



TVET REFORM PROJECT

Group Report: Fellowship 2

AUSTRALIA – MALAYSIA

FELLOWSHIP

18 – 29 April 2009

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BACKGROUND OF FELLOWSHIP TWO

TVET Reform Project

The TVET Reform Project aims to support change within the TVET system of Bangladesh. It is an ambitious program of activities that focus on a broad range of TVET issues including development of new national policy, implementation of competency based training, new teacher training arrangements, a greater role for industry and decentralised management of institutions.

Over 5 years (2007-2012), 13600 Lac BDT (16 mil €) will be committed to improving TVET policy and systems, developing new qualifications and courses, upgrading skills of managers and teachers and working with industry to increase productivity through skills development.

The project will assist Bangladesh in reducing poverty through reforms of technical and vocational education and training policies and systems. This will ensure that more people acquire employable skills and generate income through wage-earning jobs or self-employment. The project is funded by the European Commission (EC), with support from the International Labour Organisation (ILO) and the Government of Bangladesh. Over 5 years (2007-2012), 13600 Lac BDT (16 mil €) will be committed to the project through activities involving policy makers, administrators, managers, teachers, employers and workers.

The project has five major components that focus on key elements of the TVET system:

1. TVET policy, systems and management;
2. The quality and relevance of TVET;
3. Management of TVET institutions and training of vocational and technical teachers;
4. Skills development for improving industry competitiveness; and
5. Access of under privileged groups to TVET.

Fellowships

The TVET Reform Project scheduled three fellowships in the first six months of 2009 to provide key officials and industry representatives with exposure to TVET in countries that have undertaken similar reforms in recent years.

The objective of the second fellowship was to provide the opportunity for key senior government and industry officials to be exposed to the approach taken towards the three building blocks of a quality national TVET system by Malaysia and Australia. These are:

- i. A national qualifications framework.
- ii. A rigorous quality assurance system.
- iii. Programs of learning relevant to industry needs.

The fellowship program is included in this report and included targeted sessions on these three building blocks, namely:

- Industry advisory arrangements;
- National Qualification Frameworks; and
- Quality assurance in TVET.

At different points during the tour, and again on their return, participants took part in discussions and presentations on key issues raised during the tour and their relevance to the ongoing TVET reform agenda in Bangladesh.

PARTICIPANT ENDORSEMENT OF THE REPORT

This report and its recommendations have been discussed and endorsed by the following fellowship participants:

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Joint Secretary
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SUMMARY OF ACTIVITIES & KEY FINDINGS

Australia

This section provides a summary activities and the key points as identified by the group. It draws on discussions during and after the meetings, as well as evaluation sheets completed by participants.

New South Wales Department of Education and Training

- Introduction to VET in Australia
- Overview of NSW Department of Education & Training
- Overview of NSW TAFE Commission
- VET in Schools
- Overview of Industry Training in NSW
- Apprenticeships & Traineeships in NSW
- Industry Advisory Arrangements (National/NSW)
- Overview of curriculum development in NSW

The group heard an overview of the Department including the operations of NSW TAFE. Detailed presentations were also delivered on apprenticeships and traineeships, along with TAFE educational support services. The key message for the delegation was the need for strengthened traineeship and apprenticeship system in Bangladesh that involved the use of incentives to encourage employer participation.

NSW Automotive Training Board & Transport and Logistics ISC

Presented by Deborah Joyce, NSW Executive Officer –Training Packages

The fellows attended a session on 21 April 2009 with Ms Debbie Joyce , NSW Executive Officer – Training Packages, NSW Automotive Training Board at Level 4, 1 Oxford Street, Darlinghurst, Sydney. The fellows received a presentation on the Transport and Logistics Industry Skills Council NSW and Transport and Logistics Training Package. She briefly described the past history of the Australia's state and national arrangements for industry training advice intelligence gathering. She mentioned that in 2003 the Federal Government consolidated 25 national Industry Training Advisory Bodies into 10 Industry Skills councils. Since that time, forestry has also been given their own skill council, bringing the number to 11. From her presentation the following was gleaned:

- Industry Scope
 - Road Transport (largest sector)
 - Rail
 - Maritime (blue water and near coastal)
 - Stevedoring
 - Aviation (ground and flight operation)
- Transport and Logistics demography
- Broad Employment Trends
- GDP League Ladder of Australian Industries

- Skills Councils Framework etc.
- Training Package Scope
 - Endorsed components of training Package (Competency standards, Assessment Guidelines, Qualifications Framework)
 - Training Packages nationally (75 training packages across all industries)
 - Australian Qualifications Structure
 - Process of Engagement

Ms Joyce also explained the functions of The Transport & Logistics Industry Skills Council. Some of the main functions are:

- Provide accurate industry intelligence to the VET sector about current and future needs of industry skill and training requirements;
- Support the development, implementation and continuous improvement of quality training products and services recognized nationally including training packages;
- Definition of training Package and it's contents, e.g. – Competency standards, Qualifications, Assessment Guidelines.
- Learners (Operators, Team Leaders, Supervisors, Line Managers, Senior Managers, CEOs etc.)

The key message was the input from the transport sector into the learning programs delivered by the government and private training providers.

Manufacturing Industry Skills Council,

Presented by Bob Paton, CEO Executive Officer – Manufacturing Industry Skills Council

The fellows attended a session on 21 April 2009 with Mr. Bob Paton- CEO, Manufacturing Skills Australia. The fellows received power point presentation from Mr. Bob Paton on Skilling solutions in manufacturing – industry engagement. He covered the following aspects in his presentation-

Manufacturing Skills Australia

- One of 11 national Industry Skills Councils established and funded by the Australian Government and supported by industry;
- ASIC registered public Company – not profit, owned by 14 industry organization (7 employer, 7 unions) with 11 person board of Directors;
- Operate in the vocational education and training(VET) sector
- Major roles span;
 - advice to industry and government on skills needs
 - training 7 skills products services
 - assist companies with workforce development
- Supporting enterprises through training solutions.
 - Coverage of Manufacturing Skills Australia
 - Manufacturing Skills Australia Governance Structure
 - Manufacturing Skills Australia Management structure
 - Employment Profile in Manufacturing
 - Formal Skills Profile in Manufacturing

- Skills, labour and the workforce
- Addressing Skills needs in Manufacturing
- National Training Qualifications development and review

Apart from these, the fellows were exposed in detail to Manufacturing Skills Australia (MSA). For example, Manufacturing Skills Australia (MSA) addresses the skills needs of over 75000 manufacturing businesses employing almost one million Australians. They are the pivotal link between skills and workforce development, and vocational education and training. They are a not-for-profit making company limited by guarantee, owned by industry and managed by a board from across industry. They have a broad range of reference and as a advisory group is constantly seeking information on industry skills needs.

Manufacturing Skills Australia (MSA)'s activities help Australia's manufacturing sectors to play a key role in the national economy. They assist industries, enterprises, and their workforces to integrate skills development with business goals.

Manufacturing Skills Australia (MSA) encompasses most sectors of manufacturing in Australia, including: Textiles, Clothing, Footwear, Furnishing engineering, Aerospace, Boating, Process Manufacturing, Competitive Manufacturing, Laboratory Operations etc.

As part of the National Industry Skills Council forum, Manufacturing Skills Australia (MSA) provide impartial advice on industry training and skills development needs to government and industry. It administers, supplies and continuously revises the Manufacturing Industry's National Training Packages in partnership with stakeholders

Manufacturing Skills Australia (MSA) also by working together with industry, monitors and determines skills standards that help employers build efficient workforces and maintain Australia's position as a world-class manufacturer. Manufacturing Skills Australia (MSA)'s sector experts provide a free consulting service to their industry partners, advising on skills development in manufacturing today and into the future.

The key message was how the ITCs identify the training and manpower needs of the manufacturing sector and work closely with industry to improve their productivity.

