



TERTIARY EDUCATION ROADMAP FOR BHUTAN: 2017-2027

Towards bringing positive reforms in the tertiary education system

**Tertiary Education Board
Royal Government of Bhutan
December 2017**



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Tertiary Education System*

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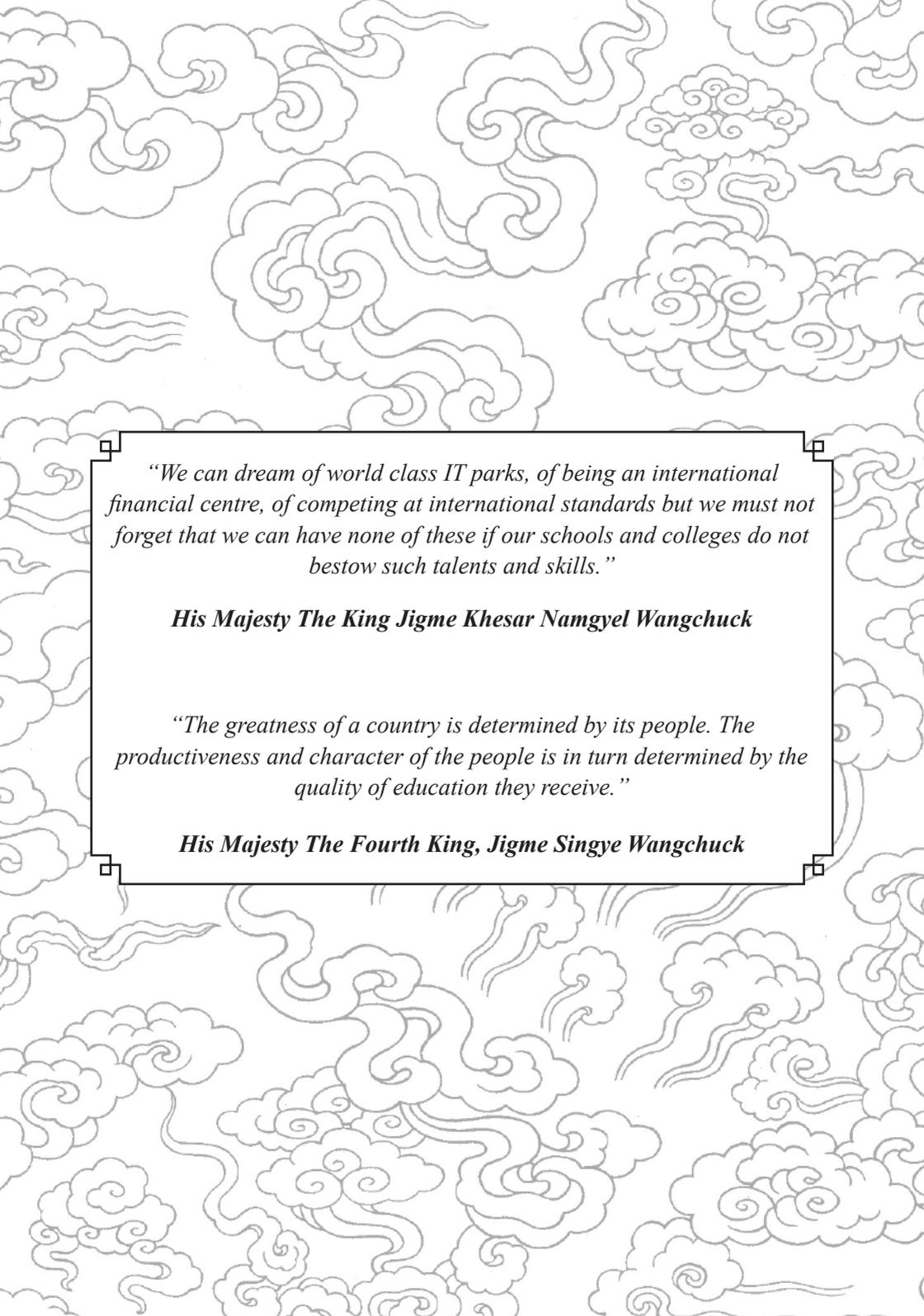
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“We can dream of world class IT parks, of being an international financial centre, of competing at international standards but we must not forget that we can have none of these if our schools and colleges do not bestow such talents and skills.”

His Majesty The King Jigme Khesar Namgyel Wangchuck

“The greatness of a country is determined by its people. The productiveness and character of the people is in turn determined by the quality of education they receive.”

His Majesty The Fourth King, Jigme Singye Wangchuck

Vision

A nationally inspired and internationally competitive tertiary education system

1. Background

The tertiary education system in the country began with the establishment of the Royal University of Bhutan (RUB) in June 2003. Prior to that, tertiary education system of the country was regulated and tied to the Indian higher education system. The core elements of tertiary education such as curriculum design, assessment and award of degree were from Delhi University, India until RUB could completely takeover the charges in 2008.

Over the years, remarkable progress was made despite tertiary education system in the country being at a nascent stage. The pressing demand for tertiary education in the country necessitated putting in place policies and systems to direct the growth and development of tertiary education in the country. Towards this end, the Tertiary Education Policy of the Kingdom of Bhutan 2010 (TEP) was developed to “...*build and advance a tertiary education system in the country that will support and strengthen our goal to create an enlightened citizenry in a knowledge-based society worthy of our rich heritage and our aspirations for a dynamic, forward-looking and confident future.*”

Consequent upon the endorsement of the TEP by the Lhengye Zhungtshog in 2010, the Tertiary Education Board (TEB) and Bhutan Accreditation Council (BAC) were instituted as oversight bodies. The TEB was instituted as the highest executive decision-making body to provide policy directives for tertiary education development, while the BAC was envisaged to undertake quality enhancement functions. The Registrar for Tertiary Education is appointed with the mandate to liaise and coordinate amongst the stakeholders. The Department of Adult and Higher Education (DAHE) functions as the Secretariat to the above oversight bodies. DAHE undertook significant initiatives including formulation of various guidelines, regulations and mechanisms to supplement the TEP 2010.

However, continued effort is required to bring desirable reforms in the tertiary education sector. Towards this end, the Tertiary Education Roadmap for Bhutan: 2017-2027 is developed focusing on four key thrust areas: access, relevance, quality, and governance and financial sustainability. The Roadmap envisages realizing the aspirations of TEP 2010 and building Bhutan into a knowledge-based society.

2. Rationale

For a country constrained by physical resources, tertiary education has a critical role to play in boosting the socio-economic progress of the country through building of long-term human capital and enhancing innovative capacity of the people. The tertiary education system must be dynamic, nationally driven and globally competitive. Hence, this roadmap is geared towards development of a professional and nationally responsive tertiary education system. It envisages guiding the development of tertiary education for the next 10 years with periodic reviews to be undertaken as per the need of the changing times.

Furthermore, the 5th TEB meeting underscored the need to develop a Tertiary Education Roadmap by either finding a model of tertiary education that Bhutan could look at or by developing its own model that would be appropriate for Bhutan.

Globally, the core areas identified in tertiary education are access, relevance, quality, governance, equity and unity.¹ In developed nations, the new area of focus in tertiary education is *internationalization*.

1 Literature review and study of international tertiary education development suggest that nations focus on certain core areas that are critical at that point in time. For example, Malaysia in its Malaysia Education Blueprint 2015-2025 identified access, quality, equity, unity and efficiency as thrust areas. Similarly, the Philippines roadmap, ‘Public Higher Education Reform 2011-2016 focused on access, quality and efficiency.’

For Bhutan, the areas of concern are:

a) Access

The TEP 2010 aspires to “create a pool of highly trained graduates and professionals of critical size which shall form the national resource.” For a developing economy like Bhutan, the main asset is human capital. Human capital development is contingent on the kind of access that people have to tertiary education. Access to quality tertiary education, grounded on national needs, is one of the main concerns as we chart new paths in tertiary education.²

b) Relevance

One of the aims of the TEP 2010 is to “provide every graduate with core life-skills including leadership abilities required as individuals and to contribute to the society.”

The Royal Charter issued for the establishment of Royal University of Bhutan (RUB) also emphasizes the need “to develop and provide programmes of study at tertiary education level, of relevance and quality which will fulfill the needs of the country for an educated and skilled population.”

The Royal Government of Bhutan is a signatory to UN Sustainable Development Goals. This Roadmap would facilitate the fulfillment of:

Goal 8

Decent work and economic growth-promote inclusive and sustainable economic growth, employment and decent work for all.

² The Gross Enrollment Ratio (GER) in tertiary education both within and outside the country is 21.4% with only 35% of more than 10000 students graduating school system having access to tertiary education in the country. This has been a big impediment to the growth of tertiary education in the country. Many students, therefore, have no option but to look for tertiary education opportunities outside Bhutan. *Annual Education Statistics 2017.*

Therefore, the shifting dynamics of economic growth necessitates alignment of tertiary education programmes that has relevance to national and international human resource needs. Some of the tertiary education programmes of the past are no longer relevant in the job market today. The increasing number of unemployed graduates has more to do with the relevance of programmes than actual employment opportunities.

c) Quality

The TEP 2010 envisages to “develop productive, socially responsible, culturally grounded, ecologically aware citizens, imbibing GNH principles and values.” Quality in tertiary education refers to quality of graduates, quality of programmes, quality of institutions and quality of the overall system. The quality of the nation’s workforce is determined by the quality of its tertiary education system. Hence, the quality of tertiary education enhances employability prospects of graduates and attracts international students to build Bhutan into a knowledge-hub.

