

Perspectives on Rethinking and Reforming Education

Bin Bai
Paryono *Editors*

Vocational Education and Training in ASEAN Member States

Current Status and Future Development



 Springer

Perspectives on Rethinking and Reforming Education

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Preface

Technical and Vocational Education and Training or TVET has been one of the major initiatives in Southeast Asian region lately as reflected in the Priority number 4 of Southeast Asian Ministers of Education Organization (SEAMEO) Seven Priority Areas (2015–2035)—promoting TVET among learners, teachers, and parents with more visible investment and relevant curricula that focuses on creativity and innovation with a clear pathway to lifelong learning (LLL), higher education (HE), and regional mobility.

In addition, the Association of Southeast Asian Nations (ASEAN) has a Work Plan on Education 2016–2020 under which TVET is one of the strategic goals, Strategic Goal 4—support the development of TVET and lifelong learning by maximising access to TVET, strengthening regional harmonisation and TVET personnel development, establishing regional quality assurance and recognition of TVET, and reducing the gap between supply and demand of skilled labours.

At this moment, comprehensive TVET country profiles from this region are not easily found both online and in printed form. There are few existing resources available online, such as posters developed by SEAMEO VOCTECH Regional Centre and UNESCO-UNEVOC. There is a printed version of “Training Systems in Southeast Asia” published by SEAMEO VOCTECH and NCVER, Australia, in 2000 that we believe the information has been outdated. The availability of TVET country profiles in this printed form will offer up-to-date information about TVET in Southeast Asia to the readers, at least for the moment. This book covers a quite detailed information about TVET in the region that differentiates from other existing publications.

This book comprises TVET country profiles from Southeast Asia, namely Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam. In addition to country profiles, this book also describes some issues and challenges faced by the countries and also future directions.

Few authors of this book were initially requested to contribute to SEAMEO VOCTECH's online knowledge platform. In this book, they update and add newest information in their articles. We thank SEAMEO VOCTECH for allowing some of the information to be published in this printed form.

We also thank Faculty of Education of Beijing Normal University. This book is funded by 2018 Comprehensive Discipline Construction Fund of Faculty of Education, Beijing Normal University.

In this opportunity, we would like to express our appreciation to the following contributors and their affiliations which have allowed them to contribute to this book. Those individuals and their affiliations are as follows: Norazlina Hj Othman from Institute of Brunei Technical Education; Pak Ravy and Chrea Sesokunthideth from the National Technical Training Institute of the Kingdom of Cambodia; Dr. Bruri Triyono from Yogyakarta State University, Indonesia; Kirya Moses, an intern at SEAMEO VOCTECH, Brunei Darussalam; Dr. Phouvieng Phoumilay from Vocational Education Development Institute of Lao PDR; Dr. Razali Hasan from University of Tun Hussein Onn Malaysia; Dr. Theresa Thang Tze Yian from Institute of Technical Education, Singapore; Dr. Tiamyod Pasawano from Rajamangala University of Technology Thanyaburi, Thailand; Nguyen Dang Tuan from GIZ-RECOTVET, Vietnam.

Few reviewers that we would like to mention their contribution to the book chapters are comprising staff from SEAMEO VOCTECH and GIZ-RECOTVET. We appreciate the input and reviews from Dr. Mohd Zamri Sabli, Dr. Abbes Sebihi, Cynthia Abdullah, Sadhvi Mathur from SEAMEO VOCTECH, and Franziska Seel from GIZ-RECOTVET.

Appreciation also goes to a few staff and students from Beijing Normal University for their hard work in making this publication possible. They are Li Mixue, Liu Yuting, Xie Lirong, Wu Qiuchen, and Zhu Xiaolin.

Lastly, we hope that this book can offer a comprehensive TVET information of the Southeast Asian countries and enjoy reading it.

Beijing, China
Gadong, Brunei Darussalam

Bin Bai
Paryono

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Chapter 1

Vocational Education and Training in Brunei Darussalam



Norazlina Othman

1.1 Overview

There are formal- and non-formal-level technical and vocational education and training in Brunei Darussalam. Formal Technical and Vocational Education and Training (TVET) in Brunei Darussalam is under the Ministry of Education and is run by public schools and colleges as well as private colleges. For the certificate and diploma level, TVET is run by the Institute of Brunei Technical Education (IBTE), while the higher level, diploma level, is run by Brunei Polytechnics. In addition, there are 4 private colleges offering TVET programmes.

At the non-formal level, like short courses, Ministry of Culture, Youth and Sports offer several TVET programmes from a few weeks to a year.

Brunei's GDP is mainly composed of three sectors: agriculture, industry and services, and in 2017, agriculture accounts for 1.2%, industry accounts for 56.5%, and services account for 42.3% in Brunei. Major industries include oil, gas and halal products.¹ These economic sectors absorb the country's workforce in agriculture, industry and services as much as 4.2, 62.8 and 33%, respectively.

