



Transforming Technical and Vocational Education

A white paper



INTRODUCTION

Governments and policy makers recognise the importance of Technical and Vocational Education (TVE) in the social and economic development of people and nations. A dynamic system, TVE faces many challenges, including the growing expectations of the young in an increasingly competitive global environment. But, despite the many efforts, the quality, standards and outcomes often remain elusive. The public image remains negative. National education systems continue to be driven by an over emphasis on academic education at the expense of building a quality TVE which can better serve the needs of individuals and the economy.

Brunei Darussalam, a small but “well-to-do” economy, is not immune to the dynamics and forces driving change in society and the world. In responding to the national vision of a modern, harmonious and progressive society, the 21st Century New Education System (SPN21) initiative was introduced in 2008 to build a more educated and skilled workforce. A strategic policy shift in education to support Brunei Vision 2035, SPN21 ensures that all students will have at least 10 or 11 years of schooling before progressing to the Sixth Form, Polytechnic or TVE under the Department of Technical Education (DTE).

The national challenge is to build a first class education system that provides opportunities for every citizen and resident to meet the manpower needs and new jobs that will be created with economic diversification. The Ministry of Education’s mission is “to provide holistic education to achieve fullest potential for all.” In this respect, TVE will play an integral role in complementing the schools. Robust, comprehensive and integrated, it will be an educational system that recognizes the diversity of talent and value in every individual. Not every child responds equally well in a highly competitive academic environment. The less academic can respond better and do well if given a more hands-on and practical teaching and learning environment. However, the educational goal in schools must continue to be to build as strong a foundation (viz, Mathematics, Language and Science) as possible so that school leavers have the best chance in acquiring the knowledge, skills and values for employability and lifelong learning to face challenges in a rapidly changing global economy.

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In this respect, the societal mindset must also change in line with present-day realities. Unlike the past, TVE is not for failures in schools. The success of an education system hinges on its ability to meet the different needs of students through alternative pathways, including that of a quality post-secondary TVE. This is a primary responsibility of government. A highly educated and skilled workforce will help to promote investments and build a modern economy that creates quality employment opportunities, especially in the private sector. However, a TVE system does not stand alone. Its development and success depends on the mutual support and collaboration among stakeholders in government, industry and community.

Thus, the ultimate proposal in this white paper is the need to restructure and establish a new system of technical and vocational education which is better aligned with the social and economic needs of the country. It calls for a fundamental shift in policy and the transformation of the present system under DTE. Replacing the DTE, will be a new autonomous post-secondary educational institution called “Brunei Technical Education” (BTE). This paper provides the rationale, proposed changes and timeframe for transforming technical and vocational education in Brunei Darussalam.



RATIONALE FOR TRANSFORMATION

The present Department of Technical Education (DTE) under the Ministry of Education was established in January 1993. It was a system designed for GCE “O” level secondary school leavers as well as those with only nine years of education. To-date, the vocational schools and technical institutes operating under DTE, have produced more than 23,000 graduates at the certificate and diploma levels. Many graduates continue to work and contribute as skilled workers, technicians and professionals in the public and private sectors of the economy. Others have upgraded through further education and training. DTE has played an important role in supporting the local economy. However, the world has since changed dramatically. Socially and economically, it is a world dominated by Info-Communications Technology (ICT), creative technology, multi-media, innovation and knowledge-based industries.

Recognizing that the role of TVE has changed over time, the Ministry of Education commissioned a strategic review on “A Consultancy Project on Technical and Vocational Education” in Jan 2012. Conducted by Dr Law Song Seng, his Report highlighted the following concerns:

- The TVE system presently constituted as a governmental department under DTE is no longer relevant and responsive in a rapidly changing global environment.
- The need for a more strategic alignment between the SPN21 initiative, TVE system and national skilled manpower needs in a diversifying economy.
- Without an appropriate system of governance with sufficient autonomy and flexibility, the effectiveness of DTE will continue to be limited by a slowness to respond, shortage of qualified teaching staff with industrial experience, inadequate training capacity, unattractive campus environment and lack of resources.
- The need for greater clarity in mission and goals. DTE should focus in the training of Technicians and Skilled Personnel and the award of National Certificates. Training should be competency-based, practical and “hands-on.” Any school leaver who has completed 10 or 11 years of schooling under SPN21 should have a place in technical and vocational training. While there are pathways for further progression, the key priority must be the employability of the graduates.