North Sydney Institute TAFE

The group toured the Ryde campus and received presentations on the Institute. Topics dealt with how the scope of Institute operations, how it complies with AQTF quality standards and the Frontline Management Initiative. The key finding for the delegation was the potential for NSW TAFE to partner with GOB to strengthen training organisations in Bangladesh.

NSW Vocational Education & Training Accreditation Board (VETAB)

The group heard a presentation on the Australian Quality Training Framework (AQTF) and how it was implemented in NSW through the registration of Training Packages and courses, and through the registration and audit of training providers. The key message for the delegation was the need for a strengthened quality system in Bangladesh that includes audits of public and private training organisations.

TVET Australia

The group was given a presentation on the National Quality Council (NQC), the National Industry Skills Committee (NISC) and the The National Audit and Registration Agency (NARA). The key message for the delegation was the need for greater involvement of industry in skills development in Bangladesh, particularly in relation to quality assurance and the endorsement of standards and curriculum.

Australian Electrotechnology Industry Skills Centre (Electro Skills) – NSW Australia

The group were presented with an overview of one of the Australian Electrotechnology Industry Skills Centre – NSW, Australia named Electro Skills (a registered Training organization) on 24 April 2009 by Mr. Mike Horne, Centre Manager. He briefly described the following aspects of the organization as outlined below:

Electro Skills is the Electrotechnology Industry's own Registered Training Organization and specializes in providing quality training for the electrical, electronics, electricity supply, telecommunications and associated industry sectors. Electro Skills operates as the Australian Electrotechnology Industry Skills Centre Limited and was established in 1994. Electro Skills has two fully equipped modern Training centres in Sydney and Canberra. Electro Skills is administered by a Board of Directors made up of high profile industry people with years of experience. The company is a "not for profit" organization and is dedicated to the development of existing and future workers in the Electrotechnology and associated industries.

Electro Skills also assist individuals or employees of businesses in Recognition of Prior Learning (RPL) and the assessment of competencies. The centre currently offers the Training courses: in, Electrotechnology Systems Electrician, Electrotechnology Trades, powerlines, Cable Jointing, Telecommunications, Electrotechnology Traineeships, occupational Health & Safety, Electrical Safety, Traffic control, Escape Release & Rescue, First Aid, Asbestos Awareness, Working at Heights plus other courses on request.. Apart from these Electro Skills conducts pre-employment aptitude tests for people entering the Electrotechnology industry. By making sound selection of apprentices up-front employers can convert more apprentices into tradespeople.

Centre for Learning Innovation (CLI)

The group was received a presentation on 24 April 2009 from Mr. John Wilson, Manager, Business Development, along with Mr. Razu Varanashi, General Manager, Mr. Dejendralal, Cluster Manager and Ms Susan Cornish, Chief Learning Design Officer, Centre for Learning Innovation, Strathfield, New South Wales, Australia. The speakers of the Centre presented activities of the Centre for Learning Innovation as follows:

- Transforming the learning experience for students and teachers.
 - CLI helps teachers to integrate technology into their teaching practice;
 - CLI develops products and services for schools across all key Learning Areas that align with NSW Syllabuses;
 - Their TAFE resources focus on up-skilling the existing workforce, skill shortages and other priority areas;
 - Extensive expertise which includes learning program designers, web developers, audio and video technicians as well as quality and technology officers.
- Building productive partnerships with schools, colleges, business and cultural institutions –
 - develop unique, richly contextualised learning products and services;
 - provide access to a wide range of high quality interactive learning resources;
 - investigate the value of the latest technologies for learning.

- Connecting Schools, colleges and the community
 - foster increased choice, more opportunities and enhanced access for today's learners;
 - the Teaching and Learning exchange (TaLe) is a portal which enables our teachers to search and find resources. TaLe offers opportunities to join online learning communities;
 - connected classes use innovative technologies to connect learners. It offers exiting solutions for a range of current and emerging challenges.

The key message was how important a centre like this is to the support of the delivery of programs of learning in the institutions. Unfortunately it would be a very expensive organisation to carry and would be beyond the resources of most developing countries. A centre concentrating on limited learning program delivery areas would be a possible alternative however.

Malaysia

Ministry of Human Resources

The group was given a presentation on the functionalities of MOHR. Both public and private institutions are working under the guidance of MOHR which covers both pre-employment and in-service training for the continuous professional development for current workers. It was noted that MOHR also has in place governance and quality assurance regulatory control for its training institutions and those private providers who receive public funds, such as for the professional transition of workers. The key message for the group was that the government actively supports skills development and has clearly tied national development to greater investments in education and training.

Department of Skills Development and Human Resources Development Fund

The group were presented with an overview of the Department of Skills Development and the operation of the Human Resources Development Fund. It was noted that one of the key functions of this department is the collection of training levy from industry and managing the training for the workers of those industries. The key message for the delegation was that public and private partnerships in skills development can extend to the funding of programs on a national scale. The group felt that the Government of Bangladesh (GOB) should engage use the Corporate Affairs & Human Resources Division of PSMB in Malaysia to provide technical assistance for establishment of the NSDC approved National Human Resource Development Fund.

Centre for Instructor and Advanced Skill Training (CIAST)

The group toured the CIAST campus and received presentation on the center where a multi-tiered approach to trainer training was discussed. It was noted that CIAST covered all public and private sector trainers in Malaysia working with other regional centers to deliver the necessary training. The key message of the delegation was that a nationally consistent training program for both public and private sector trainers was an important element of skill development quality assurance. The group also identified the potential for CIAST to partner with GOB and DTE to strengthen technical teacher training in Bangladesh.

ADTEC Center

The group toured the Department of Manpower center and received a presentation from staff on the types of training delivered and the strong links with industry. It was particularly noted

that these centers delivered different levels of technology based skills training in different key industry sectors, which provided different pathways for students and workers in a each sector. The key message for the delegation was the need for training institutions such as TTC and TSCs to work with industry and develop more market oriented programs at different levels.

Department of Higher Education

The group heard two presentations from the Department of Higher Education which highlighted the operation of polytechnics and community colleges in Malaysia. Whilst the Department also spoke of the Malaysian Qualifications Framework and their efforts at strengthening links between industry and providers, a key message for the delegation was that the Malaysian system continued to emphasise seemingly artificial distinctions between skills training, vocational training and technical education which contributed to a lack of cohesion and focus relative to their understanding of the Australian system. The key message was for Bangladesh to avoid this lack of cohesion between the different misitries involved in TVET.

IMPORTANT FEATURES OF AUSTRALIAN AND MALAYSIAN TVET SYSTEMS

Following is a brief description of the Australian and Malaysian TVET systems of relevance to the Fellowship objectives. These are:

- Outline and implementation of Qualification Frameworks within the two countries;
- The Quality Systems in Australian and Malaysian TVET.
- The development of competency standards within the two countries.

More detail is included in the Appendices.

Qualification Frameworks - Australian and Malaysian TVET

Australian Qualifications Framework (AQF)

The Australian Qualifications Framework (AQF) is a unified system of national qualifications in schools, vocational education and training, both government funded Technical and Further Education (TAFE) institutions and private providers, and the higher education sector (mainly universities), both public and private.

The table below shows the Australian Qualifications Framework.

AQF Level	Schools Sector Accreditation	Vocational and Technical Education (VTE) Sector Accreditation	Higher Education Sector Accreditation
11	Senior Secondary Certificate of Education	Vocational Graduate Diploma	Doctoral Degree
10			Masters Degree
9			Graduate Diploma
8			Graduate Certificate
7			Bachelor Degree
6		Advanced Diploma	Associate Degree, Advanced Diploma
5		Diploma	Diploma
4		Certificate IV	
3		Certificate III	
2		Certificate II	
1		Certificate	

Note: It should be also noted that there are no standardised rankings or equivalences between different qualifications issued in different sectors, as these qualifications recognise different types of learning reflecting the distinctive educational responsibilities of each sector. Where the same qualifications are issued in more than one sector, but authorised differently by each sector (i.e. Diploma, Advanced Diploma), they are equivalent qualifications, although sector- differentiated.