This paper uses references from SEAMEO VOTTECH Regional Knowledge Platform and UNESCO-UNEVOC that has been validated by the key informant from Brunei Darussalam (Dr. Chin Wei Keh). The country paper contributor is Norazlina Othman.

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¹Central Intelligence Agency (2018).

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In the coming years, the government of Brunei is planning to sharpen its focus on other areas of the economy (besides oil and gas), including financial services, the halal industry and tech start-ups. Oil and gas are still the major industries and construction and real estate sector are expected to continue growing.²

1.2 Demographic and Socio-economic Status in Brunei

See Tables 1.1, 1.2 and 1.3.

Table 1.1 Economy/standard of living in Brunei Darussalam

Economy/standard of living	Population	422,678 (2016) ^a
	Human development index	0.865 (2015) ^b
	Purchasing power parity	–
	Gini coefficient	–
	GDP—total (current price)	BND (Million) 15,747.7 (2016) ^c
	GDP—per capita (current price)	BND 37,257.0 (2016) ^c
	Poverty rate	–
	Gender dynamics/human sex ratio/gender development index (F-M ratio)	0.986 ^d

^aUnited Nations Development Program (2016b)

^bJahan (2016)

^cAsian Development Bank (2016)

^dUnited Nations Development Programme (2016a)

Table 1.2 Education in Brunei Darussalam

Education	Education index	0.692 ^a (2013)
	Adult literacy rate (% ages 10 and older)	96.4% ^a (2016)
	Expected years of schooling	14.9 Years ^a (2016)
	Mean years of schooling (of adults)	9.0 Years ^a (2016)
	School dropout rate	–

^aUnited Nations Development Programme (2016a)

²SEAMEO VOCTECH (2016).

Table 1.3 Labour force age 18–59 in Brunei Darussalam (LFS 2014)^a

Labour force	Total	Male	Female
Labour force	195,635	110,569	85,066
Employed	182,161	103,586	78,575
Unemployed	13,474	6983	6492
Participation rate	76.8	84.7	68.4
Unemployment rate	6.9	6.3	7.6

^aUnited Nations Economic and Social Commission for Asia and the Pacific (2015)

1.3 TVET Mission, Legislation and National Policy or Strategy

1.3.1 TVET Mission/Goals

Brunei Vision 2035 (Wawasan Brunei 2035) aims to transform Brunei Darussalam by 2035 as a nation widely recognized for its educated and highly skilled people measured by the highest international standards; improve the quality of life to be one of the top 10 nations in the world; and build a dynamic and sustainable economy with per capita income to be one of the top 10 countries in the world.

Majority of TVET are offered at the post-secondary level, where the main public provider is *Institut Pendidikan Teknikal Brunei* (IBTE) under the Ministry of Education (MOE). IBTE's mission is to produce highly skilled and employable graduates who meet stakeholders' expectation through a holistic learning environment. IBTE has aligned its KPI (key performance indicators) to support the national KPI, which are as follows³:

- (1) Employment rate of 80%; the proportion of graduates employed within six months after their convocation ceremony.
- (2) Employers' satisfaction rate of 90%; the proportion of employers (i.e., supervisors) being satisfied with the work and performance of our hired graduates.
- (3) Students' completion rate of 90% (Fig. 1.1).

1.3.2 TVET Legislation

In 2007, “the Compulsory Education Order 2007” was enacted. It mandates that Bruneian children residing in the country, regardless of gender and race, shall receive formal education for at least nine years. This comprises one year in preschool education, six years in primary education and two years in lower secondary.

³Ebil et al. (2017).

