

I came, I saw, I knew. The great country, Bhutan

- 2nd report: Current situation of the country, and Education system -

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Introduction

We recognize Bhutan as “The country that pursues Happiness”. In some TV programs, “99.99 % of Japanese will never visit the country for a lifetime” or “The last Shangri-La, or Arcadia in South Asia” was reported. How is the actual situation?

About six months have passed since author lived in Bhutan. Author noticed that Bhutanese have honest and kind as personalities. These customs are already becoming lost in other countries. Author spent about one month winter vacation back in Japan. People are moving expressionlessly and quickly, almost the passengers or walkers are using mobile phone in hand. Especially when author saw that many office workers are in a hurry during the morning and evening rush hours at Shinagawa station, an image that many salmons are going up the river ceaselessly was come up immediately.

Author believes that Bhutan is proud of being a country of slow living and simple life. It really means present LOHAS “*Lifestyle of health and sustainability*”. In that sense, Bhutan is much advanced from another country.

In this report, we must understand Bhutan's circumstantial situation briefly first of all.

Next, author will describe contents of outline on education system what heard through the interviews with Honorable Vice Chancellor Dasho Nidup Dorji of Royal University of Bhutan in capital Thimphu and together with the President, Dr. Andu Dukpa of Jigme Namgyel Engineering College in Dewathang of Samdrup Jongkhar.

2 How well do you know Bhutan?

The difference in longitude between kingdom of Bhutan and Japan is 45 degrees, so there are three hours in time difference. In other words, the distance between the two countries is equivalent to about 5,000 km, and it is located one eighth lap around the earth toward the west from Japan.

There are no direct flights from Japan to Bhutan. We must use Drukair of Royal Bhutan Airlines or civil-operated Bhutan Airlines (Tashi Air) which are flying twice a week from Bangkok in Thailand to Paro international airport in Bhutan.



Fig.2.1 Kingdom of Bhutan and Japan

(By courtesy of <http://utlr.me/category/world-map/>. Free for educational use. Revised by author)



Fig. 2.2 At Paro international airport, Bhutan

Real “Happiness” for Their Majesties the 5th King and Queen (*Photographed by author on 20th August, 2014*)

2.1 Brief history of Bhutan

The origins of Bhutan have not been clarified. People who lived in the southern region of Tibet beyond the Himalayas are said to be their ancestors. The history remains after the 6th or 7th centuries when Tibetan Buddhism was introduced to those areas. The official introduction of Buddhism to Japan is said to be year of AD 538 or 552.

The first King was called “*King of the Thunder Dragon*”, and the dragon is drawn on the national flag. The name of the current engineering college is derived from "*Jigme Namgyel*" that is the name of father of the first King.

The official name of the country is Kingdom of Bhutan, and its independence as a country was in 1907. After Bhutan experienced political battles such as the consolidation of Tibet in China and of Sikkim Kingdom in India, suppression of Indian anti-government guerrilla by Bhutan himself, the national situation stabilized in 2003. It took about 100 years from the declaration of independence to that time.

Bhutan promulgated the Constitution in the times of the 5th King in 2008, and the ruled system was shifted from the royal government to the constitutional monarchy. One of the symbol of the country is the King of Bhutan, and another is His Holiness the Je Khenpo known as the Reincarnation of Guru Rinpoche of Indian Buddhist Master Padmasambhava (“*Born from Lotus*”) about 8th century.

In 2016, Bhutan and Japan celebrated its 30th anniversary of diplomatic relations. The current King is His Majesty the Fifth King, Jigme Khesar Namgyel Wangchuk (1980-, reign since 2006)¹⁾. The King first visited the Great east Japan Earthquake in 2011 as the national leader. The King made speech at the Diet about the relation of the culture and national character between Bhutan and Japan.

2.2 Geographical property

The center position of Bhutan is around east longitude 90.5 degrees, north latitude 27.5 degrees. The Latitude is almost the same as the midpoint between Taipei in Taiwan and Kagoshima-city, and it coincides almost with just Okino-Erabu-shima Island in the northern northeast of Okinawa Main Island.