The Framework links together all these qualifications and is a highly visible, quality-assured national system of educational recognition which promotes lifelong learning and a seamless and diverse education and training system.

The AQF was introduced Australia-wide on 1 January 1995 and was phased in over five years, with full implementation by the year 2000.

The AQF was developed under instruction from State, Territory and Commonwealth Education and Training Ministers meeting as the *Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA)*. MCEETYA has established an AQF Advisory Board to protect the AQF qualifications guidelines and to promote and monitor national implementation of the AQF.

The Importance to Australia of the AQF

Qualifications certify the knowledge and skills a person has achieved through study, training, work and life experience. They are a measure of our 'intellectual capital' and increasingly important in a society where unskilled jobs have disappeared and continuous upskilling is required in all forms of work and in day-to-day life.

The AQF helps all learners, employers and education and training providers to participate and navigate the qualifications system. Under the AQF, you can start at the level that suits you and then build up as your needs and interests develop and change over time. The Framework assists learners to plan their career progression at whatever stage they are within their lives and when they are moving interstate and overseas.

In this way, the AQF supports national standards in education and training and encourages lifelong learning.

Key Objectives of the AQF?

The AQF should:

- provide nationally consistent recognition of outcomes achieved in post-compulsory education;
- help with developing flexible pathways which assist people to move more easily between education and training sectors and between those sectors and the labour market by providing the basis for *recognition of prior learning*, including credit transfer and work and life experience;
- integrate and streamline the requirements of participating providers, employers and employees, individuals and interested organisations;
- offer flexibility to suit the diversity of purposes of education and training;
- encourage individuals to progress through the levels of education and training by improving access to qualifications, clearly defining avenues for achievement, and generally contributing to lifelong learning;
- encourage the provision of more and higher quality vocational education and training through qualifications that normally meet workplace requirements and vocational needs, thus contributing to national economic performance; and
- promote national and international recognition of qualifications offered in Australia.

Changes Brought about by the Introduction of the AQF

Work-based qualifications and academic qualifications are now part of a single system, allowing maximum flexibility in career planning and continuous learning (remember, you are likely to make at least five major career and lifestyle changes in your lifetime).

The following changes in vocational education and training have most affected the system of qualifications:

- Vocational qualifications are now industry-based, with specified combinations of units of competency required by each industry for each qualification;
- These qualifications are designed in a sequence, allowing you to move steadily from one qualification to the next. Sometimes you will want to mix and match units of competency : whatever you chose, the units will accumulate on your record of achievement and help towards retaining your job, promotion, a change of career or further learning;

- To be assessed as competent for one of the vocational qualifications, you have to show you can use your skills and knowledge under workplace conditions, so a lot of your training will be in the workplace. Also, you can be assessed for the skills and knowledge you may already have gained informally in previous work. This assessment process is known as recognition of prior learning (RPL);
- Registered Training Organisations (RTOs) are accredited to provide training and issue qualifications according to the requirements of the AQF.

Malaysian NVQ Framework

The MQF was introduced in 2007, so is relatively new. The MQF is designed to be a unified system of qualifications offered on a national basis by all educational and training institutions which include colleges, universities, vocational institutions, professional organisations and other higher educational institutions in both the public and private sector as well as workplace training and life long learning experiences. An MQF:

- secures the standards of qualifications and reinforce policies on quality assurance;
- ensures accuracy and consistency of nomenclature of qualifications;
- supports flexible education by providing typical learning pathways and recognising prior learning (RPL);
- encourages partnerships between public and private sector, links non degree with undergraduate and postgraduate levels;
- encourages parity of esteem among academic, professional and vocational qualifications;
- establishes a common currency for credit accumulation and transfer; provides clear and accessible public information;
- facilitates, where applicable, the presentation of the intended outcomes of qualifications in forms that enable professional bodies to gauge their contribution to professional formation and articulates links with qualifications from other countries.

The MQF is sufficiently flexible to accommodate new kinds of qualification that may arise from time to time.

In developing the single interconnected structure, nationally endorsed criteria for naming, positioning and linking all qualifications are necessary. The "architecture" of the MQF requires understanding of its foundation, principally expressed as competency standards or learning outcomes, the volume of academic volume expressed as credits in terms of total student effort to achieve the learning outcomes, the purpose and character of the qualifications and consistency of nomenclature. Based on these criteria MQF divides all qualifications into the following three sectors, correlating with the type of institution which offers the courses:

- *Skills sector:*
Malaysian Skills Certificate 1-3, Malaysian Skills Diplomas 4, Malaysian Skills Advanced Diploma 5
- *Vocational and Technical sector:*
Certificate, Diploma, Advanced Diploma
- Higher Education sector:

Certificate, Diploma, Advanced Diploma, Graduate Certificate & Diploma, Bachelor's Degree, Postgraduate Certificate & Diploma, Master's Degree, Doctoral Degree

The following diagram shows the MQF in table form.

The Malaysian Qualification Framework

MQF Levels	Sectors			Lifelong Learning
	Skills	Vocational & Technical	Higher Education	
8			Doctoral Degree	Accreditation of Prior Experiential Learning (APEL)
7			Masters Degree	
			Post-Graduate Certificate & Diploma	
6			Bachelors Degree	
			Graduate Certificate & Diploma	
5	Skills Advanced Diploma	Advanced Diploma	Advanced Diploma	
4	Skills Diploma	Diploma	Diploma	
3	Skills Certificate 3	Vocational & Technical Certificate		
2	Skills Certificate 2			
1	Skills Certificate 1			

Quality Systems in Australian and Malaysian TVET.

Australian Quality Training Framework (AQTF)

The national training system is a key driver of Australia's economic and social growth. For more than a decade, the Australian Government and State and Territory Governments have been working collaboratively with industry to develop a national training system that provides the basis for high-quality, industry developed and nationally recognised training to approximately one in nine working-age Australians. Through a national network of over 4,400 public and private registered training organisations, over 1.5 million Australians from all ages, backgrounds and locations participate in vocational education and training each year.

On 1 July 2007, Australian Quality Training Framework 2007 (AQTF 2007) was introduced after endorsement by training Ministers across Australia. The National Quality Council (NQC) has worked with its members to collaboratively develop new national sets of standards to assure nationally consistent, high-quality training and assessment services for the clients of Australia's vocational education and training system.

AQTF 2007 has three components.

- (i) *The Essential Standards for Registration.* Training organisations must adhere to the Essential Standards, including *nine* conditions of registration and three AQTF 2007 Quality Indicators to become a Registered Training Organisation (RTO). Only RTOs are authorised to deliver and assess nationally recognised vocational training and issue nationally recognised vocational qualifications.
- (ii) *The Standards for State and Territory registering bodies.* State and Territory registering bodies are responsible for registering training organisations and

for quality assuring the training and assessment services they provide. In accordance with AQTF 2007 and relevant legislation within each jurisdiction. Each registering body will report annually to the National Quality Council (NQC) about its achievements.

- (iii) *The Excellence Criteria.* This is a voluntary business excellence framework designed specifically for vocational education and training in Australia. RTOs may choose to use the framework internally to continue improving the quality of their training and assessment or to apply for formal recognition of their performance by independent evaluators. The AQTF 2007 Excellence Criteria contain five inter-related criteria, identified to assist the evaluation process. these five criteria are:

1. Leadership.
2. Learning and assessment.
3. People development.
4. Relationship management.
5. Integrated information management.