In line with UN Sustainable Development Goals that states:

Goal 4

Quality education- ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

Globally, quality control and accreditation are integral parts of tertiary education systems. These processes not only ensure quality but lend legitimacy to programmes and institutes of higher learning. Tertiary education systems around the world also use these processes for establishing international credibility and facilitate transfer of credits.

d) Governance and Financial Sustainability

The TEP 2010 envisions to “...facilitate institutions to continuously evolve.” For any tertiary education system, it is important to promote good governance in TEIs to ensure sustainability of tertiary education provisions. In order to achieve efficiency in tertiary education system, there is a need to reform - both at system and institutional levels. The governance of tertiary education needs to be aligned with international best practices.

Qualitative management and governance calls for standards set by professionals to ensure that the governance system encapsulates not only practices around the world but also takes into consideration of local context. Governance system that brings about greater cohesion amongst various factors of governance and national priorities need to be promoted.

Table 1: Overview of the Roadmap

| | | | | |
|-------------------|--|---|---|---|
| Vision | A nationally inspired and internationally competitive tertiary education system | | | |
| Purpose | <ol style="list-style-type: none"> 1. Operationalize the Tertiary Education Policy of the Kingdom of Bhutan 2010; 2. Develop human capital for sustaining socio-economic development of the country; and 3. Provide strategic direction for the overall growth of Tertiary Education in Bhutan. | | | |
| Objectives | 1. Improve Access to Tertiary Education | 2. Strengthen relevance of Tertiary Education | 3. Enhance quality of Tertiary Education | 4. Streamline governance structure and financial sustainability |
| Strategies | <ol style="list-style-type: none"> 1. Promote private sector participation in tertiary education. 2. Strengthen student enrollment capacity of existing TEIs. 3. Diversify mode of delivering tertiary education and promote life-long learning. | <ol style="list-style-type: none"> 1. Enhance Programme Diversity. 2. Build industry participation and stakeholder coordination. 3. Develop long-term human resource requirement direction for tertiary education. 4. Promote entrepreneurship culture. 5. Promote science, technology, engineering and mathematics (STEM) programmes. | <ol style="list-style-type: none"> 1. Institutionalize quality assurance mechanism. 2. Enhance continuous professional development (CPD) of faculty. 3. Implement Bhutan qualifications framework. 4. Promote research and innovation in TEIs. 5. Conduct tracer study of graduates. | <ol style="list-style-type: none"> 1. Restructure Tertiary Education Board and Bhutan Accreditation Council. 2. Strengthen financial sustainability. 3. Review institutional governance and effectiveness. |

3. Purpose

The Roadmap sets out to:

- 3.1 Operationalize the Tertiary Education Policy of the Kingdom of Bhutan 2010;
- 3.2 Develop human capital for sustaining socio-economic development of the country; and
- 3.3 Provide strategic direction for the overall growth of Tertiary Education in Bhutan.

4. Objectives

The Roadmap aspires to achieve the following four key objectives:

- 4.1 Improve access to tertiary education;
- 4.2 Strengthen relevance of tertiary education;
- 4.3 Enhance quality of tertiary education; and
- 4.4 Streamline governance structure and financial sustainability.

5. Strategies

The strategies identified are in pursuance of various national policies such as TEP 2010, Economic Development Policy 2010 (EDP), Vision 2020, Bhutan Transport 2040, National Human Resource Development Advisory 2014, Bhutan Education Blueprint 2014-2024 and the Prime Minister's State of the TSA-WA-SUM Report June 2015. *(Refer Table 1 for an overview of the strategies)*

5.1 Access

Annually more than 10000 students graduate class XII and look for tertiary education opportunities. However, the total in-take capacity of in-country TEIs is about 35%. This has been a big impediment to the growth of tertiary education in the country. Many students have no option but to look for tertiary education opportunities outside Bhutan and pursue programmes that have little or no relevance to the human

resource needs of the country. As such, access to inclusive tertiary education, grounded on national human resource needs, is one of the main concerns as we chart new paths in tertiary education.

The roadmap aspires to enhance access to relevant tertiary education within country from 35% to 55% of higher school graduates to curb the severe drain on the nation's economy and ease youth unemployment. The Gross Enrollment Ratio in Tertiary Education (both within and outside country) would increase from 21.4% in 2017 to 26% in 2027. Therefore, the following strategies are identified to improve access to tertiary education:

5.1.1 Promote private sector participation in tertiary education

Private sector participation in tertiary education field is largely underrepresented in Bhutan as Royal Thimphu College (RTC), Norbuling Rigter College (NRC) and Reldri Academy of Health Sciences (RAHS) are the only private colleges/institutes at the moment. RTC, NRC and RAHS have enrolled 388, 91 and 14 students respectively in 2017 academic year.

Therefore, the roadmap aspires to encourage and facilitate establishment of additional private colleges/institutes through provision of incentives like land lease, concessional loan, tax breaks and scholarships. There is a need to streamline bureaucratic processes and review policies and procedures to make it more conducive for establishment of new TEIs in private, PPP and FDI models. One way of promoting ease of doing business in tertiary education sector will be to open one-window system for acquiring necessary clearances for helping private providers to establish new colleges/institutes.

Although there are interested individuals and groups for establishing private TEIs, the biggest challenge seems to

be access to capital. Financial institutes are not very keen in lending out for the establishment of TEIs since it entails huge investment in single project. Therefore, there is a need to have in place policies and instruments to encourage corporate bodies and big private businesses to invest in tertiary education.

5.1.2 *Strengthen student enrollment capacity of existing public TEIs*

The existing public TEIs viz. Royal University of Bhutan, Khesar Gyalpo University of Medical Sciences of Bhutan, Royal Institute of Management and Jigme Singye Wangchuck School of Law have joint annual intake capacity of 3500 students. It is very clear that existing absorption capacity of public TEIs is not at all adequate to meet the increasing demand for tertiary education opportunities in the country. The Gross Enrollment Ratio (GER) in tertiary education within Bhutan is 16.11%.

Therefore, access to tertiary education needs to be enhanced either by expanding the in-take capacity of existing public TEIs through necessary financial and human resource support from the government or by building new public colleges/institutes. However, the government should expand the capacity of only those TEIs which are offering programmes of national priority need and based on their performances.

5.1.3 *Diversify mode of delivering tertiary education and promote life-long learning*

Currently, only a limited number of TEIs in the country offer tertiary education through alternate modes. While the RTC offers continuing education opportunities, other public TEIs such as Sherubtse College, Paro College of Education, Samtse College of Education, College of Natural Resources

and College of Language and Culture Studies offer tertiary education through part time and mixed mode to limited number of learners.

In concurrence with global best practices and aspiration of TEP 2010, there is a need to institute delivery of programmes through non-traditional modes - online, MOOC, distance, mixed-mode, part-time, continuing education and other newer methods. The proper recognition system for delivering tertiary education through these modes will have to be instituted. The use of online instructions would not only expand access to higher education at a reasonably cheaper cost but also promote life-long learning opportunities in the country.

One of the flaws in the existing system is underutilization of resources in the TEIs. Some of them offer limited variety of programmes. Therefore, there is a need to diversify programmes offered in an institute. For example, the colleges of education could provide other programmes along with teacher training.

5.2 Relevance

With changing times and socio-economic growth, the needs in human resources change. Some of the tertiary education programmes of the past are no longer relevant in the job market today. Further, the shifting dynamics of economic growth necessitates introduction of new programmes to cater to the human resource needs. Therefore, programmes offered by the TEIs need to be relevant to changing times and labour market demands both within and outside the country. The EDP 2010 also states that “*the synergy between educational institutes and industries shall be established.*”

The following strategies are identified to strengthen relevance of tertiary education:

5.2.1 *Enhance programme diversity*

At the moment, one of the factors that compel Bhutanese students to look for tertiary education opportunities outside Bhutan is non-availability of their preferred programmes in the country. Only 1/3 of the programmes offered by TEIs are technical in nature whereas there are greater job opportunities for technical graduates as compared to liberal arts.

There is a need to introduce more variety of courses in TEIs, enrich the courses for students to see value in getting them and introduce more competency and skills-based curriculum to suit the skills-oriented job market.

5.2.2 *Build industry participation and stakeholder coordination*

The current collaboration between the TEIs and the industry through On-the-Job-Training and industry attachment needs to be structured and learning needs to be assessed and monitored. TEI-industry interface can be done through internship, dedicated liaison officers in the institutions and other creative solutions (*2ndNational HRD Advisory 2014*). Industry involvement in curriculum development, programme design and programme delivery should also be strengthened. This is mainly because university curriculum needs to correspond with the market demands to increase employability of graduates with right skill sets for the workplace. The industry involvement during the planning process is expected to increase greater ownership of the tertiary education institutions, since the supply generated from these institutions are to meet their human resource

requirement. There is also need to build capacity of TEIs to respond to labour market needs.