The north and the west borders the Chinese Tibet Autonomous Region, and the east and the south borders India each other. Border conflicts are occurring frequently among these three countries. There are no seas in Bhutan.

The country lies for 320 km in east and west, 160 km in north and south, and the area is about 38,400km², which is almost the same as that of Kyushu Island of Japan.

The border region with the Indian plain in the south is the lowest as about 100 m above sea level, Himalayan Mountain Range in the northern part has the highest peak "*Gangkhar Puensum*" of 7,570 m. Therefore, most of the rivers flow from north to south. 73 % of the country is forest. The proportion of trees is 34 % for broadleaf forests and 27 % for coniferous forests. The land used for agriculture is only 8 % of the country.

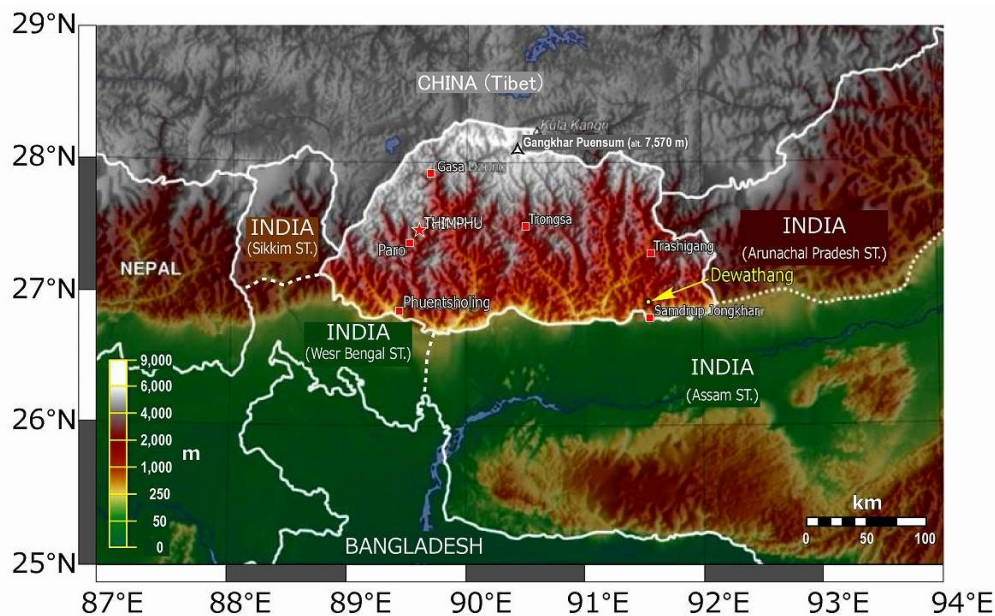






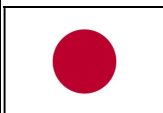


Fig.2.3 Geographical map of Bhutan

(By courtesy of <https://en.wikipedia.org/wiki/Bhutan>. Under GNU Free Documentation License. Revised by author)

The climate changes from alpine climate at the border area with China in northwest to subtropical climate at the border area with India in southeast gradually. Bhutan has four seasons like Japan. The place where author lives in is the apartment of Thangzor near Zilnoen Khanzang Village in the campus of JNEC, RUB (Jigme Namgyel Engineering College, Royal University of Bhutan). The altitude is almost 800 m high. The area belongs to Dewathang gewog (block). It takes about 40 minutes by car climbing up a steep and winding mountain road of about 20 km from the town of Samdrup Jongkhar, at the same of the seat of the prefectural government “Dzonkhag (regional province)” of the border with India. The climate belongs to subtropical zone, and heavy rain falls often through August to October of the rainy season. Table 2.1 shows some of the things as symbols of Bhutan together with Japan below.