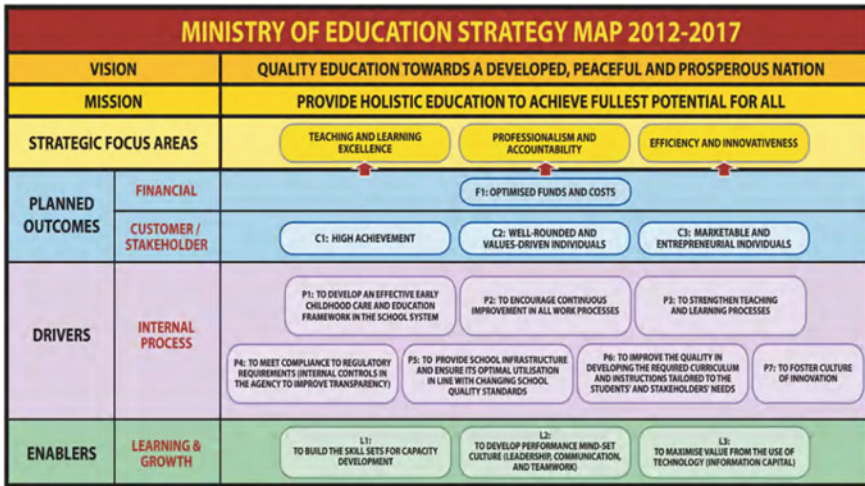


Fig. 1.1 Ministry of Education Strategy Map 2012–2017

The “National Education System for the 21st Century” or “Sistem Pendidikan Negara Abad ke-21” (SPN21) was introduced in 2009 with three main changes: educational structure; curriculum and assessment; and technical education. SPN21 aimed to reposition technical education as a choice of post-secondary education capable of producing a highly skilled workforce in line with the needs of the industry.⁴ In response to the need to restructure and establish a new system of Technical and Vocational Education and Training which is better aligned with the social and economic needs of the country, Institut Pendidikan Teknikal Brunei (IBTE) was established on 27 May 2014, following the consent of three documents by His Majesty the Sultan and Yang Di-Pertuan of Brunei Darussalam: The White Paper, Upgrading Plan for Technical Education and Institute Brunei Technical Education Order 2014.

1.3.3 TVET Strategy

In 2013, His Majesty the Sultan of Brunei Darussalam, in his *Titah*, urged a re-evaluation of technical and vocational education, in the hope of contributing more to the needs of industry and local job market. In response to this, IBTE was established on 27 May 2014, following the consent of three documents by His Majesty:

- (1) The White Paper;
- (2) Upgrading Plan for Technical Education;
- (3) Institute Brunei Technical Education Order 2014.

⁴Ministry of Education (2017a).

Under “The White Paper,” six key changes were proposed to be implemented within the next 5 years by IBTE⁵:

- (1) Course restructuring
- (2) Expanding apprenticeship options
- (3) More progressing opportunities
- (4) Upgrading the training environment
- (5) A new scheme of teaching service
- (6) Renaming DTE and vocational institutes.

This has led to the establishment of the Industry Competency Framework (ICF); a strong collaboration between Department of Energy and Industry at the Prime Minister’s Office (EIDPMO); Institute of Brunei Technical Education (IBTE), MOE and industries. Under the ICF, industry members were heavily involved in the programmes offered—from designing the curriculum to delivering and evaluating students to ensure that the programmes are competency-based and meet industry sectors’ needs. Additionally, prior to the convocation ceremonies for the programmes, ICF committees will also organize an “IBTE market day” whereby employers from government and non-government agencies are invited to provide a conditional offer of employment to potential candidates.

1.4 TVET Governance and Financing

1.4.1 Governance

The responsibility of IBTE is to replace the responsibilities mandated to the Department of Technical Education, in terms of transforming the existing administrative structure to a system based on the Board of Governance constitution. The rationale for the establishment of IBTE is to restructure the technical education system to be more responsive and relevant to the needs of the country.

IBTE is headed by Director and Chief Executive Officer (CEO), who is responsible for leading the development and execution of IBTE vision, mission and goals. The CEO acts as a direct liaison between the Board of Governors (BoG) and the Minister of Education (MoE). The CEO also communicates with the BoG and Minister of Education on behalf of IBTE.

The IBTE organization structure was realigned in 2013 to deliver an effective system for its stakeholders. The seven national technical and vocational colleges, which previously functioned as individual institutions, are restructured and organized into two network schools, namely IBTE Central and IBTE Satellite (Fig. 1.2).

⁵SEAMEO VOCTECH (2017a).

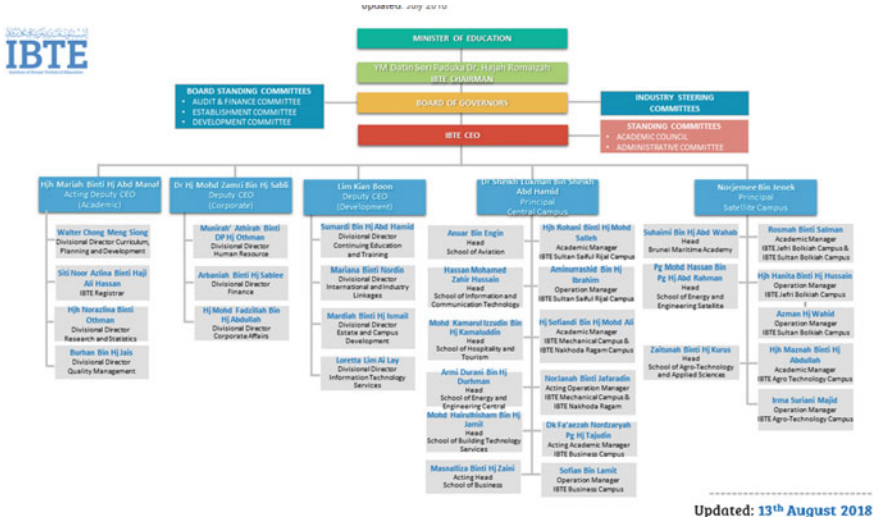


Fig. 1.2 IBTE organization chart (Institute of Brunei Technical Education 2017a)

1.4.2 Financing

Institute of Brunei Technical Education (IBTE) is primarily funded by the Brunei Government through the Ministry of Education (MOE).