For more details on the Quality Assurance see website:

http://www.training.com.au/documents/aqtf2k7Excellence_Criteria_RTO.pdf

Malaysian Quality Assurance System

The Malaysian TVET system is controlled by two ministries. These are the:

- i. Ministry of Human Resources through the Department of Skills Development (DSD).
- ii. Ministry of Higher Education through the Department of Polytechnics and Community College Education (DPCCE).

With reference to the Malaysian Qualification Framework above, the Ministry of Human Resources is responsible for the *Skills* sector of the TVET system and the Ministry of Higher Education is responsible for the *Vocational and Technical* sector. As the name implies the *Skills* sector training is more “hands-on” and the *Vocational and Technical* sector training is more knowledge-based.

The two ministries act independently and have their own quality assurance systems which endorse the Certificates and Diploma learning programs conducted and accredit the private and government training institutions. The accreditation criteria for both are as follows:

- Skills training provider is legally instituted.
- Able to provide physical facilities / resources.
- Has qualified trainers.
- Able to undertake training & assessment to meet NOSS and higher level programs.
- Able to meet quality assurance policies and procedures.
- Able to provide guidance and support to candidates.

Note NOSS are National Occupation Skill Standards developed by the Department of Skills Development (DSD), Ministry of Human Resources.

Under the DSD there are some 904 accredited institutions offering the NOSS.

The TVET component of the Ministry of Higher Education is administered by the Department of Polytechnics and Community College Education (DPCCE). There are 27 Polytechnics and 37 Community Colleges.

Development of Competency Standards-Australian & Malaysian TVET

Australian Training Packages

A Training Package in Australia is a set of nationally-endorsed standards, qualifications and guidelines used to recognise and assess the skills and knowledge people need to perform effectively in the workplace. Training packages are developed by industry through Industry Skills Councils or by enterprises to meet the training needs of an industry or group of industries. Note that training packages prescribe outcomes required by the workplace, not information on training or education.

A Training Package contains three compulsory endorsed components—Competency Standards, Qualifications Framework and Assessment Guidelines.

The 11 national Industry Skills Councils (ISCs) bridge the divide between the nation's industry and the vocational education and training environment. The ISCs are listed below.

Australian Industry Skills Councils

- Agri-Food Industry Skills Council
- Community Services & Health Industry
- Construction and Property Services Industry Skills Council
- EE-Oz Training Standards (Utilities)
- Government Skills Australia
- Forestworks – forests, wood, paper and timber products.
- Innovation & Business Skills Australia
- Manufacturing Skills Australia
- Skills DMC National Industry Skills Council
- Services Skills Australia
- Transport & Logistics Industry Skills Council (TDT Australia)

There are some 75 Training Packages which cover virtually all workplace sectors in Australia. In total the training packages contain some 15000 qualifications and over 16,500 Units of Competence.

The National Training Information (NTISD) website <http://www.ntis.gov.au/> provides downloads of all the Training Packages and provide examples of units of competence across a large number of industries.

Competency Standards

Competency Standards are a set of benchmarks used to assess the skills and knowledge that a person must demonstrate in the workplace to be seen as competent. These benchmarks are packaged into combinations to form Units of Competency.

Units of Competency consist of:

- A Unit Code
- Unit Title
- Unit Descriptor
- Pre-requisite units

- Unit application Statement
- Elements
- Performance criteria
- Required skills and knowledge
- Key competencies
- Range statement
- Evidence guide

Malaysian Development of Competency Standards

As mentioned above Malaysian TVET system is controlled by two ministries. These are the:

- iii. Ministry of Human Resources.
- iv. Ministry of Higher Education

With reference to the Malaysian Qualification Framework above, the Ministry of Human Resources is responsible for the *Skills sector* of the TVET system and the Ministry of Higher Education is responsible for the *Vocational and Technical* sector. As the name implies the *Skills* sector training is more “hands-on” and the *Vocational and Technical* sector training is more knowledge-based.

The two ministries act independently and have their own systems of development of learning programs. The Department of Skills Development (DSD), Ministry of Human Resources develops the National Occupation Skill Standards (NOSS), based on the following criteria:

- Industrial consultation.
- Levels – 1,2 ,3 ,4 ,& 5.
- Performance Standards.
- Duties and Tasks.

The NOSS are spread over some 34 major sectors of industry. The following diagram shows the application of NOSS.



Both areas rely on Industry Advisory Committees (IACs) to provide advice on learning program content and industry demand for the range of occupations. The curriculum development is developed by Curriculum Committees from all the sectors.

DISCUSSION

What changes to the existing TVET system in Bangladesh could be made to improve the system based on the fellowship experience.

1. Does Bangladesh TVET require a National Technical & Vocational Qualification Framework?

If so points to consider:

- Number of levels;
- Level descriptors;
- Pathways for the existing qualification framework.

2. What are the requirements of a Quality Assurance (QA) system in TVET for Bangladesh?

Points to consider:

- Course Accreditation.
- Registration of all training providers.
- Assessment of learning programs;
- The role and capacity of BTEB with respect to QA.

3...How can industry best provide input into the TVET learning programs offered in their sectors.

Points to consider:

- Creation of Industry Skills Committers (ISCs) for every sector of industry.
- Each ISC to develop a *Sector Occupational Standards and Qualifications Structure*.
- Relationship of BTEB with the ISCs.
- Relative roles and responsibilities of MOLE, MEWOE and MOE in supporting and working with the ISCs.

RECOMMENDATIONS

National Technical and Vocation Qualification Framework (NTVQF)

The proposed National Technical and Vocation Qualification Framework (NTVQF) to be as shown in the following table.

Proposed Bangladesh TVQF with Job Classifications

TVQF LEVELS	EDUCATION SECTORS			Job Classification
	Pre-Vocation Education	Vocational Education	Technical Education	
TVQF 6			Diploma in engineering or equivalent	Supervisor / Middle Level Manager /Sub Assistant Engr. etc.
TVQF 5		National Skill Certificate 5 (NSC 5)		Highly Skilled Worker / Supervisor
TVQF 4		National Skill Certificate 4 (NSC 4)		Skilled Worker
TVQF 3		National Skill Certificate 3 (NSC3)		Semi-Skilled Worker
TVQF 2		National Skill Certificate 2 (NSC 2)		Basic-Skilled Worker
TVQF 1		National Skill Certificate 1 (NSC 1)		Basic Worker
Pre-Voc 2	National Pre-Vocation Certificate NPVC 2			Pre-Vocation Trainee
Pre-Voc 1	National Pre-Vocation Certificate 1 NPVC 1			Pre-Vocation Trainee

Note: A final version would exclude the pre-vocational sector but it is included to show how the under-privileged section of the community can be included in the framework.

Quality Assurance (QA) system for Bangladesh TVET

It is recommended that a rigorous Quality Assurance (QA) system for TVET be introduced to support the successful implementation of a NVQF.

The QA system will cover all aspects of TVET including:

- Accreditation of training providers.
- Quality manuals and procedures.
- Endorsement of qualifications and units of competence.
- Delivery and assessment plans and materials.

- Assessment instruments and their validation against the units of competence.
- Internal and external auditing of the system for compliance against standards.

QA systems are usually implemented in stages and evolve over time. A sound starting point is to commence with a process driven system. Sri Lanka has adopted ISO 9001:2000 as their QA system for their TVET system. While the ISO 9001 design and development model is usually associated with manufacturing activities, it can be applied to TVET systems and is an excellent starting point. A consultant can develop a Quality Manual and Procedures and train a number of internal auditors to assist in establishing the QA system.

Other countries develop their own QA systems. These are specific to TVET and cover all aspects of the system. Australia when it launched the Australian Qualifications Framework (AQF) also introduced the Australian Qualifications Training Framework (AQTF). Initially it was predominantly *process based* and in 2007 was revised to be more *outcomes based*.