Partnerships among different key tertiary education stakeholders such as government, institutional policy makers, teaching and related staff, researchers, students, administrative, technical personnel, labour market, industry and community group can be a powerful force for advocating and managing tertiary education reform (*UNESCO World Conference on Higher Education 1998*). As such, the Secretariat to the apex body for tertiary education, the Department of Adult and Higher Education, should lead coordination efforts to bring cohesion and collaboration among different partners on issues, reforms, and way forward in the tertiary education system. Coordination is also required among the government, economic sectors and higher education if high-level skills necessary to implement national development strategy are to be made available in a timely manner.

5.2.3 *Develop Long-term human resource requirement direction for tertiary education*

There is no long-term human resource requirement projection for enabling the TEB to provide directions to TEIs. The TEP 2010 mandates the Ministry of Labour and Human Resources (MoLHR) and Royal Civil Service Commission (RCSC) to provide long-term human resource demand projections in the corporate and private sectors and civil service sector respectively. The demand assessment is expected to provide critical occupation and skills in demand.

Accordingly, the TEB should provide long-term strategic directions to TEIs based on the long-term human resource requirement direction developed by MoLHR and RCSC.

This information will be important for strategizing tertiary education programmes supply and in aligning tertiary education programme to the demand of the economy. The Ministry of Economic Affairs (MoEA) needs to provide long-term economic development plans and policies for enabling MoLHR and RCSC to develop long-term human resource projections. The long-term demand guide will also provide human resource intervention to complement the economic plan or policy of the country. Furthermore, it is important for TEIs to design and offer programmes aligning with the global human resource requirements so that graduates will have greater chances of getting employed outside Bhutan.

5.2.4 *Promote entrepreneurship culture*

While a culture of entrepreneurship exists in some form in some of the TEIs, it has not been mandatory so far. There is no strong drive for creating opportunities for students to acquire entrepreneurship skills and to pursue their own business needs.

Therefore, entrepreneurship culture needs to be engrained and promoted from the school level and TEIs should create conducive environment where entrepreneurship skills among the students are groomed and nurtured. Entrepreneurship skills need to be integrated in every relevant tertiary education programme. TEIs should also explore setting up business incubation units and innovation centres to support and nurture entrepreneurship culture among students. This will encourage graduates to become job creators rather than job seekers.

5.2.5 *Strengthen Science, Technology, Engineering and Mathematics (STEM) Programmes*

Globally, there has been a shift in focus on tertiary education from liberal arts to STEM programmes. This has been driven by the socio economic growth in changing dynamics in the global labour market. As economies progress, the kind of skills required in the national labour market will have increasing emphasis on sophisticated technical abilities. In Bhutan, important national policy documents such as EDP 2010 and Bhutan Transport 2040 indicate that there will be a critical requirement for graduates with specialized and technical background in the long-run. Further, Bhutan Education Blueprint 2014-2024 expressed the need to prepare more students to opt for STEM programmes at tertiary level. However, Bhutan's current enrollment into STEM programmes at tertiary level is only about 35% as compared to global enrollment rate of 57% to 60%.

For Bhutan to surge ahead in the STEM programmes, various programmes need to be instituted. Firstly, industry-institute collaboration in programme design, practical training and researches need to be encouraged. Secondly, introduction of vocational education track in higher secondary schools should be encouraged with the provision to enter institutes of higher learning in STEM fields. Contingent upon putting in place the above measures, this roadmap envisages attaining STEM programmes enrollment of 50% by 2027.

5.3 Quality

Quality control and accreditation are integral parts of tertiary education systems around the world. These processes not only ensure quality but lend legitimacy to programmes and institutes of higher

learning. Tertiary education systems around the world also use these processes for establishing international credibility and facilitate transfer of credits.

To ensure that tertiary education system in Bhutan has quality control and accreditations in consonance with world-wide practices, the following strategies are identified:

5.3.1 Institutionalize Quality Assurance Mechanism

The TEP 2010 mandates the BAC to accredit TEIs on a five-yearly basis to assess the quality of tertiary education and ensure that it meets the required standards.³

There is an urgent need for the BAC to accredit all TEIs to strengthen the quality of tertiary education in the country. The Roadmap aspires to achieve 100% accreditation of TEIs by national accrediting body. Accrediting TEIs will uplift the credibility of country's degrees and programmes at the international level. TEIs should also be encouraged and supported to get their institute accredited by regional/international accreditation bodies. At least 4 TEIs should be accredited by regional/international accrediting bodies during the roadmap period. The TEIs need to offer joint programmes through collaboration with reputed institutions outside Bhutan for enhancing quality and diversity of tertiary education programmes. Further, the government should prioritize funding based on accreditation status of TEIs. And other measures such as giving preferential treatment to graduates from accredited TEIs for employment need to be explored.

3 BAC completed accrediting 9 TEIs as of December 2017.

5.3.2 *Enhance Continuous Professional Development (CPD) of Faculty*

There is no adequate funding from the Government to support professional development programmes in public TEIs. There is a need to increase expenditure in tertiary education as a percentage of GDP to support core areas of tertiary education such as professional development programmes of faculty and, research and innovation activities.⁴

The quality of tertiary education hinges largely on the individual capacity of faculty. The government will have to support the professional development programmes of the academic staff and those at leadership positions. The CPD programmes can be supported through provision of scholarships for upgrading of qualifications and skills.

Moreover, attractive service conditions including, but not limited to, perks, remuneration and career path for faculty members will have to be put in place. This initiative would enable to attract top candidates and retain them in the teaching cadre.

5.3.3 *Promote Research and Innovation in TEIs*

The TEP 2010 aspires TEIs to focus on building strong culture of research and innovation to build Bhutan into a knowledge-based society. Tertiary Education without research and innovation activities is like an extended secondary education. This trend impedes the growth of students and faculty's intellectual capacity in terms of creativity and innovation.

Therefore, the government should allocate dedicated funds to TEIs for carrying out research and innovation activities.

⁴ The expenditure in tertiary education as a percentage of GDP is only 1.22% (State of Tertiary Education 2016).

Promoting research in TEIs can enhance quality of teaching-learning. TEIs are an untapped valuable resource- in terms of intellectual property generation (*publications and patented products*)and should be provided technical and financial assistance to build up their research capacity and productivity. TEIs should be encouraged and supported to offer research oriented PG programmes. It is also important for the TEIs to recognize research activities as part of the performance appraisal of the academics. Further, as articulated in the TEP 2010, the National Council for Research and Innovation should be instituted to plan and allocate research funds to TEIs on a competitive basis.

5.3.4 *Implement Bhutan Qualifications Framework*

BQF has been in place for some time but actual implementation has been hindered owing to many reasons. Although it is intended to facilitate credit transfer within and amongst institutes, both within and outside the country, the system is not in place.

Therefore, there is a need to operationalize the BQF. Implementing BQF should lead to seamless movement of students among TEIs through harmonization of curriculum, ensuring achievement of credit, credit transfer mechanism and recognition of prior learning. The credit transfer system instituted in in-country institutions should also be recognized by institutions abroad. It would also strengthen international benchmarking for recognition of qualifications. Such initiatives would not only enhance further studies and overseas employment opportunities for home-grown graduates but also contribute towards building Bhutan into a knowledge-based-society through attraction of international tertiary students.

Moreover, the provisions for vertical and lateral movements of students within and between technical and academic courses (*as propounded in the BQF*) will encourage students to pursue the technical courses offered by TVET institutions.

5.3.5 Conduct tracer study of graduates

Very few TEIs in Bhutan conduct tracer studies of their graduates to assess the quality of their graduates. Through these tracer studies, institutes can evaluate the efficiency and quality of their programmes. Furthermore, this kind of data will be useful for planners and policy makers in devising strategic policy documents to guide the growth of tertiary education sector in the country. It will also provide opportunities for TEIs to reflect and take necessary initiatives based on the performance of their past graduates in the job market.

There is a need to build strong culture of conducting tracer studies of graduates by TEIs so that necessary reforms in terms of programme relevancy, teaching-learning process and administrative system can be made based on their feedback. The national tertiary education oversight body would also use these tracer studies as a basis for funding and financing. However, to ensure the authenticity of these studies conducted by institutes, periodic review and audit should be conducted by the agency.

5.4 Governance and financial sustainability

Governance of tertiary education, both at the system and institutional levels, need to be aligned with international best practices as there will be huge ramifications both in short and long-terms. Qualitative management and governance calls for standards that encapsulates not only practices around the world but also takes into consideration local context. Governance system that brings about greater cohesion

amongst various factors of governance and national priorities need to be promoted.