THE RESPONSES

The findings and recommendations of the Report were widely shared within the Ministry of Education and with stakeholders in government and leaders in industry. The industry shared the same concerns and welcomes new government initiatives to transform the existing system. They are ready to participate in forging a closer collaboration with government in the training of school leavers. Other stakeholders including parents, teachers and the wider community were also consulted on the proposed changes and future direction of TVE. There was general consensus on the need and support for change. In particular, they welcome the proposal to establish a new Brunei Technical Education (BTE).

His Majesty the Sultan and Yang DiPertuan Negara Brunei Darussalam, in his *Titah* to welcome the New Year 2013, too urged the Ministry of Education to re-evaluate the status of technical and vocational education to ensure that it can contribute to the needs of the oil and gas industry as well as the job market. In response to the *Titah*, TVE must be better aligned with needs of industry. To meet the aspirations of the people in Brunei Darussalam for higher standards of living as envisioned in Wawasan 2035, the less academically inclined must be provided with the opportunities to acquire the right skills and to seek gainful quality employment. This will build the foundation for a more inclusive and harmonious society.

The recommendations for a restructuring of the present DTE system were endorsed by MOE. As a follow-up, two working teams (MOE and DTE) were set up to develop the white paper and formulate a five-year developmental plan for launching the new BTE. This white paper is supported by the proposed changes which are being further elaborated and developed in parallel with the developmental plan.



PLAN TO ESTABLISH A NEW BRUNEI TECHNICAL EDUCATION (BTE)

The key proposal of this white paper is to establish a new Brunei Technical Education (BTE). As a new post-secondary institution, BTE will replace the existing system of training under the Department of Technical Education (DTE). It will assume the functions previously fulfilled by DTE. Unlike DTE, BTE will be constituted as a statutory board under the purview of Ministry of Education. It will be the principal provider of technical and vocational education, including full-time, apprenticeships and part-time Continuing Education and Training (CET) in Brunei Darussalam. BTE is also the national agency for the development of occupational skills standards. Under the new constitution, a Board of Governors (BOG) will be appointed by government to oversee its strategic mission, direction and goals. The BOG will be empowered with the autonomy and flexibility to establish its standing and special committees as may be required to regulate and better discharge its primary functions and duties.

The BOG is accountable to the government through the Minister of Education for achieving its mission and goals. Members of BOG are non-executive appointments. They provide overall direction, guidance and oversight for the development and management of the new Institute. Approved by cabinet and appointed by the Minister of Education, they represent stakeholder groups such as government, employers and educators. The Chief Executive Officer (CEO) is the executive head of BTE and also a member of the BOG. The BOG does not report to any other external agencies or bodies. The CEO reports to the Chairman of the Board and is responsible for the administration, operation and performance of the Institute.

PROPOSED KEY CHANGES

The following key changes will be implemented over the next five years by the new BTE:

- Course restructuring
- Expanding apprenticeship options
- More progressing opportunities
- Upgrading the training environment
- A new scheme of Teaching service
- Renaming DTE and vocational institutes

Course restructuring

With the introduction of SPN21 by the Ministry of Education in 2008, plans have already been put in place to improve primary and secondary education in schools. All students will henceforth receive at least 10 or 11 years of primary and secondary education before proceeding to further education and training. In view of these changes, the present courses will need to be restructured and reconfigured to better match the needs of the new cohort of school leavers which is estimated to be more than 60% (students obtained 4 GCE 'O' Levels and below in 2012). The range, level and capacity of courses will be reviewed and better aligned with the major sectors of the economy.