With the current system an AQTF audit, with respect to *delivery and assessment of learning programs*, will follow the pattern of:

*“This is the unit of competence – you assessed this student as competent
– show me how you assessed him/her as competent”.*

An assessment plan and assessment tools, e.g. test and exam papers, assignments, practical tests, will need to be produced. Samples of actual student work plus details of the *validation* of the assessment tools against the unit of competence will need to be produced also. Validation of assessment tools is required at least once a year. The AQTF is a very rigorous system. *Note that the delivery of learning programmes is not important to the auditors.*

The current trend is to have the entire AQTF required documents online so that the staff and internal auditors can access them at any time and are readily available for the external auditors.

Industry Skill Committees

Four Industry Skill Committees (ISCs) were established in February 2009 for four selected sectors to be developed by the TVET Reform Project. It is recommended that all sectors of the Bangladesh industry establish their own as illustrated below. The following discusses the establishment and operation of the four ISCs established under the TVET Reform Project. The four sectors are:

- 1) Food Processing
- 2) Transport
- 3) Leather and Leather Goods
- 4) Information Technology

The ISCs currently have no formal relationship with the NSDC but this will change in time as the NSDC becomes more established.

Terms of Reference:

The following Terms of Reference (TORs) has been developed to guide the initial operation of the committees. Industry Skills Committees will:

- 1) Survey skills development practices in the industry sectors and identify and overcome deficiencies;
- 2) Develop industry skills development policies and practices;
- 3) Develop industry's capability to deliver in the skills training and upgrade their employees in order to improve productivity and enhance the welfare of employees;

- 4) Provide leadership and strategic advice to the TVET system on skills development needs and priorities for those industry sectors covered by the committee;
- 5) Contribute to the development and review of skills standards and qualifications and participate in the development and review of new training curriculum;
- 6) Advocate and facilitate workforce development activities in industry, including industrial apprenticeships;
- 7) Enter into partnerships with the government agencies involved in the TVET provision to advise them on the industry sector demand for skills;
- 8) Develop partnerships with TVET providers and support the development of TVET programs in schools, colleges, industry and enterprises;
- 9) Support the delivery of industry relevant training and/or professional development programs for TVET teachers; and
- 10) Develop sector skills development plans on a regular basis.

Membership:

It is envisaged that committee will involve between 8-12 members, depending on the structure of the industry and the representative bodies that exist in each sector. It is expected that membership will be drawn from individual enterprises, industry associations and union bodies where relevant. Membership of committees will be decided by project staff in consultation with industry representatives. It is envisaged that membership of the committee will initially be for 12 months at which time a review of the committees will be undertaken. Committees will be encouraged to co-opt additional members as they see fit and/or invite key stakeholders to participate in meetings as observers. Government will not be represented on committees. Membership of each Industry Skill Committee will include seats for the Federation of Bangladesh Chambers of Commerce & Industry (FBCCI) and the Bangladesh Employers Federation (BEF) as observers. This will ensure close and ongoing dialogue between committee members and the FBCCI and BEF representatives on the TVET Reform Project Steering Committee.

Selection of Chairperson:

The selection of committee Chairperson and Deputy-Chairperson will occur at the first meeting of each committee. ILO project staff will open the first meeting and call for nominations. A vote will be taken if more than one nomination is received. If the vote is tied, discussions will be held out of session with members to resolve the impasse. The ILO will not vote on the selection of committee Chairperson or Deputy-Chairperson.

Meetings:

It is envisaged that meetings will initially occur every month in the first instance with an ongoing commitment to be determined by the members in consultation with project staff.

Sub-Committees:

It is envisaged that the Industry Skill Committees will establish sub-committees as required. Sub-committees may be established, for example, to review skills standards for technical accuracy or to provide input into new curriculum. Membership of these sub-committees will be determined by the parent committee.

APPENDIX A PROGRAM FOR FELLOWSHIP 2 - 2009

(TVET QUALIFICATIONS, STANDARDS AND CURRICULUM)

Day	Date	Location	Activities	Contact
0	Friday 17 April	Dhaka	<ul style="list-style-type: none"> 21:30 pm Meet at Zia International Airport <p>Flight SQ 435 Depart Dhaka - Zia International 23.55 hrs arrive Singapore International Airport 05:55hrs 18 April.</p>	
1	Saturday 18 April		<p>Flight SQ 219 Depart Singapore International Airport (Changi) 09:25hrs arrive Sydney Kingsford Smith International 18:55hrs</p> <p>Accommodation: Travelodge Hotel, 27 Wentworth St, Sydney Phone 61 88 946 0111</p>	
2	Sunday 19 April	Sydney	Free Day Under own arrangements	
3	Monday 20 April	Sydney	<p>Morning Program:</p> <ul style="list-style-type: none"> NSW Department of Education & Training <p>Venue TBA</p> <p>9.00am – 10.30am Introduction to VET in Australia</p> <p>10.00am – 10.45am Overview of NSW Department of Education & Training</p> <p>10.45am – 11.15am Morning Tea</p> <p>11.15am – 12.00pm Overview of NSW TAFE Commission</p> <p>12.00am – 12.30pm VET in Schools</p> <p>Lunch: own arrangements</p>	<p>Mary Anne Howell Study Group Coordinator NSW DET</p> <p>Email: Maryanne.howson@det.nsw.edu.au</p>

Day	Date	Location	Activities	Contact
			<p>Afternoon Program:</p> <ul style="list-style-type: none"> NSW Department of Education & Training <p>Venue TBA</p> <p>1.30pm – 2.30pm Overview of Industry Training in NSW 2.30pm – 3.30pm Apprenticeships & Traineeships in NSW 3.30pm – 3.45pm Afternoon Tea 3.45pm – 4.45pm Industry Advisory Arrangements (National/NSW)</p> <p>Dinner: Own arrangements</p> <p>Accommodation: Travelodge Hotel, 27 Wentworth St, Sydney</p>	
4	Tuesday 21 April	Sydney	<p>Morning Program:</p> <ul style="list-style-type: none"> NSW Department of Education & Training <p>Level 4, 1 Oxford Street Darlinghurst</p> <p>9.00am – 10.00am NSW Automotive Training Board Deb Joyce, NSW Executive Officer –Training Packages</p> <p>10.00 – 11.00am Manufacturing Industry Skills Council, Bob Paton, CEO Executive Officer – Industry leadership of Training</p> <p>Lunch: Own arrangements</p>	<p>Deborah Joyce Executive Officer Automotive Training Board 8251 0032 0419 436 685 debbiej@atbnsw.com.au</p> <p>Bob Paton, CEO Manufacturing Skills Australia 9955 5500</p>
			<p>Afternoon Program:</p> <ul style="list-style-type: none"> North Sydney Institute of TAFE, Ryde Campus, Ryde College, 250 Blaxland Road, Ryde - <i>Meet at Lobby Café, The Blaxland Hotel</i> 	<p>Estee Ch'ng Business Consultant, NSI International</p>

Day	Date	Location	Activities	Contact
			<p>12.45 Bus to Ryde Campus</p> <p>1.30pm – 2.30pm Boardroom Level 5A</p> <ul style="list-style-type: none"> Welcome by NSI International & Faculty Management Team Janet Elms-Smith, Associate Director for Tourism, Hospitality & Events Management (THEM) - Overview of NSI & THEM Estee Ch'ng, NSI International Business Consultant - NSI International Projects <p>2.30pm – 3.30pm College Tour – Hospitality & Horticulture facilities</p> <p>3.30pm – 4.00pm Afternoon tea hosted by the College, Questions & Answers/ discussion</p> <p>4.30pm – 4.45pm Transfer to Hotel</p> <p>Dinner: Own arrangements</p> <p>Accommodation: Travelodge Hotel, 27 Wentworth St, Sydney</p>	<p>TAFE NSW – Northern Sydney Institute</p> <p>Tel: 02 612 9448 4438 (Ext: 26438) Mob: 0434 565 844</p> <p>http://www.tafestudy.info/international</p>
5	Wednesday 22 April	Sydney	<p>Morning Program:</p> <ul style="list-style-type: none"> NSW Vocational Education & Training Accreditation Board (VETAB) <p>9:30am – 11:30am (Topics and location to be advised)</p> <p>Lunch: Own arrangements</p>	<p>Mary Anne Howell</p> <p>Study Group Coordinator NSW DET</p> <p>Email: Maryanne.howson@det.nsw.edu.au</p> <p>Phone:</p>
			<p>Afternoon Program:</p> <p>1.30pm Bus to TVET Australia - Level 16/201 Miller Street, North Sydney</p>	<p>Julie Northridge Phone: 02 9409 3212</p>