The following strategies are identified to streamline governance and financial sustainability of tertiary education:

5.4.1 *Restructure Tertiary Education Board and Bhutan Accreditation Council*

Although the TEP was endorsed in 2010 followed by the creation of TEB as the highest executive decision making body for tertiary education, substantive provisions of the TEP 2010 still remains to be operationalized.⁵ While TEB in current setup have been trying their best to fulfill their professional mandates, Secretariat to this body is housed within a small division under the DAHE. This has impeded the TEB to enforce provisions of TEP 2010 in the most professional manner.

Therefore, there is a need to restructure TEB to have more functional independence and credibility. The TEB Secretariat will have to be strengthened possibly with officials from higher education background even if it has to go beyond the normal HR norms of the RCSC. This would enable the TEB Secretariat to carry out the ground work in the most professional and systematic manner for facilitating the decision-making process of the TEB.

Further, as envisaged by the TEP 2010, there is a need for the BAC to grow into an independent quality assurance body. The accreditation system within the Ministry of Education and Bhutan Occupational Standards maintained by the

⁵ This is mainly due to lack of capacity of the TEB Secretariat which is housed within the small division under the Department of Adult and Higher Education, Ministry of Education. With the current set up, it is challenging for the TEB to regulate and provide directives to TEIs which are established either by a Charter or an Act of Parliament.

MoLHR could be explored for streamlining and possible merger for overall efficacy within the small system. Besides, professional bodies such as Bar Council, Teacher Education Council, Technical Education Council, Architecture Council and others need to be established and made functional to protect the integrity of the professions.

5.4.2 *Enhance Financial Sustainability*

While the Funding and Financing Mechanism for Tertiary Education 2013 is in place to incentivize only those programmes meeting the national priority needs and requirements, the mechanism has not been operationalized.

The funding and financing mechanism needs to be implemented on a priority basis. The TEB will have to replace block grants with performance-linked and per student funding for all public TEIs. The government needs to prioritize providing scholarships to TEIs offering programmes of national priority needs⁶. The government will have to provide funds to public TEIs based on the ranking of the TEIs determined by parameters such as employability of graduates and accreditation status. This intervention will encourage TEIs to become more innovative and responsive in terms of developing academic programmes that meet the changing human resource requirements of a dynamic labour market.

This roadmap aspires to increase number of self-funding tertiary students in every public TEI to make tertiary education provision sustainable in the long-run. To supplement this

⁶ A study conducted by ADB recommended phasing out government funding for those programmes if 60% (*or more*) of the graduates cannot find employment for consecutive two years.

initiative, various other measures such as cost sharing, loans (programme-based/income contingent etc.) need to be put in place to ensure long-term sustainability of tertiary education in the country.

There is also a need to build endowment/trust funds, institutionalize corporate/individual’s donations to TEIs as tax deductible and initiate funding schemes in strategic priority areas such as research, innovations and discoveries.

5.4.3 *Review Institutional Governance and Effectiveness*

Good governance is indispensable for the efficient functioning of any organization and for building great institutions.

This roadmap aspires to review the existing governance structure and effectiveness of existing TEIs for instituting standardized governance structure. As propounded by the TEP 2010, there is a need to provide some level of autonomy in areas of human resource, finance and academic to TEIs. The TEIs should prepare a five-yearly strategic plan to serve as a basis for securing long-term funds from the government.

6. Results framework for roadmap

A. Impact and Impact Indicators

| Impact | Code | Impact Indicators | Baseline | Target | Data Source | Frequency of Data Collection |
|-------------------------------------|------|---|---------------|--------|-------------|------------------------------|
| Enhanced employability of graduates | 1.1 | Unemployment rate of graduates | 31.06% (2014) | 15% | LFS 2014 | Annual |
| | 1.2 | % of graduates employed within one year of graduation | 80% | 90% | MoLHR | Annual |

B. Outcomes and Outcome Indicators

| Impact | Outcome | Code | Impact Indicators | Baseline | Target | Data Source | Frequency of Data Collection |
|-----------|--|------|---|----------|--------|--|------------------------------|
| Outcome 1 | Improved Access to Tertiary Education | 1.1 | GER in Tertiary Education (both within and outside country) | 21.4% | 26% | State of Tertiary Education in Bhutan (DAHE) | Annual |
| | | 1.2 | % of tertiary students studying abroad | 25.32% | 20% | State of Tertiary Education in Bhutan (DAHE) | Annual |
| | | 1.3 | % of students studying in private TEIs within country | 11.83% | 15% | State of Tertiary Education in Bhutan (DAHE) | Annual |
| | | 1.4 | % of students undergoing tertiary education under alternate mode within country | 10% | 18% | State of Tertiary Education in Bhutan (DAHE) | Annual |
| Outcome 2 | Enhanced relevance to tertiary education | 2.1 | % of students studying entrepreneurship programmes/modules/courses | 11% | 25% | State of Tertiary Education in Bhutan (DAHE) | Annual |
| | | 2.2 | % of students enrolled in STEM programmes | 35% | 50% | TEIs | Annual |

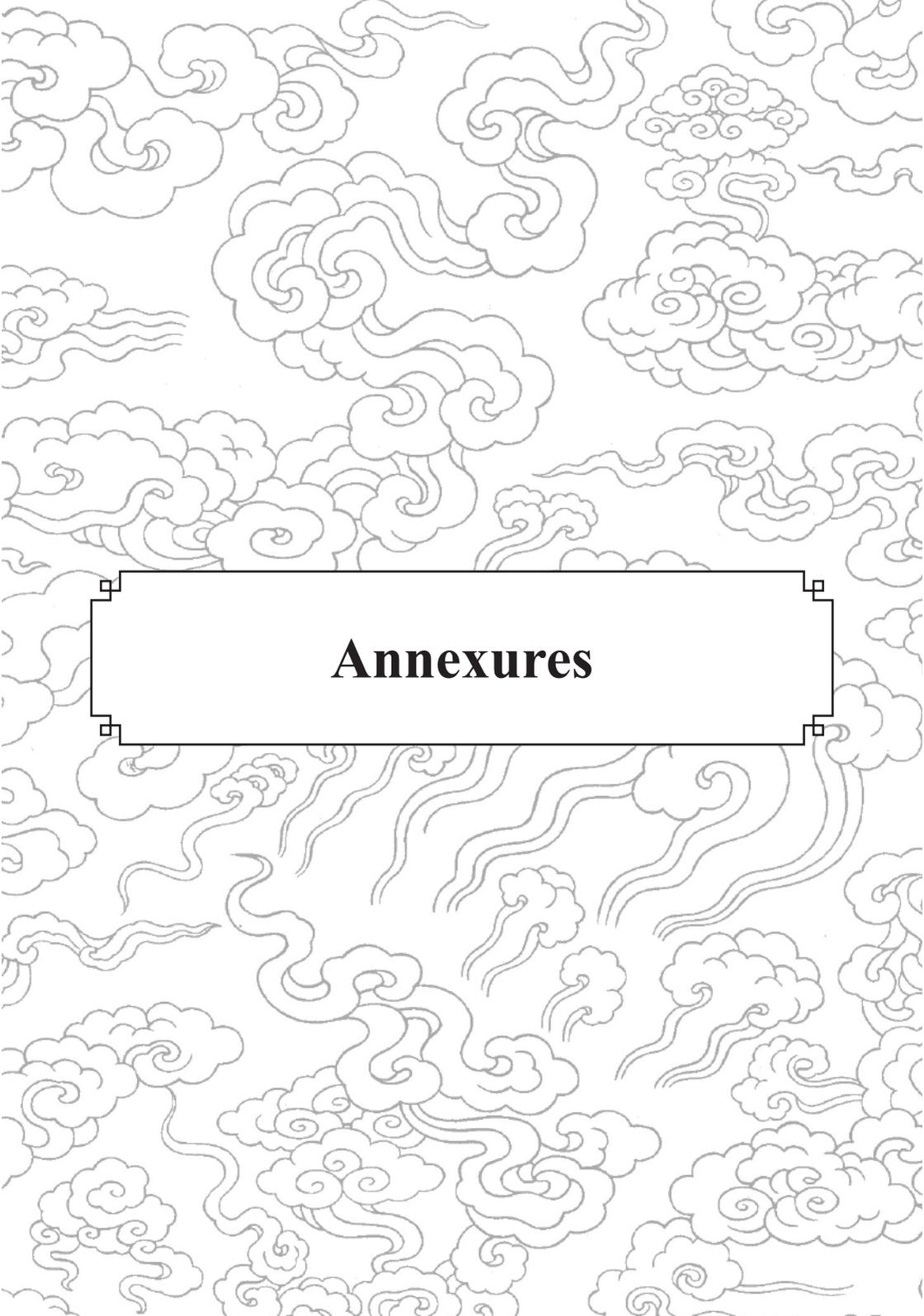
| | | | | | | | |
|-----------|---|-----|--|---|---|--|--------|
| Outcome 3 | Enhanced Quality of Tertiary Education | 3.1 | No. of Programmes/TEIs accredited by regional/ international accrediting bodies | 0 | 4 | DAHE/TEIs | Annual |
| | | 3.2 | No. of peer review research paper published by public TEIs | 52 | 1254 | TEIs | Annual |
| | | 3.3 | No. of TVET graduates enrolled in tertiary education programmes | NA | 40 | QAAD, DAHE | Annual |
| Outcome 4 | Streamlined governance structure and financial sustainability | 4.1 | TEI-wise % of self-funding tertiary students (public TEIs) | RUB:16% KGUMSB:9% RIM:23% JSWSL:NA | RUB:30% KGUMSB:10% RIM:30% JSWSL:30% | State of Tertiary Education in Bhutan (DAHE)/ TEIs | Annual |
| | | 4.2 | TEI-wise % of annual revenue generated from sources other than tuition/government funding. | RUB:8% RIM:15.8% JSWSL:NA | RUB:13% RIM:20% JSWSL:8% | TEIs | Annual |