The new BTE will strengthen its focus on the development of practical skills. The curriculum will be “competency-based” and training “hands-on.” It will conduct three levels of courses and award its own certificates, viz Industrial Skills Certificate (ISQ), National Technical Certificate (*Ntec*) and Higher National Technical Certificate (*HNtec*). The present two-year Diploma courses will be gradually phased out or subsumed under the Brunei Polytechnic. Graduates of the *HNtec* courses are trained as “technicians” whereas those in *Ntec* and *ISQ* will qualify as “skilled personnel.” The *ISQ* courses are industrial short courses ranging from three months to one year depending on the nature of the occupation. The *Ntec* full-time courses are of one or two- year duration depending on the nature and depth of training required. *HNtec* courses, on the other hand, are pegged at a higher level of train-

ing with more theory and will need two years to complete. Every school leaver who has completed 10 or 11 years of schooling under SPN-21 is eligible to apply for a course in BTE.

The *HNtec* courses will require a minimum of three GCE “O” levels with subject prerequisites and grades. To better respond to the wide range of educational achievements especially in Language, Mathematics and Science, there will be two clusters of *Ntec* courses. Cluster “A” are the mechanical-based courses for which no GCE “O” or subject pre-requisites are required. All other courses (e.g. electrical or electronics-based) which require pre-requisite subjects and grades will be placed under cluster “B.” ISQ courses are catered for those who wanted to obtain industrial skill for employment and require completion of year 9. Based on the potential pool of school leavers and projected student intake rates under SPN21, BTE will need to build a full-time total training capacity of 8,000 places over the next seven years. By then, it will be offering a projected number of 10 ISQ, 43 *Ntec* and 36 *HNtec* approved courses.

Expanding apprenticeship options

Apprenticeship is not just another model of skills training. Besides the knowledge and skills, apprenticeship helps to build a strong bond between the apprentice and his company that an educational institute will find it difficult to achieve. The best practice is the “dual” system of apprenticeship in Germany and Switzerland which trains up to 70 % of a school cohort. The result is that these countries produce one of the most highly professional and skilled workforces in the world.

However, our tradition and contexts are not the same. It will be unrealistic to fully depend on this mode of training. But, it is a training scheme suitable for those who wish to earn as they learn. There is potential to expand the scope of apprenticeship in Brunei Darussalam. Working with the major sectors of industry, new areas of apprenticeship, some of which may not be available under the full-time system, can be identified and introduced. The target is to expand the present apprenticeship places from the present 60 to 200 places over the next five years. The wider options in apprenticeship training will help to provide more occupational choices and match the interest of school leavers. This form of industry-based training will strengthen the partnership and collaboration between the industry and BTE.

More progression opportunities

With social and economic progress, the aspirations of the young and expectations of parents will accordingly rise. Many will continue to aspire for a university degree education. There is nothing wrong in having these aspirations. The important issue is the recognition that each individual is different. In principle, the eligibility criteria for progression to the next level of training should be based on merit performance and the potential to do well. Quality and standards must not be compromised. The primary mission of BTE is to prepare people well for the occupations for which they are trained. Its mission should not be relegated to preparing students for the next level of education and training.

But, those who have performed well must be given the opportunities to progress further. This will provide the motivation for students to do well and enhance the attractiveness of the training system. The different pathways will add to the robustness of the educational system. With proper articulation and experience, more opportunities can be created for up to 25% of DTE graduates to progress to the higher-level courses within BTE and the Brunei Polytechnic.

Upgrading training environment

A conducive teaching and learning environment is a necessary condition for the total development of students in vocational training. Besides classrooms and up-to-date training facilities, are the amenities to promote student participation in sports, music and arts. Ample spaces must be provided to encourage student interaction and staff collaboration with industry. The design of workshops, laboratories and training rooms needs to be improved to achieve a better integration in the teaching of theory and practice. The objective is to create an experiential learning environment closer to the working world. Ultimately, an architecturally attractive and purposefully-designed campus will help to change the image of TVE.