IBTE funds allocated are subjected to the following factors but not limited to:

- The type of programmes run in each school;
- The number of students in each school;
- The employability rate of programmes;
- Past spending performances.

1.5 Education and TVET System

1.5.1 National Education System (Twenty-First Century/Revised System)⁶

In 2009, the Ministry of Education (MOE) in Brunei introduced a new educational system known as the National Education System for the twenty-first century or *Sistem Pendidikan Negara Abad Ke-21* (SPN21). The current structure of this system is shown in Fig. 1.3.

⁶Unesco (2017).

Table 1.4 IBTE entry requirements

Levels	Minimum qualifications
Industrial skills qualifications	Completion of year 9 or equivalent qualifications
National technical education certificates (NTec)	Completion of year 10 (Express) or year 11 of Secondary education with passes in relevant subjects, or equivalent qualifications
Higher national technical education certificates (HNTec)	Three “O” Levels with prerequisite grades in relevant subjects or an NTec in related field, or equivalent qualifications
Diploma	Five “O” Levels with prerequisite grades in relevant subjects, or equivalent qualifications

1.5.2 TVET System

Majority of TVET are offered at a post-secondary level. The IBTE entry requirements can be seen in Table 1.4.

While the programmes offered by IBTE mostly focus on preparing for graduate employment, they also provide opportunities for further study for those with advanced status. Schematic diagram to show the progression opportunities of IBTE graduates is shown in Fig. 1.4.

The diagram to show the progression of opportunities from secondary education to IBTE is shown in Fig. 1.5.

1.5.2.1 Formal TVET System

For the formal TVET system, education and training are typically provided by an education or training institution, structured (in terms of learning objectives, learning time, or learning support) and can lead to certification. Formal learning is intentional from the learner’s perspective.

The two main public TVET providers in Brunei Darussalam are IBTE and Polytechnic Brunei (PB). There are seven campuses in IBTE⁷: IBTE Sultan Saiful Rijal Campus, IBTE Jefri Bolkiah Campus, IBTE Business Campus, IBTE Mechanical Campus, IBTE Sultan Bolkiah Campus, IBTE Nakhoda Ragam Campus and IBTE Agro-technology Campus. These campuses will be further breakdown into nine schools, as shown in Fig. 1.6.

The technical institution has undergone a transformation, including courses restructuring and expansion of an apprenticeship scheme. Under this new TVET system, all Brunei Darussalam Technical and Vocational Education Council (BDTVEC) Programmes (i.e. Diploma Level 4 and Skill Certificates programmes) will be phased out by 2017 and will be replaced by IBTE programmes. The new curricula developed

⁷Institute of Brunei Technical Education (2017b).