Table 2.1 Symbols of Bhutan and Japan*

Country	Flag	Bird	Animal	Flower	Tree	Sport
Kingdom of Bhutan	 Thunder Dragon	 Raven (渡りカラス)	 Takin (a kind of goat)	 Blue Poppy (青いケシ)	 Cypress (糸杉)	 <ul style="list-style-type: none"> • Dartse (archery) • Khuru (darts) • Digor (stone throwing) • Bhutanese Sumo wrestling
Japan	 Rising Sun	<ul style="list-style-type: none"> • Japanese Crane (鶴) • Pheasant (雉) 	Wild Japanese Serow (日本カモシカ)	Chrysanthemum (菊)	Cherry Tree (桜)	<ul style="list-style-type: none"> • Sumo wrestling • Judo • Kendo • Japanese Archery

* Tabulated by author with cooperation of Dr. Andu Dukpa, President of JNEC, RUB.

2.3 Social situation and Happiness

The population is 784,000 in 2016 ²⁾. There are 20 “Dzongkhag” (regional province) in Bhutan. The capital is Thimphu situated in western part at altitude reaches almost 2,400 m. The population is about 100,000 in 2015, and population inflow is increasing every year, both rapidly increasing automobiles in a few years recently. The population distribution of Bhutan is 31 % in urban areas and 69% in rural and mountainous areas.

The average life span of Bhutan is 69.8 years old, while Japan is 83.8 years old in same 2015. Regarding the population 753,951 investigated in 2013 by UN (United Nations), the male vs female ratio was 53.7 % for males and 46.3 % for females.

Bhutan is a young country. The median of age in statistic figure (not the average age) is 26 years old.

Meanwhile, Japan is 46.5 years old and it is the most aging country among the major developed countries in 2013.

The birth rate of Bhutan is 4.7 people in 2000³⁾. It is about 3.3 times higher compared with 1.42 people in 2014³⁾ of Japan.

Rank of the “Happiness” is 79th among 158 countries in the world, while Japan is 46th in 2015 by UNSDSN⁴⁾.

Basically, expenses for medical care and education are free for charge. According to the statistics in 2014⁵⁾, the health rate of the nation is 90%⁵⁾. There are 29 modern hospitals, and 122 doctors are registered. There are 166 traditional medical facilities.

Traditional medicine in Bhutan is almost a treatment method with external medicine, pasting medicinal herbs onto acupuncture points that control disease, or painting saps of wild grasses. In recent years, Cordyceps sinensis (冬虫夏草) has been found in high mountain area. The cure method by natural medicinal herb has been undergone revaluations in view of its more natural effects.

Smoking in public places is prohibited in consideration of health. In addition, because selling “junk food” is prohibited, there are no shops of “Kentucky Fried Chicken” and “McDonald” in the country.

Among the numerous public holiday in Bhutan, on 16th and 17th in February are New Year’s Days, and on 21 to 23th celebrate the present King’s birthday. Many people often take holidays from work continuously during that period assuredly. There seems to be a private leave system that is requested to work without compensation by absentee. However, it seems that souvenir is always given as a present to deputy certainly. There is no system called paid holidays in Bhutan except marriage ceremony or funeral ceremony. People work on Saturday morning a half-day.

2.4 Economics

Labour percentage of industries in 2014⁶⁾ is about 17 % at maximum in agriculture, next follows by road construction and hydropower generation and water supply. The manufacturing industry is only 8 %. Recently, the tourism industry is on the rise, and it is said that about 1,000 travel agencies are registered for tax measures.