C. Output and Output Indicators

| Outcome Code | Code | Output | Code | Output Indicator | Baseline | Target | Data Source | Data Collection Frequency |
|--------------|----------|---|------|---|---------------------|--------------------|--|---------------------------|
| Outcome 1 | Output 1 | Established new private colleges | 1.1 | No. of private colleges/institutes established | 3 | 5 | DAHE | Annual |
| | Output 2 | Increased in-take capacity of public TEIs | 2.1 | Total in-take capacity of public TEIs | 9920 | 15000 | State of Tertiary Education in Bhutan (DAHE) | Annual |
| | Output 3 | Enhanced alternate modes of programme delivery in TEIs | 3.1 | TEI-wise no. of programmes with alternate modes of delivery | RUB:13 JSWSL: NA | RUB:29 JSWSL: 1 | TEIs | Annual |
| Outcome 2 | Output 1 | Diversified programmes offered by TEIs | 1.1 | Total no. of new programmes launched by Public TEIs | 101 | 195 | TEIs | Annual |
| | Output 2 | Established TEIs-industry interface for relevant programmes | 2.1 | % of TEIs offering programmes with industry linkage | 63% | 74% | TEIs | Annual |
| | Output 3 | Developed National HRD Master Plan | 3.1 | Timeline by which National HRD Master Plan is developed | NA | June 2019 | MoLHR | Annual |

| | | | | | | | | |
|-----------|----------|--|-----|--|---------------------------------|---------------------------------|------------|--------|
| Outcome 2 | Output 4 | Promoted entrepreneurship courses in TEIs | 4.1 | % of TEIs that offer entrepreneurship modules for students of all programmes | 42% | 63% | TEIs | Annual |
| | Output 5 | Strengthened STEM programmes in TEIs | 5.1 | % of STEM Programmes in TEIs | 35% | 50% | TEIs | Annual |
| Outcome 3 | Output 1 | Enhanced quality of tertiary education | 1.1 | % of TEIs accredited by BAC | 75% | 100% | QAAD/ DAHE | Annual |
| | | | 1.2 | No. of TEIs that offer joint programmes with reputed institutes abroad | 1 | 10 | TEIs | Annual |
| | Output 3 | Enhanced motivation and professionalism of faculty | 3.1 | TEI-wise % of faculty with relevant level of qualification (public TEIs) | RUB: Masters-59% PhD-8% | RUB: Masters-79% PhD-19% | TEIs | Annual |
| | | | | | KGUMSB: Masters-62% PhD-5.6% | KGUMSB: Masters- 81% PhD-15% | | |
| | | | | | RIM: Masters-57% PhD-7.7% | RIM: Masters- 90% PhD-60% | | |
| | | | | | JSWSL: Masters-55% PhD- NA | JSWSL: Masters-100% PhD- 18% | | |

| | | | | | | | | |
|--------------|-----------------|--|-----|---|----|------|------|--------|
| Outcome 3 | Output 3 | Enhanced motivation and professionalism of faculty | 3.2 | % of faculty who have undergone Professional Development programmes | NA | 80% | TEIs | Annual |
| | | | 3.4 | Faculty satisfaction level in public TEIs | NA | 80% | DAHE | Annual |
| | | | 3.5 | Student satisfaction level | NA | 80% | DAHE | Annual |
| | Output 4 | Promoted research and innovations in TEIs | 4.1 | No. of research oriented programmes | 1 | 7 | TEIs | Annual |
| | | | 4.2 | Timeline by which National Council for Research and Innovation is established | NA | 2019 | DAHE | Annual |
| | | | 5.1 | Timeline by which all provisions of BQF is institutionalized | NA | 2018 | DAHE | Annual |
| Output 5 | Implemented BQF | | | | | | | |



Annexures

Annexure 1: Situational Analysis on Access to Tertiary Education

a) Lack of adequate intake capacity inside the country

The access to tertiary education in Bhutan is currently limited to around 3,500 students every year, which are offered as full-time programmes by various TEIs. New modes of delivery of programmes such as online, part-time, distance, mixed-mode etc. are not being harnessed.

Annually 10,000 youths leave the higher secondary schools with many seeking to continue their higher education. The Gross Enrolment Ratio (GER) in tertiary education within the country is 16.11% as of 2017. There is only limited private sector participation in tertiary education. Currently, RTC, NRC and RAHS are the only private colleges/institutes in the country. The GER goes up to 21.4% if one includes TEIs both inside and outside the country. As per the registration record maintained by DAHE (Dec. 2017), 2874 students are pursuing tertiary education outside the country. However, the actual number of students studying abroad might go over 4000 students.

Further, not many TEIs have provision to deliver tertiary education through alternate modes except for few RUB Colleges and RTC. RTC is the only college which offers resident continuing education (CE) to about 240 students as of 2017. There is high drop-out rate from the existing CE program offered by RTC due to long course duration and not having system in place to credit their work experiences.

b) Financing, scholarships and admissions

There is no provision in the Constitution that requires the government to fund or subsidize tertiary education in the country. Hence Government financing may be subjected to change in future. Currently the investment in higher education sector accounts for only 1.22 as percentage of the Gross Domestic Product (GDP).

Government scholarships, both within the country and outside are awarded solely on merit basis. No innovative schemes have been initiated. Also admissions to public TEIs are on merit basis and in private TEIs it is on first-come-first-served basis.

Beside the government scholarships, there are few NGOs and private college (RTC) offering full and half scholarships with different criteria.

The current government has initiated student loan scheme for tertiary education whereby about 100 students are selected annually based on the financial need basis.

c) Lack of programme diversity

Currently the ratio of student enrollment in science/humanities in Higher Secondary School is about 30/70. And only 1/3 of the existing programmes offered by TEIs of the country are in the science and technical fields. Currently only few TEIs conduct tracer studies of their graduates. The current programme development process is tedious as it takes long duration (2 years in RUB's case) to launch new programme. Moreover, one of the reasons that students go abroad for pursuing tertiary education is due to lack of programme diversity in TEIs within the country.

d) Mobility of student and faculty

Although TEP 2010 encourages credit transfers to allow mobility of students from other countries, only few TEIs in country have put to practice. Technical and vocational education is offered by different institutions with no lateral mobility. Most of the courses at TEIs are not aligned with that of other universities to allow mobility of faculty members.

For instance, European countries have jointly adopted the Bologna Process that allows great mobility of students and faculty freely among 25 countries. The learning environment is enriched with the presence of international students and faculty.

Annexure 2: Situational Analysis on Relevance of Tertiary Education

The second National HRD Advisory of the MoLHR indicates that approximately 4000 to 4500 university graduates will enter the labour market annually in the 11th FYP period. However, the demand within the existing industry does not look very optimistic. The RCSC, which has been one of the largest employing sectors, will recruit less than 500 to 700 graduates annually in the 11th FYP period. This number is expected to gradually decline over the subsequent plan periods.

The TEP 2010 highlights the importance of delivering quality and relevant tertiary education in the country. Over the years, skill mismatch, shortage of skill and unemployment have become a major concern for the Government, with increasing number of university graduates not getting jobs. The process of matching university graduates to the demands of our industry is important and this can be addressed by improving the relevance of tertiary education system.