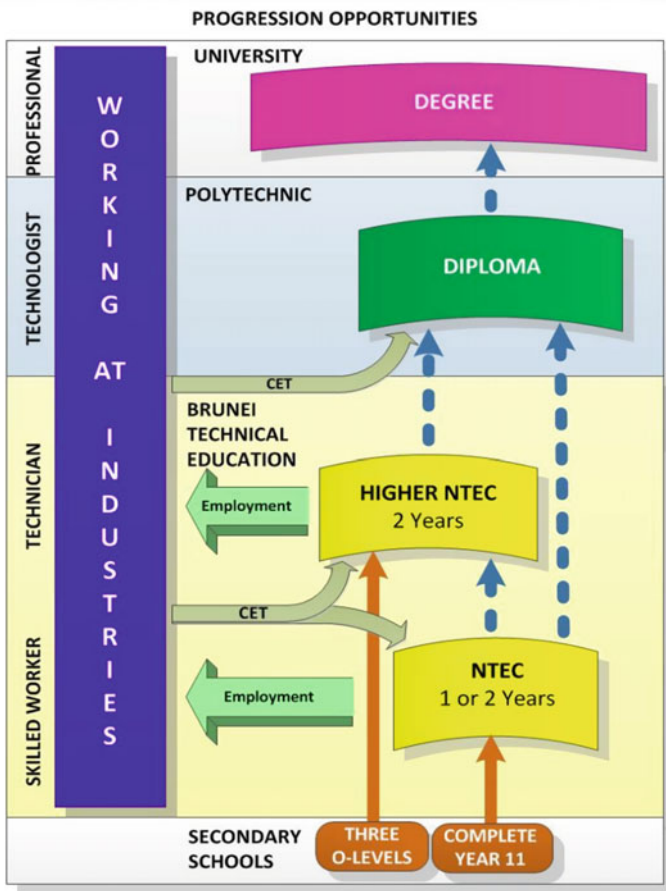


Fig. 1.4 Progression opportunities for IBTE graduates

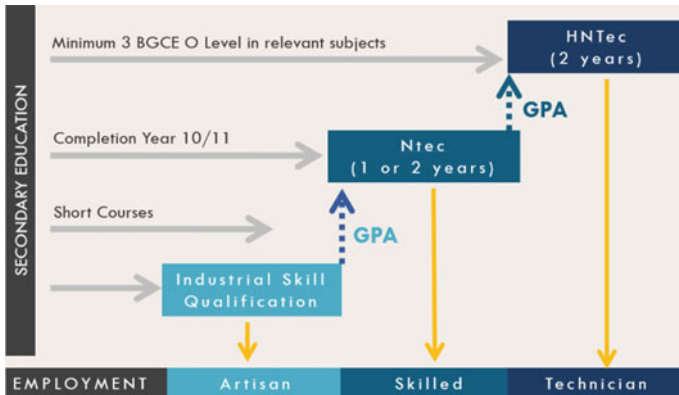


Fig. 1.5 Progression opportunities from secondary education to IBTE

THE TWO NETWORK OF SCHOOLS

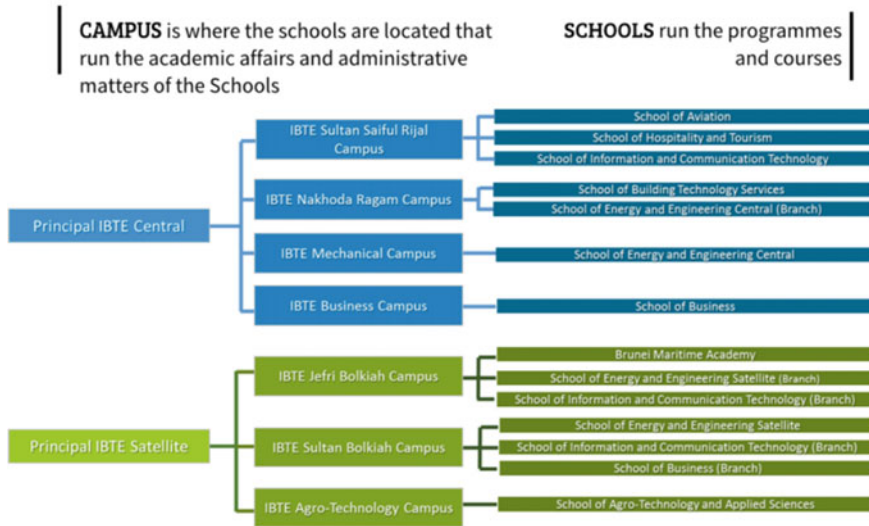


Fig. 1.6 Campuses in IBTE

by the Curriculum Planning and Development Committee in IBTE focused on the development of students’ practical skills, hence implementing competency-based assessment (CBA) into each subject to ensure the programmes in IBTE meets the industrial standards and produces job-ready graduates.

Students may apply to IBTE through three levels of training: (i) Higher National Technical Education Certificate(HNTec), (ii) National Technical Education Certificate (NTec) and (iii) Industrial Skills Qualification (ISQ).

ISQ is part of the Energy Industry Competency Framework (EICF ISQ), launched in July 2013 to standardize education and training necessary for the local workforce to work in the oil and gas industries. ISQ is a one-year programme where five months (first semester) will be spent on learning core modules of the school followed by the four to six months (second semester) of technical module offered by the Registration Training Organisations (RTOs) from the energy industry. Depending on the programmes, the duration for the NTec is one or two years and the HNTec programme lasts for two academic years. Both programmes are school based on practical training in school workshops followed with short work placements in industry. IBTE also offers dual system apprenticeship (DSA) programmes both in NTec and HNTec levels, normally conducted over two years to a maximum of four years. DSA programmes consist of two components: (i) Institute-Based Trainings (IBT) at IBTE or at a Registered Training Organisations (RTO) and (ii) On-the-Job Training (OJT) at the workplace of the employer under the supervision of an expert. The list of programmes offered in IBTE can be found in Fig. 1.7.