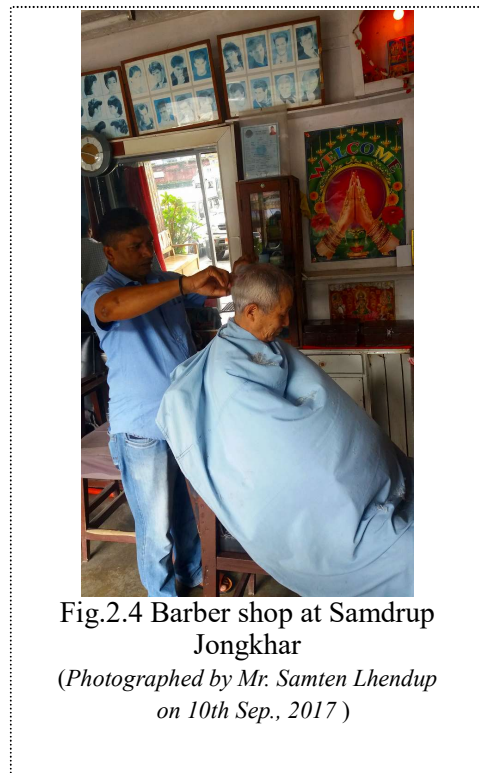


Fig.2.4 Barber shop at Samdrup
Jongkhar

(Photographed by Mr. Samten Lhendup
on 10th Sep., 2017)

Gross domestic product (GDP) per capita of Bhutan is 1,200 US\$, while Japan is 40,000 US \$(1 US\$=104 JPY, prediction in 2016⁷⁾). Author heard from the local people that the daily labor wage is about 440Nu (700 JPY). This is not a wage per hour.

Hydroelectric power generation by technical assistance from India has recently exceeded 1,600 MW/year and the self-sufficiency rate is 400 % too enough for domestic consumption. Most of them, about 80 %, are sold to India to earn foreign currency. On the other hand, the domestic penetration rate of electricity has not reached to 40 % yet.

The south side of the author's apartment is a steep valley and there are open-cut coal mines. Surprisingly, Bhutan is rich in many mineral resources such as limestone, iron ore, silicon and so on.

Currency of Bhutan is Ngultrum (Nu, BTN) and it is equivalent to Indian Rupee. The exchange quotation is 1 Nu= 1 Rp = 1.6 JPY. Note of Indian Rupee is usable in Bhutan.

The concrete prices that the author experienced are;

- Hairdressing for cut only: 80 JPY (add more 80 JPY to have head and body massages)
- Plastic bottled “Coca-Cola” or “Pepsi-Cola” of 330 ml: 35 JPY

- Canned domestic beer “Druk Lager Premium” and “Druk 11000” of 500 ml: 80 JPY
- Bottled domestic white wine “Zumzin” made from peach produced in Samtse of 750 ml: 430 JPY
- Bottled high grade grain whisky produced in Gelephu, 750 ml: 430 JPY
- High grade sticky rice “Khamti” tastes like “Koshi-Hikari *” 1 kg: 110 JPY
- *Rice from Minami Unuma-gun, Niigata, Japan. 1kg: 800-1,300 JPY
- Ordinal Bhutan rice 1 kg: 40 JPY
- Regular unleaded gasoline in average: 80 JPY/liter

- Diesel in average: 80 JPY/liter.

As mentioned in section 2.2, because of agricultural lands are small and farming techniques are still under improving, self-sufficiency of rice is 50%, while Japan is 64% in production basis. Because Bhutan is a devout Buddhist country, slaughter of livestock is forbidden. Through Buddhist teachings, people believe in reincarnation. In order to cremate the dead bodies and flow their ashes to the river, fishing is strictly forbidden.

2.5 Transportation

There are no railways and tunnels as characteristics of traffic. There are also few bridges exceeding the length of 20 m, and there is a characteristic that there is no traffic signal even in capital Thimphu.

The road length is 3,912 km. The paved road rate is 80 % in Japan, however, only 5 % in Bhutan. Most of the roads are rough mountainous paths. Author made a trip from the capital Thimphu to JNEC in Dewathang by a four wheel driven automobile on November in 2016. If you can drive without break, the time required is only 1,510 minutes or almost one day as written in the guidebook. The distance of it is about 230 km by the straight line connection through the provincial towns on the map, however, it was actually 800 km or more. In addition, there are many road closures due to construction or maintenance of the roads, it takes 3 nights and 4 days even in a hurry. If you take the way of Asian Highway from West Bengal state to Assam state through India, you can arrive almost on 1 night and 2 days.

