targets. The implementation of the master plan mostly depends on availability of funds both from the Royal Government and aid from donor agencies. Most of the training programmes are implemented through donor aid and participants are sent for ex-country training. An examination of implementation of HRD plans of various ministries show that there is a yawning gap between the targets and achievements. These gaps are mainly due to lack of funds. There is a lack of institutions that can deliver in-service training. Some ministries and agencies conduct in-service, in-country programmes through in-house resources. However, such initiatives are far and few.

11.4.0 Strategies for Implementation

- 11.4.1 The above discussion shows that civil servants enter the services at different levels requiring different qualifications. There are many pre-service education and training institutions in Bhutan. They basically produce graduates for government requirements in education, health, agriculture and forestry areas. The RIM also produces graduates for other areas. However, there are not many masters courses; hence, there is a need to start more masters courses in the country. The recommendations for RNR, education and health sectors are already discussed in the previous chapters of this report. Therefore, HRD issues in these sectors are not delineated here.
- 11.4.2 In-service training programmes are generally conducted with the help of domestic trainers, in-house experts, or international trainers. There are not many institutions engaged in the in-service training and development. In-country capabilities have to be developed to train the civil servants. There is too much reliance on ex-country, donor led training. Such HRD interventions are at best ad hoc.
- 11.4.3 The Royal Audit Authority (RAA) is a model organisation in HRD. It has a well developed Continuing Professional Development Policy (CPDP). It has assessed training needs and developed training programmes based on them. It has a policy of 60 hour training per employee per annum. It is indeed a gold standard. The RAA has a pool of internal trainers. In addition, it has a well-defined HRD structure wherein the roles and responsibilities of different role holders, such as participants, instructors, HR Division are clearly articulated. The organisation also has an HRD Committee consisting of senior officials and plays an important role in the design, development and conduct of training programmes.
- 11.4.4 It is recommended that a policy of 40 hour training per employee per year should be followed for all civil servants. In-house trainers also have to be developed. They should be trained in areas of training skills and facilitation. Ex-country training can be implemented depending on the availability of aid from different donors. Ex-country training should be used for the training of trainers, both regular and occasional. In-country training with

the help of domestic and international trainers should be encouraged. RAA's HRD model can be followed by others as well provided that a systematic and rigorous approach to HRD is pursued.

- 11.4.5 It is high time to realise that in-service training infrastructure is at best weak in the country so it must be bolstered. RIM should be provided with extra-resources, both physical infrastructure and human capacity, to play an active role in the in-service HRD. Further, RIM should exclusively focus on the HRD of the civil service sector. Its capacity for conducting management development programmes is limited therefore it needs to work on strengthening this area. Attention should also be paid to new modes of learning, like e-learning and mixed-mode learning to support the learning needs of civil servants.

CHAPTER TWELVE

Strategies for Implementation

- 12.1.1 The strategy for implementation of any policy is as important as the policy itself. Therefore, an attempt has been made throughout this report to emphasise the implementation aspect. Various chapters have outlined several strategies for implementation. The arrangements for co-ordination mechanisms for implementation of the National HRD policy have been delineated separately in the policy document.
- 12.1.2 Resources for HRD in any country are limited. Thus, there is always a need to decide priorities. Prioritisation has been done below in Table 12.1 for HRD services in terms of Highest priority, Priority, and Moderate priority. Table 12.1 shows that professional and technical & vocational education is the Highest priority while science, architecture and paramedical education is a Priority. Finally, humanities and social science education is of Moderate priority.

Table 12.1: Prioritisation of Different HRD Services

Sl. No.	HRD Domain	HRD Service	Priority
1	Education	Professional education (Engineering, ICT, medical, management, & tourism)	Highest priority
		Vocational engineering	Highest priority
		Technical and vocational education	Highest priority
		Science, Architecture, and Paramedical education	Priority
		Humanities and social sciences	Moderate priority
2	Training and Development	In-service training of Executives and professionals and top and senior managers in corporations and large organisations	Priority
		In-service training of workers	Priority
		In-service training of others	Priority
		Entrepreneurship development	Highest priority
3	Professional Association	Establishment of HRD Network	Highest priority

- 12.1.3 This chapter provides a summary of strategies for implementation that are already discussed in the preceding chapters. The details are not provided here. Only major strategies and action steps for their implementation are identified.

12.1.4 Table 12.2 describes the strategies for establishing and strengthening technical and vocational education institutions in Bhutan. The action steps, agency responsible, timeline and the possible location of the institutions are presented. The time line is delineated in terms of three-stage time frames: Short-term (2-3 years), medium-term (4-5 years) and long-term (6 years onwards).

Table 12.2: Strategies for Implementation of Educational Services

Sl. No.	Action Steps	Responsibility	Possible Location	Timeline
1	Establishment of Hotel Tourism Management and Training Institute	TCB	Thimphu	Ongoing
2	Establishment of Tourism Vocational Institute	MoLHR/TCB	Paro/ Thimphu	Short-term
3	Establishment of Medical College	MoH	Thimphu	Under preparation
4	Paramedical courses in Medical College	MoH	Thimphu	Medium-term
5	Establishment of Pharmacy College	Private Investor/MoH	Gelephu	Long-term
6	Consolidation, strengthening and incentivizing of the TTIs	MoLHR	Not applicable	Immediate
7	Increase courses and slots in the CST and JNP	RUB	Not applicable	Short-term
8	introduction of masters and doctoral courses in the CST	RUB	Not applicable	Medium-term
9	Encouragement to the Private TTIs	MoLHR	Not applicable	Ongoing

12.1.5 Table 13.3 describes the strategies for establishing and strengthening training and development institutions in Bhutan. Again, the action steps, agency responsible, timeline and possible place for location of the institutions are presented.