Day	Date	Location	Activities	Contact
			<p>1.30 – 2.30 pm Julie Northridge, Senior Client Relationship Manager National Audit & Registration Agency – Role of TVET Australia and its agencies,</p> <p>2.30pm – 3.30pm Australian Training Products (Videolink presentation)</p> <p>Dinner: Own arrangements</p> <p>Accommodation: Travelodge Hotel, 27 Wentworth St, Sydney</p>	<p>julie.northridge@tvetaustralia.com.au</p> <p>Nigel Raines Nigel.raines@tvetaustralia.com.au (coordinating the ATP presentation)</p>
6	Thursday 23 April	Sydney	<p>Morning Program:</p> <ul style="list-style-type: none"> TAFE NSW Training and Education Support Portfolio <p>9.30 am – 12:30pm Venue to be advised Overview of curriculum development in NSW – topics to be advised</p> <p>Lunch: Own arrangements</p>	
			<p>Afternoon Program:</p> <p>Australian Electrotechnology Industry Skills Centre, 23-27 Marquet Street, Rhodes</p> <p>1.15pm Bus to industry skills centre 2.00pm – 3.30pm Presentation and tour 3.30pm – 4.15pm Transfer by bus to hotel</p> <p>Dinner: Own arrangements</p> <p>Accommodation: Travelodge Hotel, 27 Wentworth St, Sydney</p>	<p>Mike Horne Centre Manager Electroskills</p> <p>9736 1777</p>
7	Friday April 24	Sydney	Morning Program:	

Day	Date	Location	Activities	Contact
			<ul style="list-style-type: none"> Centre for Learning Innovation 51 Wentworth Road, Strathfield <p>8.50am bus to Centre for Learning Innovation 9:30am – 11:30am TAFE Resource Development 11.30 – 12.00 Return bus</p> <p>Lunch: Own arrangements</p>	
			<p>Afternoon Program:</p> <ul style="list-style-type: none"> Academy of Information Technology, Level 1, 841 George Street, Sydney 2.00pm – 3.00pm Edward Keller, Managing Director - presentation and tour of the Academy (a private Registered Training Organisation) <p>Dinner: Own arrangements</p> <p>Accommodation: Travelodge Hotel, Wentworth Street, Sydney</p>	<p>Edward Keller Managing Director</p> <p>Phone: 9211 8399 Email: edward.keller@ait.nsw.edu.au</p>
8	Saturday April 25	Sydney	<p>Free Day:</p> <p>Under own arrangements</p> <p>Accommodation: Travelodge Hotel, 27 Wentworth St, Sydney</p>	
9	Sunday April 26	Sydney/K uala Lumpur	<p>Afternoon Program:</p> <p>Depart Sydney at 14:00hrs on Flight MH122 Arrive Kuala Lumpur 20:30hrs</p>	

Day	Date	Location	Activities	Contact
			Accommodation: Corus Hotel – Kuala Lumpur	
10	Monday April 27	Kuala Lumpur	<p>Morning Programme:</p> <ul style="list-style-type: none"> Ministry of Human Resources, Department of Skills Development (DSD) <p>08.30am – 09.00am Travel to Department of Skills Development (DSD)</p> <p>09.00am – 09.05am Welcoming remarks</p> <p>09.10am – 09.20am Corporate Video of Ministry of Human Resources</p> <p>09.20am – 10.00am Presentation by DSD</p> <p>10.00am – 10.30am Question and Answer Session</p> <p>10.30am – 11.00am Presentation by Human Resource Development Corporation</p> <p>11.00am – 11.30am Question and Answer Session</p> <p>11.30am – 12.00 noon Lunch</p> <p>Lunch: Own arrangements</p>	
			<p>Afternoon Program:</p> <ul style="list-style-type: none"> Visit to ADTEC run by Department of Manpower <p>1.00pm – 2.00pm Travel to ADTEC</p> <p>2.00pm – 3.00pm Overview of ADTEC</p> <p>3.00pm – 3.30pm Afternoon Tea</p> <p>3.30pm – 4.00pm Malaysian Qualifications Framework</p> <p>4.00pm – 4.30pm Malaysian Qualifications Framework Authority</p> <p>Dinner: Own arrangements</p> <p>Accommodation: Corus Hotel – Kuala Lumpur</p>	
11	Tuesday April 28	Kuala Lumpur	Morning Programme:	

Day	Date	Location	Activities	Contact
			<ul style="list-style-type: none"> Visit to CIAST <p>8.30am – 9.30am Travel to CIAST 9.30am – 10.15am Overview 10.15am – 10.30am Discussion 10.30am – 11.00am Morning Tea 11.00am – 12.00am Site Visit</p> <p>Lunch: Own arrangements</p> <p>Hotel Corus – Kuala Lumpur – Meeting Room</p> <p>1.30pm – 2.00pm Fellowship Review 2.00pm – 3.00pm Fellowship presentations Groups 1 & 2 3.00pm – 3.30pm Afternoon Tea 3.30am – 4.00pm Fellowship presentations Groups 3 & 4 4.00pm – 5.00pm Fellowship Reporting Requirements</p> <p>Dinner: Own arrangements</p>	
12	Wednesday April 29	Kuala Lumpur	<p>Morning Programme:</p> <ul style="list-style-type: none"> Ministry of Higher Education (Department of Polytechnic & Community College Education) <p>8.30am – 9.30am Travel to Ministry of Higher Education 9.30am – 10.15am Overview of Ministry of Higher Education 10.15am – 10.30am Discussion on Polytechnic & Community College Education 10.30am – 11.00am Morning Tea Lunch: Own arrangements</p> <p>Afternoon Program:</p> <ul style="list-style-type: none"> Visit to Selayang Community College 	

Day	Date	Location	Activities	Contact
	Thursday April 30		<p>(Address: Persiaran Pegawai. Km 16 Jalan Ipoh, 68100 Batu Caves, Selangor Darul Ehsan)</p> <p>1.30pm – 3.00pm Visit to polytechnic or community college</p> <p>Depart Hotel 19.00hrs</p> <p>Depart Kuala Lumpur at 22:20hrs on Flight MH196.</p> <ul style="list-style-type: none"> • Arrive Dhaka -Zia International Airport 00:10hrs on Thursday 30th April 2009. 	