Since the automobile is driven on the left lane of the road, the traffic rules are exactly the same as Japan, India, UK etc. By this, in almost all automobiles, the steering wheel is set on the right side. The transmission is wholly manual operation. There are many people who are not conscious of the importance of subscribing to insurance in preparation for an accident, so caution is necessary concerning traffic.



Fig.2.5 Map of principal road in Bhutan (Roads are indicated by red lines)

(By courtesy of http://www.nationsonline.org/oneworld/map/bhutan_map.htm/ for Free use. Revised by author)



Fig.2.6 The latest and tradition living together 5

Wearing “Gho” and to ride an Indian-made motorbike.

(Photographed by author on 3rd March, 2018 at Canteen, JNEC, RUB)

The car import tax is 60 % of the new car price in the case of Indian products and 110 % other than that. Considering air pollution, imports of used cars was prohibited from 2011 onwards. Roughly speaking, there can be seen a lots of Indian-made “Suzuki Multi” and Hyundai’s compact cars. The status symbol is to become the owner of “Toyota Land Cruiser” made in Thailand.

2.6 The latest and tradition

Television viewing and internet use was approved on June 2, 1999. That day was the silver wedding

anniversary of the fourth King Jigme Singye Wangchuk. Mobile phones were allowed to use in 2003 finally.

Television is only one state-owned “BBS (Bhutan Broadcasting Service)”. BBS also broadcasts radio. Satellite broadcasting began in 2006. The daily broadcasting time is limited. Author has never seen the installation of receiving antennas except in town of Phuentsholing. Most households contract a cable TV.

There are 12 newspaper companies. The largest is the “*Kuensep*”. It is owned 51 % by the government with a circulation of 130,000 copies per week. The languages used by each newspaper are; 4 in Dzongkha only, 5 combined with English and Dzongkha, and 3 in English only.

The Bhutan people are stipulated by the law to wear ethnic costumes so as not to forget the ancient traditions. They are "Gho" for male and "Kira" for female. In the case of official circumstances, "Kabney" and "Ratus" are added respectively. They are just like the robes or stole “Kesyay (袈裟)” of Buddhist monks and nuns. The colors of them are strictly specified by the rank. The highest grade is yellow of the King and the highest monk “*Je Khempo*”. The senior government officer, members of the parliament, and the person called “*Dasho* (Lord or Baronet)” awarded by the King is orange. The judge is green, district administrator is red with a white stripe, and ordinary citizen is white.

3 Education system in Kingdom of Bhutan

In the preceding issue of No.36, the relationship between Bhutan and author and acquaintances was described. In this chapter, the result of the investigation on the education system in Bhutan is reported.

3.1 History of Education in Bhutan

Until the early 20th century, only the education for Buddhism was performed in Dzongkha (temples).

In 1914, the first King Ugyen Wangchuck (1862-1926, reign from 1907) built the first schools in the province of Haa and Bumthang for the boys of royal families.

Around in 1950, the first Western-style school was built by the second King Jigme Wangchuck (1905-1952, reign from 1926).

The third King Jigme Dorji Wangchuck (1928-1972, reign from 1952) has attempted to establish the Bhutan own education system.

The royal families at that time had been educated in Darjeeling or Kalimpong in the Kingdom of Sikkim (Sikkim State of India from 1975) neighboring to the west of Bhutan.

In 1961, the first education five-year plan was announced. Dzongkha was enacted in national language. The reason why is that only Dzongkha had characters. However, the usage rate of Dzongkha is not high. In general, about less than half of the population is only using Dzongkha.

In 1963, F.W.J. McKee who was Canadian priest and the Principal of Darjeeling high school in Kingdom of Sikkim was invited to Bhutan by the third King. He established Sherubtse College in Trashigang. This was the first university in Bhutan.

In 1964, government decided to use English as education language. However, Nepali language in the southern district was still approved to use by the government.