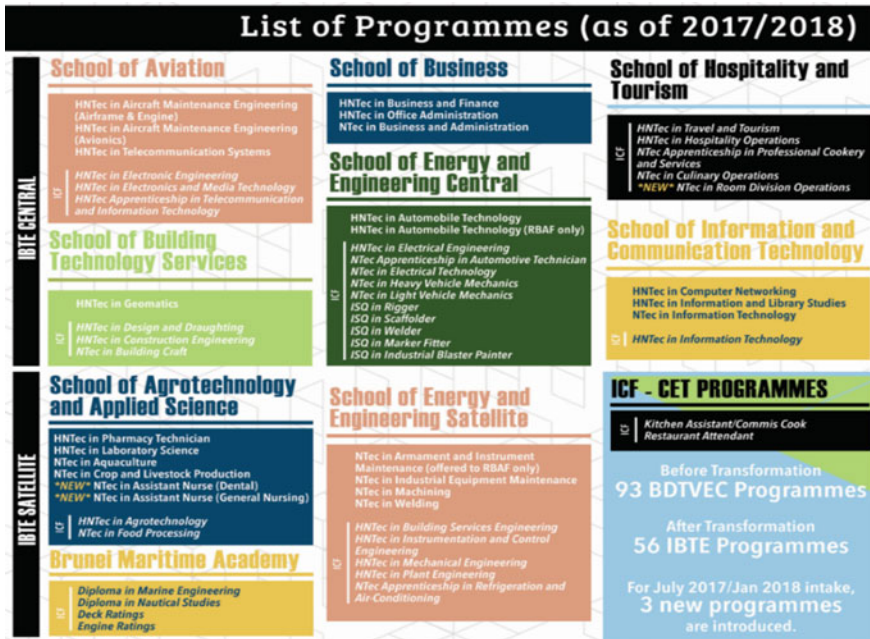


Fig. 1.7 List of programmes offered in IBTE

At present, there are five private TVET providers in Brunei Darussalam, namely Laksamana College of Business, Kemuda Institute, Micronet International College, IGS and Cosmopolitan College of Commerce and Technology. These private institutions provide courses from Pearson’s BTEC, National Craft Certificates (NCC Education), Limkokwing University of Creative Technology (LUCT), BDTVEC and London Chamber of Commerce.

1.5.2.2 Non-formal and Informal TVET System⁸

Non-formal is the education and training that takes place outside the formal system either on a regular or intermittent basis. Informal TVET covers learning resulting from daily life activities related to work, family, or leisure. Informal learning is part of non-formal learning. It is often referred to as experience-based learning and can be understood to a certain degree as accidental learning.

The Continuing Education and Training (CET) under the Institute of Brunei Technical Education has been in existence since 1958. The IBTE CET offers short courses, programs and workshops that are designed to further encourage social/career mobility and education progression particularly for school leavers and matured students.

⁸See Footnote 6.

BDQF Levels	Schools Sector Qualifications	Technical and Vocational Education Sector Qualifications	Higher Education Sector Qualifications
8			Doctoral Degree
7			<input type="checkbox"/> Master's Degree <input type="checkbox"/> Post Graduate Diploma <input type="checkbox"/> Post Graduate Certificate
6			Bachelor's Degree
5		<input type="checkbox"/> Advanced Diploma <input type="checkbox"/> Higher National Diploma (HND)	<input type="checkbox"/> Foundation Degree <input type="checkbox"/> Advanced Diploma <input type="checkbox"/> Higher National Diploma (HND)
4	<input type="checkbox"/> GCE "A" Level <input type="checkbox"/> IGCSE "A" Level <input type="checkbox"/> IB Diploma <input type="checkbox"/> STPU	<input type="checkbox"/> Diploma <input type="checkbox"/> Higher National Technical Education Certificate (HNTEC)	
3	<input type="checkbox"/> GCE "O" Level (Grades A-C) <input type="checkbox"/> IGCSE and GCSE "O" Level (Grade A* - C) <input type="checkbox"/> SPU (Grades A-C) <input type="checkbox"/> BTEC level 2 Diploma	<input type="checkbox"/> Skills Certificate 3 (SC3) <input type="checkbox"/> National Technical Education Certificate (NTec)	
2	<input type="checkbox"/> GCE "O" Level (Grades D-E) <input type="checkbox"/> IGCSE "O" Level (Grade D-E) <input type="checkbox"/> SPU (grades D) <input type="checkbox"/> BTEC Level 2 Extended Certificate	<input type="checkbox"/> Skills Certificate 2 (SC2) <input type="checkbox"/> Industrial Skills Qualifications (ISQ)	
1	BTEC Level Introductory Certificate	Skills Certificate 1 (SC1)	

Fig. 1.8 Brunei Darussalam qualifications framework (BDQF) (Ministry of Education 2017b)

IBTE CET is one of the national providers of non-formal TVET, committed to providing quality, innovative training and personal enrichment opportunities for the citizens and non-citizens in Brunei Darussalam. The IBTE CET provides lifelong learning opportunities, which allow adult learners to acquire further knowledge and skills in relevant fields.

1.6 National Qualification Framework

His Majesty the Sultan dan Yang Di-Pertuan of Negara Brunei Darussalam has consented to the establishment of the National Qualification Framework, namely Brunei Darussalam Qualifications Framework (BDQF) by the Ministry of Education through the Brunei Darussalam National Accreditation Council (BDNAC).

The BDQF has been stipulated in the Brunei Darussalam National Accreditation Council Order 2011 (BDNAC Order 2011). With reference to the BDNAC Order 2011, the BDQF is used as a tool to develop guidelines that classify qualifications based on criteria agreed at the national level and benchmarked with international good practice.