APPENDIX B LIST OF FELLOWSHIP PARTICIPANTS

DEPT/Ministry	Names of fellowship-2 Participants	Designation	Address
MY&S 1/1	Mr. Gazi Mizanur Rahman	Joint Secretary	Ministry of Youth & Sports, Bldg # 7, Bangladesh Secretariat, Dhaka-1000
DTE2/1	Prof. Md. Fazlul Karim	Director (planing & Development)	Directorate of Technical Education Shikkha Bhaban (3rd floor), Dhaka-1000
MOE 3/1	Mr. Swapan Kumar Ghosh	Deputy Chief-2	Planning Cell Ministry of Education Bldg # 6, 17th Floor Bangladesh Secretariat Dhaka-1000
BMET (MOEWOE) 4/1	Mr. Md. Ahsan Habib	Director (Training)	Bureau of Manpower Employment and Training (BMET) 89/2 Kakrail, Dhaka-1000
BTEB 5/1	Mr. Mohammad Ali	Director (Curriculum)	Bangladesh Technical Education Board (BTEB), Sher-E- Bangla Nagar, Dhaka 1207
BTEB 6/2	Mir. Md. Mosharraf Hossain	Controller of Examination	Bangladesh Technical Education Board (BTEB), Sher-E- Bangla Nagar, Dhaka 1207
BTEB 7/3	Mr. Md. Shahdat Hossain	Curriculum Specialist(VOC)	Bangladesh Technical Education Board (BTEB), Sher-E- Bangla Nagar, Dhaka 1207
BTEB 8/4	MS Nurun Nahar Begum	Deputy Director (Research)	Bangladesh Technical Education Board (BTEB), Sher-E- Bangla Nagar, Dhaka 1207
BTEB 9/5	MS. Kabari Mazumder	Specialist (Research)	Bangladesh Technical Education Board (BTEB), Sher-E- Bangla Nagar, Dhaka 1207
BTEB 10/6	Mr.Md. Nuruzzaman Pramanik	Curriculum Specialist(BM)	Bangladesh Technical Education Board (BTEB), Sher-E- Bangla Nagar, Dhaka 1207
BEF 11/1	Mr. Farooq Ahmed	Secretary	Bangladesh Employers Federation (BEF), Chamber Building,122/124 Motijheel C/A, Dhaka-1000
ILO 12/1	Mr. Md. Wazed Ali	Programme Officer, Component-2	TVET reform Project, ILO Office, Dhaka
ILO 13/2	Mr. Ian Moore	Advisor, Component 2	TVET reform Project, ILO Office, Dhaka

APPENDIX C BACKGROUND ON INSTITUTIONS VISITED

AUSTRALIA

Australia commenced reform of its vocational education and training system (VET) in the early 1990's. At this time, industry, government and unions recognised that changes in the world of work meant that the VET system had to change if it was to support the country's emerging challenges in the increasingly global economy.

Since that time, the Australian TVET system has embarked on a program of continuous improvement which has seen a number of significant changes implemented, including:

- Introduction of competency based training (CBT) and assessment;
- Establishment of industry training advisory bodies;
- Introduction of a national qualifications framework;
- Development of a training market where private and public training organisations compete for funds;
- Expansion of training to a wide range of industry sectors;
- New national quality assurance arrangements for both public and private training providers;
- Strengthening of the apprenticeship and traineeship system;
- Expansion of TVET in schools;
- Professionalisation of the TVET workforce; and
- Greater engagement with industry for the strategic development of the VET sector.

Although these developments have taken over a decade to become established, they have set the basis of a modern training system that is recognised around the world as one of the international leaders in TVET. However, whilst well conceived and designed, TVET in Australia remains challenged by a number of issues including the need to:

- Harmonise systems across the different states and territories;
- Shift from a 'training' mindset to one of workforce development;
- Balance current national and local industry needs with future skill requirements;
- Attract and retain trainers and managers in the TVET workforce; and
- Provide adequate funding.

The organisations to be visited in Australia represent the key elements of the local TVET system, from national to state training authorities, to public and private training providers and to industry organisations closely involved in education and training issues.

TVET Australia

TVET Australia Ltd is a company owned by the members of the Ministerial Council for Vocational and Technical Education (MCVTE). The organisation is governed by a Board of Directors comprising representatives from Commonwealth, State and Territory Governments, industry and unions.

TVET provides secretariat and other services to the National Quality Council and the National Industry Skills Committee. It also manages the National Audit and Registration Agency and TVET Product Services.

National Quality Council

The NQC is a Committee of the Ministerial Council for Vocational and Technical Education (MCVTE), and oversees quality assurance and ensures national

consistency in the application of the Australian Quality Training Framework standards for the audit and registration of training providers. It has specific decision-making powers in relation to the endorsement of Training Packages and other aspects of the quality assurance under the National Skills Framework.

The National Quality Council has a key role in bringing together the major players in the vocational and technical education sector - industry, unions, governments, equity groups and practitioners - to oversee and support the current and future quality of vocational and technical education across Australia. It is also critical to ensuring the successful operation of the National Skills Framework – the system's requirements for quality and national consistency in terms of qualifications and the delivery of training.

The National Industry Skills Committee (NISC)

The National Industry Skills Committee (NISC) is a sub-committee of the Ministerial Council for Vocational and Technical Education (MCVTE). It was established in 2006 to provide high level advice to MCVTE regarding workforce planning and future training priorities in the vocational education and training system.

In addition it engages with the National Senior Officials Committee (NSOC) on issues of relevance to industry and the National Quality Council (NQC) to ensure that industry's views inform the quality assurance arrangements for the national training system. The National Industry Skills Committee (NISC) is responsible for advising the Ministerial Council for Vocational and Technical Education (MCVTE) on matters relating to vocational education and training, including workforce planning, future training priorities and other related issues (Skillling Australia's Workforce Act 2005).

The National Audit and Registration Agency

The National Audit and Registration Agency, provides audit and registration services for Registered Training Organisations (RTOs) that operate in more than one Australian State or Territory. These are known as multi-jurisdictional RTOs.

TVET Australia also has direct responsibility in supporting the implementation of national training policies as determined by the Ministerial Council for Vocational and Technical Education (MCVTE). To this end, TVET contributes, in a meaningful way, to the continuous improvement of the National Training System as well as enhancing Australia's position as a leader in the international training market. The outcomes of TVET Australia's core business operations translate to increased national productivity and international competitiveness.

TVET Australia works with stakeholders to provide industry leadership for, and to improve the quality of, the National Training System. TVET Australia improves the quality of the National Training System by:

- Advising and servicing the National Industry Skills Committee to provide high-level industry advice to the Ministerial Council for Vocational and Technical Education (MCVTE);
- Advising and servicing the National Quality Council to provide high level advice to the MCVTE.

TVET Australia's place in the national training governance framework ensures that its services support the priorities of the Council of Australian Governments (COAG) in delivering on its human capital reform agenda.

In fulfilling its mission, TVET Australia engages widely with all sections of the National Training System including Commonwealth, State and Territory Training Ministers and Government Agencies, Industry Skills Council (ISCs), Registered Training Organisations (RTOs), and peak bodies (employer and employee).

NSW Vocational Education & Training Accreditation Board

VETAB's main functions are:

- to register training organisations;
- to accredit vocational courses;
- to approve persons to provide courses for overseas students; and
- to advise the Minister, liaise with authorities (both in NSW and elsewhere) and investigate and report on matters relating to these registration, accreditation and approval functions.

These responsibilities are outlined in the Vocational Education and Training Act 2005 (the VET Act). The functions of VETAB are supported by staff within the Quality Assurance Services Directorate of the NSW Department of Education and Training. Auditors are employed on a contractual basis to assess individual applications and make site inspections.

Quality assurance of courses and training providers is a crucial element of any TVET system. In Australia, because of its federal system, each state and territory has its own accreditation board. However, they all implement the national standards, known as the Australian Quality Training Framework (AQTF). This framework is managed the National Quality Council. These standards are:

1. The Registered Training Organisation (RTO) provides quality training and assessment across all of its operations
2. The Registered Training Organisation adheres to principles of access and equity and maximises outcomes for its clients.
3. Management systems are responsive to the needs of clients, staff and stakeholders, and the environment in which the Registered Training Organisation operates.

Whilst each of these standards has more detailed requirements not shown here, RTOs are also expected to meet certain conditions of registration pertaining to:

- Governance
- Interactions with the registering body
- Compliance with legislation
- Insurance
- Financial management
- Certification and issuing of qualifications and statements of attainment
- Recognition of qualifications issued by other RTOs
- Accuracy and integrity of marketing
- Transition to Training Packages/expiry of accredited courses.