The Labour Force Survey (LFS) 2014 indicates unemployment of 2.6%, which are approximately 9100 individuals unemployed. Youth unemployment in 2014 was 9.4%, which is approximately 3600 youths unemployed. Graduates unemployed constitute 31.06% of the total unemployed in 2014, which is approximately 2800 graduates unemployed. As indicated in the following table, the composition of graduates against the total unemployed has been increasing sharply over the years (*4.55% in 2010, to 12.74% in 2012, 32.37% in 2013 and 31% in 2014*).

| LFS year | Total unemployed | Graduate unemployed | % graduate unemployed |
|----------|------------------|---------------------|-----------------------|
| 2010 | 11000 | 500 | 4.55% |
| 2011 | 10500 | 900 | 8.57% |
| 2012 | 6902 | 879 | 12.74% |
| 2013 | 9916 | 3210 | 32.37% |
| 2014 | 9174 | 2849 | 31.06% |

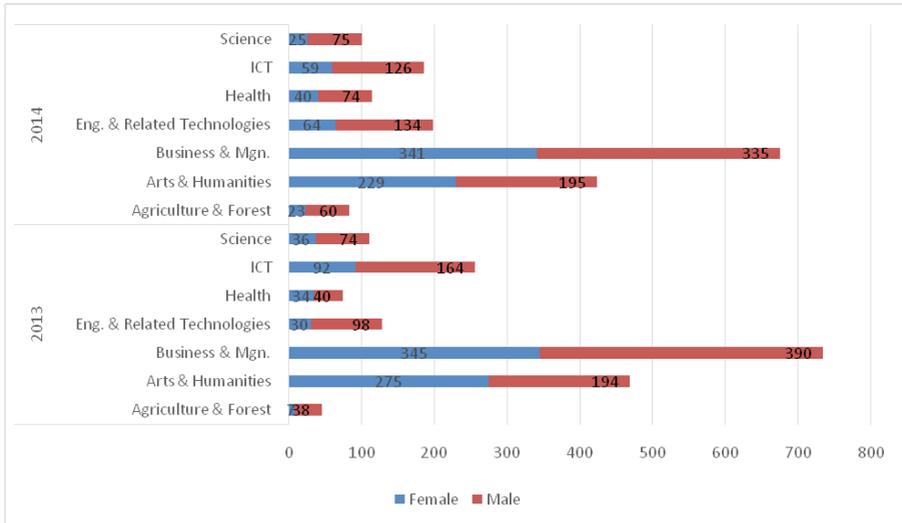
Source: LFS 2014

a) Lack of linkage between tertiary education programme and the economic direction

There are no systematic formal assessments of the country's economic prospects and their implication for skills requirement through the tertiary education. While the EDP 2010 has highlighted the economic areas and priority sectors, the tertiary education programs are not assessed to align with the EDP. In absence of long-term human resources direction, it is difficult to provide directives to the TEIs on demand requirements of the economy. The current system of introducing a new programme in the TEIs indicates that the proposals come from the TEIs themselves with some market or need assessment carried out with relevant industries, which is later validated by a committee. Transitions and development in tertiary education also indicate that a major reform has to be undertaken to address quality and relevance.

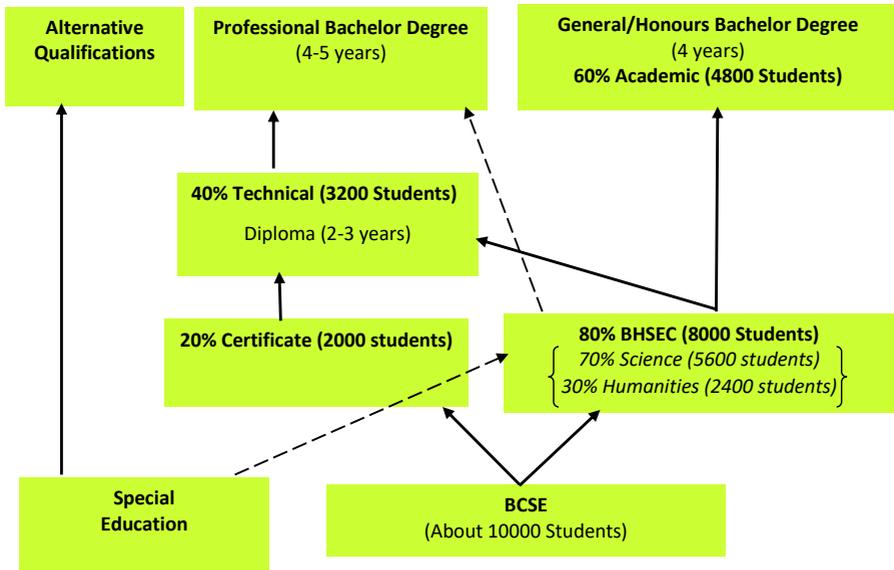
Further, 80% of the students currently pursuing tertiary education both within and outside the country, as per the DAHE data, are in the general fields. The *Beyond Graduation Survey 2014* (MoLHR), indicates that a significant number are graduating in the broad field of business & management, arts & humanities and information technology. This trend was common in both 2013 as well as in 2014. While increasing number of university graduates are not getting employed, Bhutan also imports a significant number of foreign workers. The Labour net data (December 2013) indicates that about 2100 foreign workers were university graduates, a significant number of these are science and engineering professionals. Economic sectors such as construction, hydropower, mining, and health require technical professionals.

Broad field of study/programme by gender in 2013 and 2014 (Source: The Beyond Graduation Survey 2014)



In order to enhance intake for technical programmes at tertiary level, it has to begin from the school level itself. Bhutan Education Blueprint 2014-2024 identified “Offering a variety of elective subjects besides the core subjects for students to choose from including technical/vocational subjects, especially from the secondary classes onwards,” as one of the game changing initiatives (p.77). The Bhutan Education Blueprint and TVET Blueprint 2016-2026 state that 20 % of those leaving the secondary schooling system must enter the TVET system by 2024, and the level must increase to 40% by 2034. The future school graduates will be better prepared to take up technical courses. Moreover, the skilled human resources will not only have greater chances of getting employed within the country but also overseas. Thus, to enhance employability of graduates, it is desirable for the government to reform the education structure post class X as proposed below:

Fig. Education Pathway (Continuation of BEB 2014-2024, p.31)



In addition, DAHE provides annual ex-country scholarships for about 200 higher secondary students. These scholarships are to be offered in the areas where in-country TEIs do not have the capacity but there is critical demand requirement in the country. The current practice is that these requirements are collected from RCSC (for the civil service sector) and MoLHR (for the non-civil service sector). DAHE, then compiles the requisition for endorsement by the scholarship steering committee.

It is expected that RCSC and MoLHR compile these scholarship requirements based on their sector’s long-term human resource requirement, therefore DAHE, thus far has not validated on the requisitions. However, there has been increasing number of these scholars not getting absorbed by the labour market upon graduation. For some areas, there are no vacancies. In 2015, four students graduated in Food Technology based on RCSC’s requirement were not provided vacancies in the government sector. Therefore, despite huge investment from Government to send students for specialized courses outside the country, these students remain unemployed.

Bhutan has a small labour market which gets saturated easily. RCSC, which has been one of the main employing sectors, has recently adopted ‘zero growth policy.’ The intake for the civil service sector has been on the decline over the years. Further, most government owned corporations have reached its saturation and have not generated new employment in the recent years. On the other hand, private sector has not grown to generate employment for the graduates.

While labour market transitions are happening, tertiary education institutions have not evolved much in terms of course diversity. Graduate perception survey conducted by the MoLHR indicates that graduates have low preference to work in the private sector. Graduates are also not confident to take up self-employment initiative since the tertiary education programmes are not designed for students to take up entrepreneurship after the graduation.

b) Tertiary education financing is not performance based

All the public tertiary education institutions are almost fully funded by the Royal Government of Bhutan. The DAHE developed the *Funding and Financing Mechanism for Tertiary Education 2013* to finance those tertiary education programmes which are aligned to the national priority needs and requirement and to sustain the existing competencies of the TEIs. However, this financing mechanism has not been operationalized. This has resulted in continuation of those programmes with low employment prospects.

c) Weak linkage between TEIs and Industry

The colleges under RUB currently have Research and Industry Linkage units. These units are mandated to liaise with the industry on a regular basis. Further, these units are also responsible for carrying out On-the-Job-Training (OJT) and on campus recruitment. However, this linkage has not resulted in employment of graduates.

In the case of KGUMSB, the institutes operate in direct partnership with the Ministry of Health (MoH) which is its major employing sector. The

only health services that are privatized are diagnosis and pharmacy. But it is important to note that programmes offered through KGUMSB are pursued abroad by self-funded students. Further, since KGUMSB is catering only to MoH, the graduate absorption capacity of the sector would soon reach its saturation point. The Royal Thimphu College has industry linkage for some of its programs. It, however, lacks formal and sustained linkages with the industry.

d) Need for strengthening career counselling

Classes X & XII are the key stages of the students since their decision will have direct impact on the kind of jobs they will take up later. At class X, a student decides either to enroll for higher education under different streams (e.g. science, commerce, arts) or opt for vocational programmes. At class XII a student decides on higher education programmes.

Currently, career counseling offered at the secondary education level needs to be strengthened and given priority. The MoLHR on the other hand lacks capacity to provide clear labour market information and skills forecast data which will be useful guide for any career counselling.

On the other hand, despite the in-country institutional capacity to offer programmes such as commerce, business management, ICT and general art subjects, the students entering ex-country institutions for similar courses keep on increasing, resulting in higher supply of job seekers in these fields. The National Graduate Orientation Program (NGOP) 2012 and 2013 validate that almost 40 to 50% of graduates have studied outside Bhutan. There are about thirty education consultancy and placement firms registered with DAHE. These education consultancy and placement firms are responsible for facilitating and helping self-funding students interested to study abroad. Statistics shows that not all students avail the services of these consultancy firms. Therefore, majority of students undertake undergraduate programme on their own with little knowledge of labour market requirements or demands. This has resulted in most of these graduates not getting employment after graduation.

e) Lack of long-term human resource requirement direction

The vision of the EDP 2010 is to promote a green and self-reliant economy sustained by an IT enabled knowledge society. The areas of economic opportunities identified in the EDP are high quality green services, agro and forest based production, energy, information and cultural industry, natural resources, transportation, construction and waste management services. The National HRD policy 2010 was developed to complement the EDP 2010 in required HRD intervention.