The framework explains the level of learning, the learning outcomes of study areas and a credit system based on student's academic load. This criterion applies to all qualifications recognized by Brunei Darussalam, thereby integrating and linking all qualifications recognized within the country (Fig. 1.8).

1.7 Quality Assurance and Standards

The existing agencies under MOE responsible for accrediting quality education in Brunei Darussalam are the Brunei Darussalam National Accreditation Council (BDNAC) and Brunei Darussalam Technical and Vocational Education Council (BDTVEC).

The BDNAC is the sole accrediting body in Brunei Darussalam responsible for all matters related to the assessment and accreditation of qualifications recognized by the Government of His Majesty the Sultan dan Yang Di-Pertuan of Brunei Darussalam, which established in 1990. This includes all approved programmes on its website, with levels and purposes as a point of reference and value-added information for learners and employers. In 2011, the BDNAC Order was in place and the Brunei Darussalam Qualification Framework (BDQF) was formed. The BDQF explains the level of learning and provides mechanisms for the progression or inter-relationship between academic qualifications, including non-degree and degree qualifications, learning outcomes of study areas and credit system based on student academic load to facilitate the credit accumulation and transfer, which is acceptable within and outside Brunei.

Under the EICF, the Energy and Industry Department of the Prime Minister's Office (EIDPMO), in collaboration with MOE, have also set up a working group to overlook the Energy Industry Quality Assurance (EIQA) which would manage, monitor and audit the quality process and standards for RTOs.

All training providers or institutions of higher education have to develop their own coherent internal quality assurance including management system of organizational structure, its responsibilities, procedures and resources for setting and implementing quality policies.

IBTE has set up a new division called "Quality Management Division." This division was established to ensure that the quality management system is operating within the IBTE effectively and efficiently. The main functions of the quality management division are as follows;

- To oversee the quality management system (QMS) and related processes (quality planning, support, product realization and improvement processes).
- To give support to those programmes in acquiring international and national certification/accreditation.
- Ensure QMS & IBTE academic policies are communicated and implemented within IBTE and its campuses/schools.
- To support IBTE schools' management representatives to identify and plan the activities and resources needed to develop, implement and maintain the QMS and to achieve the quality standards.
- To centrally monitor and evaluate teaching and learning and examination and assessment processes of every programme.

In 2016, IBTE has been awarded the ISO 9001-2008 quality management system (QMS) certification—the first post-secondary institution in Brunei that have been awarded the ISO certificate.

1.8 TVET Graduates

Based on Student Admission Data July 2016 (based on 1st choice), the top 10 most popular courses among students are:

- (1) HNTec Information Technology
- (2) NTec Business and Administration
- (3) HNTec Business and Finance
- (4) NTec Information Technology
- (5) NTec Apprenticeship in Professional Cookery & Services
- (6) HNTec Construction Engineering
- (7) HNTec Electronics and Media Technology
- (8) BMA COP Apprenticeship in Engine Ratings
- (9) HNTec Information and Library Studies
- (10) HNTec Office Administration.

The employment rate from the year 2015–2017 is shown in Table 1.5.

The sector and occupations, which are financially rewarding, are those related to oil and gas industries. The median starting salary for ISQ program is \$700, whereas other sectors starting salary for SC2 are only \$540⁹ (ISQ—Industrial Skill Qualification; SC2—Skill Certificate 2).

The Research and Statistic Division (RSD), IBTE has conducted Employers Satisfaction Survey (ESS) since 2014. The purpose of this study is to identify the level of employers' satisfaction with IBTE graduates. The study is conducted one year after the graduation ceremony and targeted at the direct/immediate supervisors of the graduates.

The key findings of the surveys for the years 2015–2017 are tabulated in Table 1.6.

Table 1.5 Employment rate from the years 2015–2017

Year	2017	2016	2015
^a Employment rate (%)	61.3	74.5	71.5

^aEmployment rate is the proportion of employment-seeking graduates (i.e. excluding graduates doing further studies) that are successfully employed, six months after the national convocation ceremony

⁹SEAMEO VOCTECH (2017b).

Table 1.6 Key findings of the surveys for the years 2015–2017

Year	2017	2016	2015
No. of responses from industries	237	208	134
<i>Perception of TVET in Brunei</i>			
% agreed that IBTE is producing enough supply of TVET graduates to meet industrial needs (%)	65.4	83.2	66.4
% agreed that IBTE have been providing appropriate skills to its graduates (%)	68.4	82.2	78.4

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1.9 TVET Personnel (Teachers)

1.9.1 Composition of Personnel

IBTE is made up of 425 teachers/instructors, 21 school management and 1 full-time in-company trainer. Additionally, numerous experts from Registered Training Organisations (RTOs) for certain programmes such as industrial skills qualification (ISQ) and dual system apprenticeship (DSA) also contribute to IBTE students' training.