In 1971, Bhutan joined the United Nations. As a result, the sightseeing tour was opened to foreigners in 1974. At the same year, the first engineering college, Jigme Namgyel Polytechnic (JNP. Present, Engineering College) was founded on 22th February.

Since 1972, GNH was decided as a national guideline by the fourth King Jigme Singye Wangchuck (1955-, reigned 1972-2006). In particular, enhancement for education system and their facilities were carried out. In 1975 Paro College of Education was established for teacher training.

In 1989, the government decided to abolish Nepali language education.

On June in 2003, Royal University of Bhutan (RUB) was established by integrating many of the colleges through the Royal Charter. The Chancellor of RUB is His Majesty the King of Bhutan.

In 2005, the first census was carried out. After that, the census continues every five years.

3.2 Present education system in Bhutan

There is no compulsory Education. Expense of education is free for government education facilities. In the case of admission exceeding the registration ability, the students will have private expenses.



Education field of Bhutan is distinguished as follows.

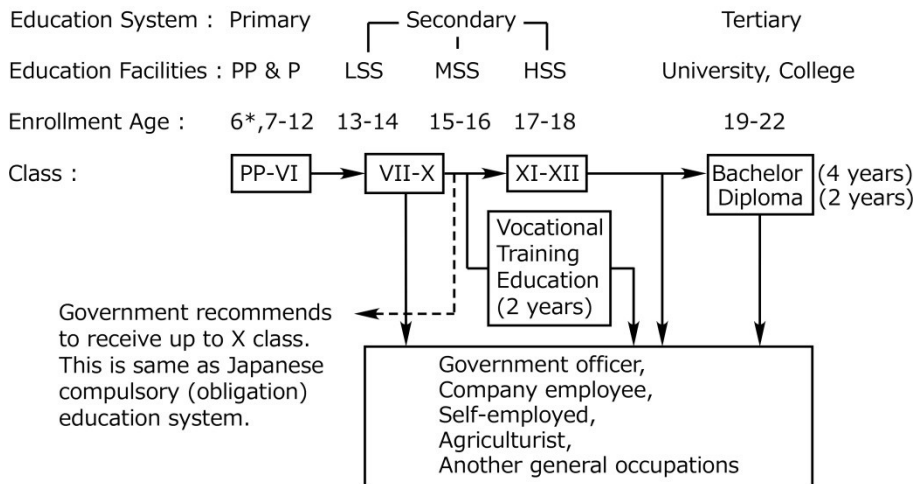
- (1) General Education
- (2) Vocational Training Education
- (3) Tertiary Education
- (4) Monastic Education
- (5) Non-formal Education and Lifelong Education

(6) Special Education

Fig.3.1 Primary School at Haa Dzongkhag

Royal Government of Bhutan approved to use English for education language in 1964.
(Photographed by author on 25th August, 2014)

Author summarized the education system including (1), (2), and (3) to Figure 3.2.



PP & P: Pre-primary* and Primary school
* Kindergarten in Japan
LSS, MSS, HSS: Low, Middle, High Secondary School

Fig.3.2 Education system of Bhutan

(Drawn by author with cooperation of Mr. Samten Lhendup, Dean of Academic Affairs of JNEC, RUB)

Those who are wishing to enter the next education stage need to pass through a unified examination. For example, at the end of class VI (age 12), X (age 16), and XII (age 18), one must pass unified examination to obtain a completion qualification. In the case of Class XII (age 18), the score of the examination will be reflected in the enrollment to the colleges of RUB that can be applicable. The pass rate of examination is quite high. Because it is not compulsory education, some failed students voluntarily leave schools. The government recommends that pupil shall get the education from PP to X (age 16) class as fundamental education.

Many people live in the mountainous area sparsely in Bhutan. So, it is always a social problem to keep the attendance school of the children in an appropriate range. As solution to the problem, a lot of small community primary schools are placed in the every district. As shown in Tables 3.1 and 3.2, the enrollment rate and the literacy rate have become higher than in the previous 30 years.