The MoLHR has developed the National Workforce Plan (NWFP) for the production, tourism and construction sector. The NWFP provides critical job and capability requirement for the three sectors from 2016 to 2022. The NWFP will be instrumental in aligning provisions of tertiary education programmes to the demand from these sectors.

Further, the Government has started exploring overseas employment as an opportunity for Bhutan. Therefore, our tertiary education programmes should also explore aligning to meet targeted global human resource requirements. Currently, the government is investing a huge amount of resources to retrain and re-skill graduates to fit the overseas HR requirement which otherwise can be done away with if right interventions are made during the design and implementation of tertiary education programmes.

Annexure 3: Situational Analysis on Quality of Tertiary Education

As per clause 10 of the TEP 2010, all universities are required to create and maintain an effective quality assurance system that covers all programmes and related degrees. All TEIs are subject to a periodic five-yearly review undertaken by the Bhutan Accreditation Council (BAC). The BAC was established in 2011 with Quality Assurance and Accreditation Division (QAAD) as the Secretariat.

BAC has put in place Accreditation Principles and Bhutan Qualifications Framework (BQF). The BAC also has developed the guidelines for the recognition of qualifications based on the UNESCO toolkit on recognition of qualifications. Further, based on Accreditation Principle, Accreditation Handbook was developed to accredit the TEIs.

Currently all the TEIs have their own internal quality assurance mechanisms. For instance, RUB has established the Wheel of Academic Law which spells out procedures starting from the conception of a programme to its launch. However, the programme accreditation has not been initiated by the BAC as an oversight body on quality assurance.

a) Accreditation of TEIs

The BAC carried out accreditation of nine colleges as of December 2017 and plans to complete accreditation exercise for all TEIs in the coming years. None of TEIs in the country has been accredited by regional/international accrediting bodies. BAC is yet to grow into autonomous body as envisaged in the TEP.

b) Bhutan Qualifications Framework is not fully implemented

The provisions laid out in the Bhutan Qualifications Framework with respect to lateral entry, credit transfer, life-long learning and recognition of prior learning are yet to be implemented. As a result it impedes seamless flow of students among TEIs within the country and between national and international TEIs.

c) Difficulty in cross border recognition

There is no well-established networking system for the mutual recognition of cross border qualifications. This hampers students aspiring to go abroad for further studies and employment. Further, it also becomes difficult for Bhutan to attract international students for achieving the goal of building Bhutan into a knowledge-hub.

d) Weak Research Culture

Research works undertaken by TEIs are currently limited in absence of adequate funding from the government. TEIs don't take research as one of the main mandates in the current settings.

e) Inadequate Faculty Development Programme

The quality of tertiary education is directly linked with the quality of faculty. Professional Development Programme in TEIs is inadequate. There is no adequate funding from the government for faculty professional development in the public universities.

f) No uniform mode of funding TEIs

Lack of uniform system of funding TEIs is hampering quality of tertiary education. Currently the TEB has not been able to institute uniform system of funding for all public TEIs. While few universities such as RUB and KGUMSB are funded based on per student cost, other TEIs such as Royal Institute of Management and Jigme Singye Wangchuck School of Law are funded like any other government organizations. In absence of such system, TEB is not able to fund programmes which are of priority need to the nation and place desired accountability to TEIs.

g) Weak self-assessment culture in TEIs

According to the provisions of the Accreditation Principles, periodic review is to be carried out by the BAC based on the self-assessment report of the TEIs. However, the self-assessment culture in TEIs is not systematized. Lack

of such culture not only deters institutes to reflect on their own performance from time to time but also hampers external accreditation process.

h) Quality of graduates

While there is lack of overall directives from the TEB on programmes of national need, the TEIs also do not take proactive measures to position themselves according to the market dynamics. All TEIs do not conduct tracer studies of their graduates to assess the quality/competency of their graduates in the world of work. This leads to graduate unemployment issue which is one of the indicators of graduate quality. Moreover, graduates are not adequately prepared to become entrepreneurs and usually anticipate the government to provide employment.

Annexure 4: Situational Analysis on Governance and Financial Sustainability

With the endorsement of TEP by the Cabinet in 2010, the TEB was formed with Department of Adult and Higher Education as the Secretariat. The TEB was constituted as the highest executive decision-making body to provide oversight and direction to TEIs. Similarly, BAC was also put in place with DAHE as the Secretariat to function as the highest authority for assuring quality of tertiary education and recognition of tertiary education qualifications. As subsidiary of TEP 2010, numerous documents including Rules and Regulations for the Establishment of Colleges 2012, Accreditation Principles, Bhutan Qualifications Framework and Funding and Financing Mechanism for Tertiary Education 2013 were developed.

DAHE administers and provides ex-country scholarships to about 200 students every year based on academic merit. This includes about 30 scholars to RTC every year. Similarly, the current trend is that majority of students under RUB, KGUMSB, RIM and JSWSL are fully funded by the government. However, there are following issues with respect to governance and financial sustainability:

a) Bureaucratic Setup of TEB and BAC

While TEB and BAC in current setup have been trying their best to fulfill their professional mandates, Secretariat to both these bodies are housed within small divisions under the DAHE. This has impeded the above bodies to enforce provisions of TEP 2010 in the most professional manner. Moreover, members of above bodies being from civil service, it has remained as the biggest challenge to deliver the professional mandates of providing oversight and direction for the growth of tertiary education in the country and in assuring the desired quality of tertiary education.

b) Lack of Tertiary Education Act

Lack of Tertiary Education Act impedes TEB and BAC to function to their fullest potential. Without legal backing for both these bodies, making and implementing decisions remained as the most formidable challenge. Moreover, the fact that TEIs are backed either by a Charter or an Act makes it even more difficult for above bodies to work towards bringing positive transformation to the existing tertiary education system.

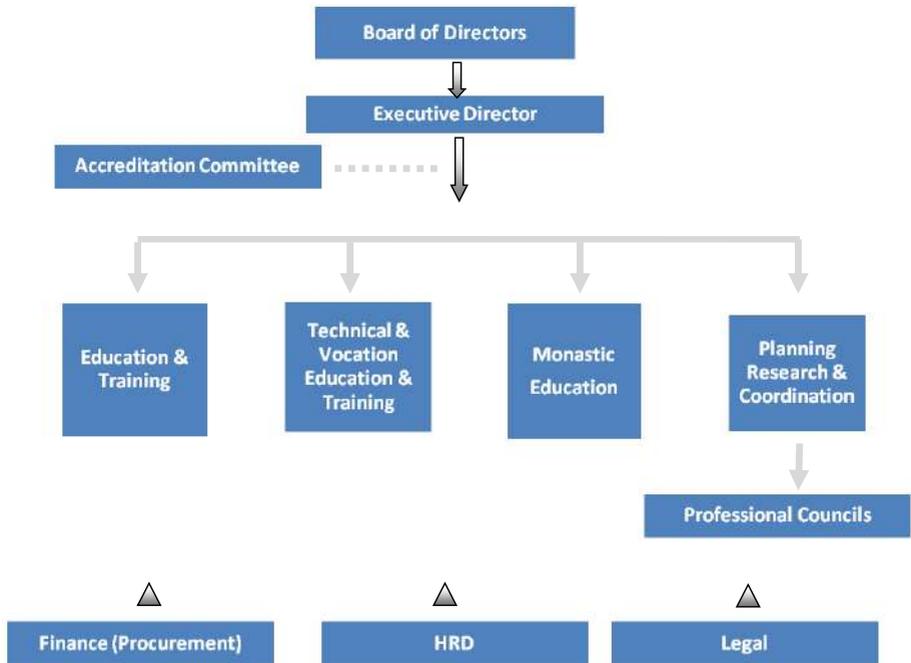
c) Financial Sustainability of Tertiary Education

The current practice is that the government funds majority of slots in public TEIs which will not be sustainable in the long-run. Moreover, indiscriminate funding of all programmes in public TEIs aggravates graduate unemployment issue. On other hand, the government's expenditure on tertiary education in 2013-2014 fiscal year was only 1.22% of GDP. The government will have to increase its investment in tertiary education sector to support priority areas of public TEIs such as professional development programme of faculty members and research activities. Public TEIs don't receive adequate funding from the government for carrying out research and innovation activities.