1.9.2 Composition of Teaching Workforce¹⁰

In Brunei Darussalam, IBTE teachers consist of expatriate and locals with an average age of 38. There is no gender imbalance in IBTE teachers as the number of males almost equals to female teachers. For the local teachers, they are mainly recruited from fresh graduates with a minimum qualification of at least one level higher qualification than those in related field. Hence, the basic qualification is Diploma Level 5 (formerly known as Higher National Diploma).

Most local IBTE teachers are recruited prior to acquiring their teaching qualification. Only a small proportion of the local IBTE teachers have industrial experience. The training and recruitment of IBTE teachers in Brunei are based on the in-service model, in which the teacher's qualification is acquired at the university level within the first few years usually in the probationary phase of employment.

¹⁰A Portal to LLL Resources (2017).

1.9.3 Salaries of Teachers/Trainers/Instructors

The starting salary for the basic qualification (Diploma Level 5) is BND\$2035 per month.

1.9.4 Teachers' Professional Development¹¹

Teachers' continual professional development (CPD) is provided through in-house training, short courses locally and overseas and industrial placement. Locally, CPD is led by different agencies under the purview of MoE such as SHBIE and ILIA.

- SHBIE is a graduate school of education as well as one of the major providers of continuous professional development for teachers. Education is offered in two main categories: (a) teachers' personal development teachers are given opportunities to upgrade their academic qualifications through post-graduate studies up to Ph.D. level, (b) teachers' professional development in-service teachers attend various research-based continuous professional development courses designed by the institute in collaboration with the MoE. Examples include the twenty-first century Teaching and Learning (21CTL) course and the personalized pedagogy and technologies course. In addition, the MoE, the Ministry of Religious Affairs and private schools run a range of short courses.
- ILIA provides action-based, continuing professional development for teachers and school leaders in terms of individual leadership, teacher leadership and school leadership training through its three-tier school leadership programmes. These programmes are designed for aspiring school teachers, middle leaders and senior school leaders.

1.10 Private Sector Cooperation

With the launching of Brunei's long-term development plan (Brunei Vision 2035), the private sector will increasingly be involved in the planning and implementation of development projects—including those relating to TVET. This is particularly the case for post-secondary TVET, where industries play important roles in several aspects, including curriculum planning, the development and implementation of apprenticeship schemes, and competency-based training and assessment. Under the competency-based arrangements, any assessments for students need to be verified by the relevant industries.

¹¹Institute of Brunei Technical Education (2013, 2017.2.5).

Engagement by employers, employees and civil society in TVET can take various forms, including¹²:

- Participating in developing national, sector or local policies;
- Supporting funding mechanism;
- Joining the boards and management bodies of TVET provider;
- Helping to identify occupational skills and standards as the basis for education and training standards;
- Participating in pilots, initiatives and innovations.

Under the new IBTE constitution, a Board of Governors (BOG) was appointed by the government to oversee IBTE strategic mission, direction and goals. The BOG is empowered with the autonomy and flexibility to establish its standing and special committees may be required to regulate and better discharge its primary functions and duties. The BoG members consist of high-level officials from both the government and the private sector.¹³ The government members include Ministry of Education, Ministry of Finance, Prime Minister's, Industry and Energy Department, Prime Minister's Office (EIDPMO) and Ministry of Primary Resources and Tourism, Ministry of Development and Brunei Investment Agency (BIA). The private-sector members are from Darussalam Enterprise (DaRe), Authority for Info-Communication Technology Industry (AITI), Royal Brunei (RB), Telecom Brunei Berhad (TelBru), Tabung Amanah Islam Brunei (TAIB), Association of Surveyors, Engineers and Architect (PUJA), Brunei Gas Carrier and Centre of Capacity Building (PPK).

IBTE also works together with the Industry Competency Framework (ICF) team under the Energy and Industry Department at the Prime Minister's Office (EIDPMO), industries and other government agencies to revise the curriculum. From these strong collaborations, a Programme Development & Evaluation Committee (PDEC) was established to bring in industrial subject-matter experts (SMEs) and teaching professionals from various institutions to develop a competency-based curriculum.

From the non-oil and gas sectors, the initiative has been done to link and strengthen collaboration between IBTE and industries through the formation of Industry Steering Committee (ISC). With the formation of the ISC, IBTE hopefully will be able to implement its core business of developing and ensuring relevant training programme to meet the needs of the industry. ISC acts as an advisory body to support the development and implementation of the training programmes that would meet the need of the industry.

IBTE also strengthened their existing apprenticeship programmes through a dual system apprenticeship (employed-based training model). In this model, the apprentice is employed by a company and spends time in the workplace and at a Registered Training Organisation (RTO) undertaking "off-the-job training" during a period of block release, 6 months in the company and 6 months in RTO. RTO has proposed 16 new dual-system apprenticeship programs for the oil and gas, marine, hospi-

¹²IBTE Ignite (2017a).

¹³Institute of Brunei Technical Education (2013, 2017.1.5).