In planning for the longer-term needs of an expanded BTE, the existing seven smaller campuses will be regrouped into two bigger “regional campuses.” The first new regional campus will be built by 2018. This first campus will also incorporate the new BTE

PLAN TO ESTABLISH A NEW BRUNEI TECHNICAL EDUCATION (BTE)

Headquarters. Meanwhile, the existing campuses will be regrouped and start to operate as two regional campuses. The older campuses will be upgraded or redeveloped to meet the changes in courses, revised curriculum and student development activities. With the experience of building the first regional campus, the second regional campus can be built by 2020. The total capital cost to upgrade existing campuses and build a new system of two regional campuses under BTE by 2020 is estimated at B\$408 million. This includes upgrading existing campuses where required (35 million), a new BTE headquarters (33 million) and building the two new regional campuses (\$170 million each, including training and non-training facilities). This is the estimate based on the vision of a fundamental transformation in building a first-class technical education system.

New scheme of teaching service

Unlike school education, vocational training especially under BTE will be practice-based, hands-on and experiential. The teachers who can best meet the needs of students in this learning environment are those who not only have the appropriate professional qualifications but most importantly the relevant industrial experience with pedagogic training. As such, the years and value of the experience they bring with them in the context of practical skills training must be recognized. The ability to attract professionally trained and well-qualified teaching staff is key to upgrading the quality of training and standards.

The present DTE teaching scheme is being reviewed. A new enhanced scheme of teaching service will be introduced to attract, retain and develop the right types and number of staff in meeting the needs of an expanded BTE system. Benchmarked against the relevant industry and public sector schemes, it should be a scheme specially tailored for teachers in TVE. To make the scheme attractive, there will be provisions for staff development through different career tracks such as Teaching, Leadership, Specialist and Technologist. The compensation structure will be designed to raise the professional competency and standards of the teaching staff. The goal is to position the teaching service in BTE as a professionally fulfilling, challenging and rewarding career to support a first class post-secondary technical and vocational education. Other benefits and incentives may be introduced to ensure the continuity of leadership, expertise and core capabilities in the teaching service.

Renaming of DTE and Training Institutes

With the proposed changes, the existing DTE system will be fundamentally transformed and take on a new role in TVE. This calls for a new corporate name and restatement of its mission and goals. The new Brunei Technical Education (BTE) will be repositioned as a post-secondary educational institution. Its mission is to help build a better educated and skilled workforce. The primary goal is to attract and equip as many school leavers as possible for jobs and careers in industry. The campuses will be renamed as “Colleges” in keeping with students who now have a secondary education and the upgrading of the training system.

Separately, a bill has been drafted by the Attorney General’s Office to legally constitute BTE as a Statutory Board with its own Board of Governors, the Chief Executive Officer and other officers. The bill defines the primary functions of BTE and the powers and duties of the Board of Governors. Provisions have been made for the transfer of all staff of DTE to BTE upon its formation. All existing vocational schools and technical institutes will also be transferred to the new BTE.



CONCLUSION

The present system of TVE under DTE will be restructured and transformed as a post-secondary education institution. Empowered with a new constitution and aligned with the education system and national skilled manpower needs, the new BTE will better respond to the needs of our younger generations.

Many challenges lie ahead. But, the journey of transformation begins now. BTE will help to build a better-educated and skilled workforce to meet the challenges of an increasingly global and knowledge-based economy. The issue today is not just about TVE. It is about building quality and strengthening an educational sector that matters most to society and the economy.



UPGRADING PLAN FOR TECHNICAL EDUCATION IN BRUNEI DARUSSALAM 2013-2018

DEPARTMENT OF TECHNICAL EDUCATION
MINISTRY OF EDUCATION
SPG 347 JALAN PASAR BAHARU
GADONG BE1310
NEGARA BRUNEI DARUSSALAM