Annexure 5: Roadmap Development Approach

| Stage | Activity | Agencies |
|-------|---|---|
| 1. | Bilateral Meetings | MoLHR, MoAF, MoWHS, MoEA, TCB, BCCI & NLC |
| 2. | Preliminary Presentations to Stakeholders | RUB, RIM, RITH, KGUMSB, RCSC, MoLHR, MoAF, MoWHS, MoEA, TCB, BCCI & NLC |
| 3. | Presentation to TEB meeting | RCSC, MoLHR, GNHC, MoF, MoEA & MoE |
| 4. | Held taskforce Meetings | RUB, KGUMSB, MoLHR, RCSC, RTC, |
| 5. | Two rounds of Retreat | Taskforce Members |
| 6. | Presentation to DAHE | DAHE Officials |
| 7. | Presentation to MoE | Secretariat, HRD, EMSSD, DYS, PPD, SLCD & AFD |
| 8. | Presentation and vetting by Technical Committee | Technical Committee Members |
| 9. | Stakeholder Consultative Meetings | RUB, RIM, RITH, KGUMSB, RCSC, MoLHR, MoAF, MoWHS, MoEA, TCB, BCCI & NLC |
| 10. | Milestones Setting Exercise | Government Performance Management Division, GNHC, MoF & MoE |
| 11. | Presented to MoE | Hon'ble Minister & MoE officials |
| 12. | Presented the revised Roadmap to TEB meetings | RCSC, MoLHR, GNHC, MoF, MoEA & MoE |
| 13. | Endorsement by the 11 th TEB Meeting | RCSC, MoLHR, GNHC, MoF, MoEA & MoE |
| 14. | Workshop on proofreading of Roadmap | RUB, RIM, KGUMSB, JSWSL & MoE |

Annexure 6: Proposed Structure of Bhutan Qualifications Authority



TERTIARY EDUCATION BOARD (TEB) MEMBERS

1. Norbu Wangchuk, Hon'ble Sherig Lyonpo, Ministry of Education (Chairperson)
2. Karma Yeshey, Secretary, Ministry of Education
3. Indraman Chhetri, Commissioner, Royal Civil Service Commission
4. Sherab Tenzin, Director General, Department of Employment and Human Resources, Ministry of Labour and Human Resources
5. Tandin Tshering, Director General, Department of Cottage and Small Industry, Ministry of Economic Affairs
6. Rinchen Wangdi, Director, GNH Commission Secretariat
7. Loday Tsheten, Director, Department of National Budget, Ministry of Finance
8. Kesang Choden Dorji, Director, Department of Adult & Higher Education, Ministry of Education (Member Secretary)

CO-OPTED TEB MEMBERS

1. Nidup Dorji, Vice Chancellor, Office of the Vice Chancellor, Royal University of Bhutan
2. Dr. Kinzang P. Tshering, President, Khesar Gyalpo University of Medical Sciences of Bhutan
3. Karma Tshering, Director General, Department of School Education, Ministry of Education
4. Kinga Dakpa, Director, Royal Education Council

TECHNICAL COMMITTEE MEMBERS

1. Karma Yeshey, Director General, Department of School Education, Ministry of Education
2. Dr. Singye Namgyel, Chief Executive Officer, Thuksay Research and Consultancy
3. Dr. Karen Beardsley, Fulbright Professor, Royal Thimphu College
4. Dr. Kezang Sherab, Dean of Research and Industrial Linkages, Paro College of Education

CORE GROUP MEMBERS

1. Tshewang Tandin, Director General, Department of Adult and Higher Education, Ministry of Education
2. Dr. Pakila Drukpa, Registrar, Khesar Gyalpo University of Medical Sciences of Bhutan
3. Dorji Wangchuk, Dean of Development and External Relations, Royal Thimphu College
4. Rinzin Wangmo, Chief Programme Officer, HEPD, DAHE, MoE
5. N.B Raika, Chief Programme Officer, QAAD, DAHE, MoE
6. Tenzin Choden, Officiating Chief Programme Officer, HRDD, Department of Human Resource, MoLHR
7. Tashi Dawa, Dy. Chief Programme Officer, SSSD, DAHE, MoE
8. Rinzin Jamtsho, Dy. Chief Programme Officer, HEPD, DAHE, MoE
9. Dorji Lhamo, Planning Officer, Office of the Vice Chancellor, Royal University of Bhutan
10. Dolay Tshering, Programme Officer, SSSD, DAHE, MoE
11. Chainga, Programme Officer, HEPD, DAHE, MoE

TASK FORCE MEMBERS

1. Dasho Indraman Chhetri, Commissioner, Royal Civil Service Commission
2. Tshewang Tandin, Director General, Department of Adult and Higher Education, Ministry of Education
3. Dr. Pakila Drukpa, Registrar, Khesar Gyalpo University of Medical Sciences of Bhutan
4. Dorji Wangchuk, Dean of Development and External Relations, Royal Thimphu College
5. Ugyen Dorji, Chief Programme Officer, Publication and Industrial Media Division, Royal Education Council
6. Sangay Tenzin, Chief Programme Officer, KGUMSB
7. Pema Wangdi, Sr. Lecturer, JSWLS
8. Sonam Euden, Associate Dean for Student Services, JSWLS
9. Karma Thinley, Director, Royal Institute for Tourism and Hospitality
10. Rinzin Wangmo, Chief Programme Officer, HEPD, DAHE, MoE
11. N.B Raika, Chief Programme Officer, QAAD, DAHE, MoE
12. Phuntsho Wangdi, Chief Programme Officer, School Liaison and Coordination Division, Department of School Education, MoE
13. Tenzin Choden, Officiating Chief Programme Officer, HRDD, Department of Human Resource, MoLHR
14. Thinley Rinzin, Offtg. Chief Planning Officer, PPD, MoE
15. Tashi Dawa, Dy. Chief Programme Officer, SSSD, DAHE, MoE
16. Chencho, Dy. Chief Planning Officer, Government Performance Management Division, Office of the Prime Minister
17. Kaysang W Samdrup, Media and Communication Specialist, Department of Revenue and Customs, MoF
18. Sonam Chokey, Planning Officer, GNHC

19. Rinzin Jamtsho, Dy. Chief Programme Officer, HEPD, DAHE, MoE
20. Sonam Choden, Lecturer, Royal Institute of Management
21. Dorji Peljor, Asst. Programme Officer, Royal Institute of Management
22. Dorji Lhamo, Planning Officer, Office of the Vice Chancellor, Royal University of Bhutan
23. Dolay Tshering, Programme Officer, SSSD, DAHE, MoE
24. Phub Gyem, Dy. Chief Curriculum Officer, Khesar Gyalpo of Medical Sciences of Bhutan
25. Yeshe Dorji, Sr. Programme Officer, Education Monitoring and Support Service Division, Department of School Education
26. Jigme Wangchuk, Programme Officer, Department of Human Resources, MoLHR
27. Rinzin Lhamo, Human Resource Officer, Royal Civil Service Commission
28. Dawa Tshering, Sr. Programme Officer, HEPD, DAHE, MoE
29. Chainga, Programme Officer, HEPD, DAHE, MoE
30. Tshewang Jamtsho, Asst. Planning Officer, PPD, MoE

ACRONYMS

| | |
|-------|--|
| ADB | Asian Development Bank |
| BAC | Bhutan Accreditation Council |
| BCCI | Bhutan Chamber of Commerce and Industry |
| B.Ed. | Bachelor of Education |
| BQA | Bhutan Qualifications Authority |
| BQF | Bhutan Qualifications Framework |
| CE | Continuing Education |
| DAHE | Department of Adult and Higher Education |
| ECPF | Education Consultancy and Placement Firms |
| EDP | Economic Development Policy of the Kingdom of Bhutan, 2010 |
| EMSSD | Education Monitoring and Support Services Division |
| FDI | Foreign Direct Investment |
| GER | Gross Enrollment Ratio |
| GNH | Gross National Happiness |
| GNHC | Gross National Happiness Commission |
| HEPD | Higher Education Planning Division |
| HR | Human Resource |
| HSS | Higher Secondary School |
| ICT | Information and Communication Technology |

| | |
|--------|--|
| JSWSL | Jigme Singye Wangchuck School of Law |
| KGUMSB | Khesar Gyalpo University of Medical Sciences of Bhutan |
| MoE | Ministry of Education |
| MoEA | Ministry of Economic Affairs |
| MoF | Ministry of Finance |
| MoH | Ministry of Health |
| MoLHR | Ministry of Labour and Human Resources |
| NA | National Assembly |
| NC | National Council |
| NGO | Non-Government Organization |
| NWFP | National Workforce Plan |
| OJT | On-the-Job-Training |
| PPP | Public-Private Partnership |
| QAAD | Quality Assurance and Accreditation Division |
| RCSC | Royal Civil Service Commission |
| RIM | Royal Institute of Management |
| RITH | Royal Institute for Tourism and Hospitality |
| RTC | Royal Thimphu College |
| RUB | Royal University of Bhutan |
| SSSD | Scholarship and Student Support Division |

| | |
|--------|---|
| STEM | Science, Technology, Engineering and Mathematics |
| TEB | Tertiary Education Board |
| TEI | Tertiary Education Institution |
| TEP | Tertiary Education Policy of the Kingdom of Bhutan, 2010 |
| TVET | Technical and Vocational Education Training |
| UNESCO | United Nations Educational Scientific and Cultural Organization |

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