Table 12.3: Strategies for Implementation of Training and Development Services

Sl. No.	Action Steps	Responsibility	Possible Place	Timeline
1	Management Development Entrepreneurship Development	RIM	Thimphu	Short-term
2	Technical training in tourism	Hotel Tourism Management and Training Institute & TCB	Thimphu	Ongoing
3	Worker training	TTIs & MoLHR	Not applicable	Short- to Medium- term
4	Technical training of engineers	CST & RUB	Not applicable	Short-term
5	Establish a professional body of HRD professionals (HRD Network)	MoLHR	The HQ at Thimphu	Short-term
6	Training of trainers	HRD institutions, MoLHR, and RCSC	Not applicable	Immediate
7	Strengthening of MDPs in the RIM	RIM	Not applicable	Immediate

12.1.6 The success of action plans above depends on a host of factors. The most important factor is the availability of fund for introducing new courses and establishment of the required institutions. Another important factor is the development of international orientation and mindset. It has earlier been pointed out that several Bhutanese institutions need to develop themselves as regional institutions. It requires aggressive marketing of HRD services, integrating with the educational market, and building international collaborations. It also necessitates developing human capacities and creating intellectual capital. Availability of modern research facilities and academic infrastructure are pivotal for producing intellectual capital. Finally, the Royal Government needs to incentivise HRD institutions to become more entrepreneurial and innovative in their approach and offerings.

APPENDIX ONE

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APPENDIX TWO

The List of Consultees

Ministry of Labour and Human Resources

H E Lyonpo Dorji Wangdi	Hon. Minister
Dasho Dr. Sonam Tenzin	Hon. Secretary
Pema Wangda	Director General, Department of Labour
Sonam Rinchen	Director, Department of Human Resources
Sangay Dorjee	Director, Department of Occupational Standards
Chimi Dorji	Chief Human Resource Officer
Sangay Dorji	Chief Program Officer
Karma Lhazom	Sr. Program Officer
Ugyen Tenzin	Statistician
Nidup Tshering	Program Officer
Wangchuk	Program Officer
Yeshey Wangdi	Principal, Khuruthang TTI
Kinley Wangdi	Principal, Chumey TTI
Kinley Penjor	Principal, Rangjung TTI
Bumchu Wangdi	Principal, Samthang TTI
Lobzang Dorji	Principal, Sershong TTI
Sangay Wangchuk	Principal, TIAE
Jigme Dorji	Principal, TIZC
Thinley Wangchuk	Principal, NIZC

Royal Civil Service Commission

Bachu Phub Dorji	Chief Planning Officer
Ugyen Tshewang	Chief Human Resource Officer

Gross National Happiness Commission

Karma Tshetim	Hon. Secretary
Lhaba Tshering	Planning Officer

Ministry of Economic Affairs

Dasho Sonam Tshering	Hon Secretary
Dorji Wangda	Director General, Department of Geology and Mines
Danraj Subba	Chief Industry Officer, Department of Industry

Rinchen Dorji	Deputy Chief Industry Officer, Department of Industry
Om Nirula	Head, Entrepreneurship Promotion Centre
Thuji D. Nadik	Joint Director, Tourism Council of Bhutan
Chimi Yuden	Asst. Planning Officer, Tourism Council of Bhutan

Ministry of Education

Aum Sangay Zam	Hon. Secretary
Karma Yeshey	Director, Department of Adult and Higher Education
Jambay Wangchuk	Chief Planning Officer
Bhumika Ghalley	Human Resource Officer

Royal Education Council

Gyaltshen Penjor	Director
Tashi Wangyel	Member
Sonam Karma Tshering	

Royal University of Bhutan

Dasho (Dr.) Pema Thinley	Hon Vice-Chancellor
Kesang Doma	Registrar
Dorji Wangchuk	Director, College of Natural Resources, Lobesa
Thubten Gyatsho	Director, Paro College of Education
Nidup Dorji	Director, College of Science & Technology, Phuentsholing
Lhato Jamba	Director, Gedu College of Business Studies, Gedu

Royal Institute of Management

Karma Tshering	Director
Indraman Chettri	CPO/Senior Lecturer

Royal Thimphu College

Dasho Tenzing Yonten	Chief Executive
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Ministry of Health

Dr. Dorji Wangchuk	Director General, Department of Medical Services
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Sonam Dorji	Chief Planning Officer
Deki	Human Resource Officer
Chimi Rinzin	Human Resource Officer

Ministry of Agriculture

Tenzin Chophel	Chief Planning Officer
Kinga Wangdi	Human Resource Officer

Ministry of Information and Communications

Tenzin Choeda	Director, Department of Information Technology
Sangay Wangmo	ICT Officer, Dept. of Information Technology
Tshering Wangmo	Information & Media Officer, Department of Media

Ministry of Foreign Affairs

H E Lyonpo Ugyen Tshering	Hon Minister
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Anti Corruption Commission

Aum Neten Zam	Chairperson
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Royal Audit Authority

Ugyen Chewang	Auditor General
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Ministry of Works and Human Settlement

Dechen Eadon	Human Resource Officer
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Druk Holding and Investments Ltd.

Karma Yonten	Chief Executive Officer
Damber S. Kharka	Executive Director

Bhutan National Bank Ltd.

Kyipchu Tshering	Chief Executive Officer
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Bank of Bhutan Ltd.

Kuenga Tshering	Chief Executive Officer
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