Table 3.1 Enrollment rate [%]

Year	Primary Education	Secondary Education			Tertiary Education
	PP&P age 6-12 class PP-VI	LSS: First stage age 13-14 class VII-VIII	MSS: Second stage age 15-16 class IX-X	HSS: Third stage age 17-18 class XI-XII	University, College age 19-
1988	25	8	3	-	-
2017	95.7	100	100	73.4	27.5*

* limited to domestic students

Table 3.2 Literacy rate [%]

Year	Male	Female
1990	30	10
2013	55 (in adult)	

(By courtesy of Ministry of Education, Royal Government of Bhutan for Table 3.1, 3.2 and 3.3)

3.2 University in Bhutan

Students who have completed the education class XII equivalent to Japanese High School can go on to university called Tertiary education.

In Japan, there are so many universities as to be called "University just in front of the station". So how many universities are there in Bhutan? The results of comparing two countries are shown in Table 3.3. The university enrollment rate is unexpectedly high.

Table 3.3 Number of universities and enrollment of students

Country (year)	University	Student	Enrollment Rate,[%] (Population)
Bhutan (2017)	1 (consist of 12 colleges)	ca. 11,500*	1.47 (78,4000)
Japan (2014)	781	2,855,529	2.2 (127,083,000)

* limited to domestic students

The colleges installed in Royal University of Bhutan are shown in Fig.3.3 and Table 3.4.

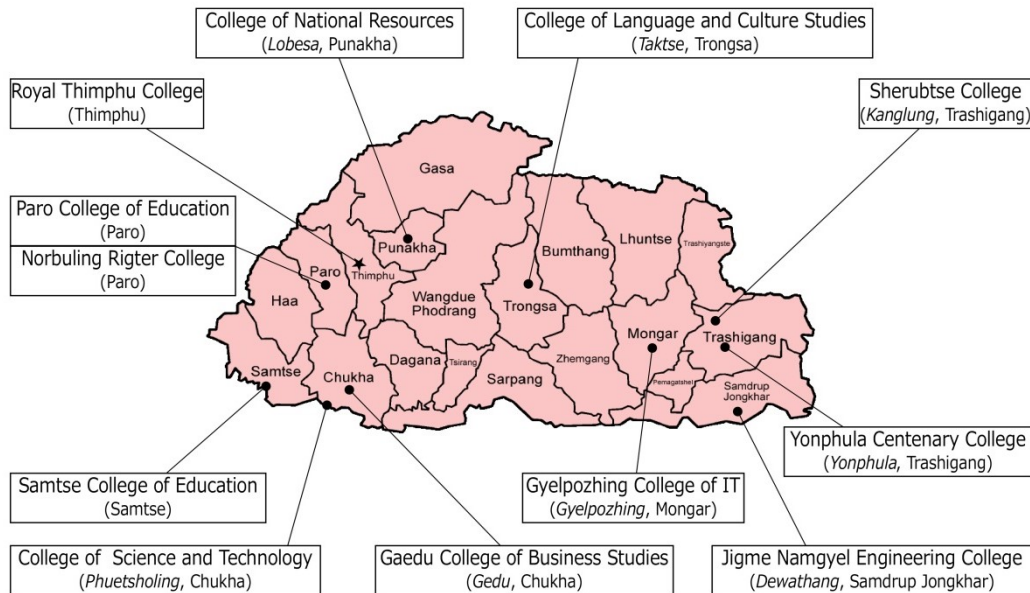


Fig.3.3 Twelve colleges installed in Royal University of Bhutan

(Map by courtesy of <https://en.wikipedia.org/wiki/Bhutan>.

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3.3 Royal University of Bhutan

Royal University of Bhutan (RUB) was established in June 2003 through the Royal Charter. RUB goes on with the Civil Service until 2011. On July 2011, RUB delinked from Civil Service and had greater autonomy. The Chancellor of RUB is His Majesty the King. The headquarter is the Office of Vice Chancellor, Dasho Nidup Dorji in capital Thimphu.

RUB offers courses for;

- (1) Liberal Arts & Sciences
- (2) Engineering
- (3) Education including teacher training
- (4) Health Sciences including Traditional Medicine
- (5) Bhutanese National Language “*Dzongkha*” and Traditional Culture
- (6) Natural Resources including Agriculture
- (8) Commerce and Business Studies

The university is managed through grants received from the Ministry of Finance based on per student costs and from self-financed students. Additional capital funds are supported from Royal Government of Bhutan, United Nations, and others. The total amount of these has been announced approximately 1.17 billion Nu (1.87 billion JPY)⁸⁾ in 2016.

There are 523 academic staff and 459 administrative staff in RUB. The ground total is 982 people⁸⁾.

Also in 2016, 3,184 students entered 8 colleges of RUB, and the total number of students was 9,173 including 56 % for males and 44 % for females⁸⁾. Since two colleges were founded in 2017, the number of enrolled students is over 10,000 including the two affiliated colleges shown in Table 3.4.

Table 3.4 Royal University of Bhutan** ; Address (founded) and [Accredited Grade]

10 constituent colleges		
Universit y of Bhutan	CNR: College of Natural Resources	Lobesa, Punakha (1992).
	CST: College of Science and Technology	Rinchening, Phuentsholing, Chukha (2001). [A]
	GCBS: Gaeddu College of Business Studies	Gaeddu, Chukha (2008). [A]

CLCS: College of Language and Culture Studies	<i>Taktse</i> , Trongsa (July 16, 1961*)
JNEC: Jigme Namgyel Engineering College	<i>Dewathang</i> , SamdrupJongkhar (Feb. 22, 1974). [A]
PCE: Paro College of Education	Paro (Nov. 4, 1975). [B]
SCE: Samtse College of Education	Samtse (1968). [A]
SC: Sherubtse College	<i>Kanglung</i> , Trashigang (1968). [A]
GCIT : Gyelpozhing College of IT	<i>Gyelpozhing</i> , Mongar (Oct. 6, 2017)
YCC: Yonphula Centenary College	<i>Yonphula</i> , Trashigang. Private, (Oct. 8, 2017)
2 affiliated colleges	
RTC: Royal Thimphu College	Thimphu. Private, (July 18, 2009). [A+]
NRC: NorbulingRigter College	Paro. Private, (July, 2017).

* Founded as a monastic school. It was upgraded to college in 1997.

** *Tabulated by author with cooperation of Dr. Andu Dukpa, the President of JNEC, RUB.*

Conclusion

In this second report, author described the national situation and education system of Bhutan, and the circumstances of Royal University of Bhutan.

In fact, there are 21 colleges, schools and faculties that are accredited as tertiary education institutions in Bhutan. Among them, it is limited to the colleges belonging to Royal University of Bhutan in this report and they are shown in Table 3.4. However, graduate schools, departments and kind of degrees to be awarded is omitted. Author would like to describe them in detail if there is another opportunity.

Especially for Jigme Namgyel Engineering College, the only higher education institution in Bhutan where the Department of Mechanical Engineering is founded, author would like to describe in detail in the following third report due to present space limitation.

Speaking of Bhutan, it is said to be “GNH”. However, everybody do not know much about the actual life of the ordinary people of the country yet. If this report was able to give you a little understanding of Bhutan, there is nothing so pleasing for me.

Acknowledgement

I would like to deeply appreciate the people and organizations who created the materials that I cited.

Especially, I would like to express my deep gratitude to President of JNEC, Dr. Andu Dukpa and Dean of Academic Affairs, Mr. Samten Lhendup, and Teacher of Garpawoong Middle Secondary School, Ms. Chhimi Bida. They provided me with important information on education system in Bhutan.

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- 1) The birthday of His Majesty the Fifth King on 21th February is a national holiday.
- 2) Population of Japan: 126,323,000 in 2016. “*World Population Prospects*”, Population Division, Department of Economic and Social Affairs, United Nations. And World Data Atlas; <http://jp.knoema.com/atlas> referred on 1st Feb., 2018.
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