New South Wales Department of Education and Training

The NSW Department of Education and Training is the main government department in the state of New South Wales (NSW) dealing with TVET and other sectors of education. It acts as both provider and regulator of TVET and other forms of education in NSW.

It aims to deliver high quality, internationally competitive public education and training from early childhood (pre-school), through to the compulsory years of schooling (Kindergarten to Year 10), and senior secondary education leading to the award of the NSW Higher School Certificate (in Years 11 and 12).

It also provides TAFE NSW courses, adult and community education courses, migrant English programs, post-secondary art courses and advice to the NSW Government on higher education. The Department is particularly focused on addressing the training needs of industry and meeting the challenge of skills shortages in certain trades.

It strongly promotes lifelong learning, and aims to provide students with a smooth transition from school to work or further study, and from post-compulsory education and training to work or further study.

The Department is the largest single organisation, public or private, in Australia. With a recurrent budget of \$11.8 billion, the Department is responsible for around one quarter of the State's total budget.

Around 741,000 students are taught by over 50,000 full time teachers in more than 2,200 NSW Government schools - including pre-schools, primary schools, central schools, high schools, colleges and specialist schools.

NSW leads the way in Australia in requiring new teachers to be accredited in terms of professional teaching standards through its Institute of Teachers. It also requires teachers to undertake continuous professional development.

With over 500,000 enrolments, and 10,000 permanent teachers, TAFE NSW is not only Australia's largest training provider, it is also among the largest in the world. TAFE NSW has 10 Institutes delivering a wide range of nationally recognised courses at more than 130 metropolitan and regional campuses.

NSW TAFE Commission

TAFE NSW is Australia's largest training provider, and it is among the largest in the world. The letters 'TAFE' stand for Technical and Further Education, and, for hundreds of thousands of people each year, it also stands for high quality, accessible training.

There are 10 Institutes within TAFE NSW, delivering a wide range of nationally recognised courses at more than 130 metropolitan and regional campuses. Many campuses specialise in study areas aligned with the work skills needs of local industry.

TAFE NSW courses have flexible delivery options, which mean students can design a study schedule to suit their needs. The full-time weekly attendance is between 12 and 30 hours. Part-time study is less than 12 hours per week or less, or in short full-time blocks.

The Open Training and Education Network (OTEN) offers distance education programs to help students to study from away from campus. OTEN courses are delivered by a range of media, such as printed lesson notes, online, satellite broadcasts, videos, audio cassettes and electronic mail.

TAFE NSW and other providers are bound to offer recognition of prior learning (RPL), where skills gained outside the formal education system are reviewed against the learning outcomes of a particular course.

TAFE NSW also runs many courses to help unemployed people get into or return to the workforce. TAFE NSW Aboriginal Coordinators at each campus can assist Aboriginal people and Torres Strait Islanders access and study courses specifically designed for them.

People from a non-English speaking background are welcome, and will find excellent TAFE NSW courses and services such as English language skills development to help them with their studies if they require them.

Teacher consultants are available to assist people with disabilities complete their studies. Most TAFE NSW Institutes have Women's Strategy Officers who can offer advice about the services available to assist women students.

NSW Board of Vocational Education & Training

The Board of Vocational Education and Training was established in 1994 to provide the State Government and the Minister for Education and Training with strategic advice about the NSW vocational education and training system.

The Board, which is appointed by the Minister, oversees policy and planning initiatives and fosters partnerships between key stakeholders in the NSW training system. The Board is a key source of advice to the Minister on state and national vocational education and training priorities.

In addition to its advisory role, the Board's work includes the implementation of a range of projects designed to demonstrate the value of vocational education and training for individuals, industry and communities.

The Board's advice and activities are underpinned by the belief that training and skills development is vital to the growth of a well-balanced and prosperous society. The Board is committed to ensuring that vocational education and training meets the needs of individuals as well as industry, and that the benefits of high-quality training are shared throughout communities. Two key areas where BVET have a major role is in implementation of apprenticeships and traineeships, and monitoring industry advisory arrangements in NSW.

Apprenticeships and Traineeships:

Apprenticeships and Traineeships are jobs that combine work and structured training. Although they vary from one industry to another, apprenticeships and traineeships include:

- paid employment under an appropriate industrial arrangement (for example, an award or enterprise agreement);
- a Training Contract that is signed by both the employer and apprentice or trainee and registered with the NSW Department of Education and Training (DET);
- a qualification, delivered by a Registered Training Organisation, that meets the requirements of a declared apprenticeship or traineeship in NSW and leads to a nationally recognised qualification.

There are more than 100 apprenticeship vocations available in NSW. Apprenticeships generally last four years and cover traditional trade areas such as building and construction, hairdressing, cooking, the automotive industry, engineering and manufacturing.

There are over 600 traineeship vocations introduced to provide employment and training opportunities in a range of areas, including multimedia, information technology, sport and recreation, hospitality, retail and primary industries.

All apprenticeships and traineeships (designated by the Commissioner for Vocational Training under the Apprenticeship and Traineeship Act 2001) are recognised trade vocations and recognised traineeship vocations respectively under the Apprenticeship and Traineeship Act 2001.

Industry Advisory Arrangements:

The NSW Government funds a network of industry training advisory bodies (ITABs), including Industry Skills Councils (ISCs), to provide independent industry advice and support to critical operational areas of the vocational education and training system to facilitate the workforce development agenda in NSW.

The organisations are contracted by the NSW Department of Education and Training and play a pivotal role in:

- the establishment and review of apprenticeship and traineeship pathways to ensure that they reflect the needs of NSW industry;
- advising on the appropriateness of vocational pathways in schools ;
- representing the needs of NSW industry in the continuous improvement process and implementation of the national training packages;
- providing industry expertise in relation to compliance audits of training organisations and the accreditation and review of courses;
- identifying and prioritising industry skills development needs.

In addition they:

- develop training and career information resources;
- provide professional support to Registered Training Organisations, including TAFE NSW;
- advise other government agencies such as the Office of Fair Trading, NSW Police and the Department of Primary Industries;
- provide professional advice on training and workforce development to industry and enterprises;
- promote the benefits and opportunities of vocational education and training to their industries.

The industry bodies funded in NSW complement the national industry skill councils that operate at the national level and are funded by DEEWR. In practice, the state and national industry training bodies work collaboratively together, and in many cases, are part of a formalized network.

North Sydney Institute of TAFE

The Northern Sydney Institute is the TAFE NSW Institute servicing the northern suburbs of Sydney. The institute comprises seven colleges.

- Bradfield Senior College
- Crows Nest College
- Hornsby College
- Meadowbank College
- North Sydney College
- Northern Beaches College
- Ryde College

NSW Automotive Training Board & Transport and Logistics ISC

The Transport and Logistics Industry Skills Council (the Skills Council) is one of 11 national organisations that have a key role in advising government on national industry skill requirements, and providing advice to industry around national workforce planning initiatives, training package development and the national vocational education training system.

The National Training System Governance Arrangements

Skills Councils comprise a critical aspect of the national training system governance arrangements in Australia.

The Skills Council receives funding from the Commonwealth Government and also attracts funding support through other Governments projects, non Government projects and industry sponsorship.

The Skills Council has a responsibility to liaise with a broad range of industry, government and community key stakeholders including, business organisations, industry peak bodies, training organisations, unions, government departments and regulators.

The Skills Council service provision centres on:

- Providing accurate industry intelligence to the vocational education and training sector about current and future skill needs and training requirements
- Supporting the development, implementation and continuous improvement of quality, nationally-recognised training products and services, including industry Training Packages
- Provision of workforce planning services to industry
- Working collaboratively in research and policy projects focusing on the industry skill and labour requirements
- Developing learning and assessment resources to meet targeted industry training needs

The Transport and Logistics sector in Australia

The Transport and Logistics [sector](#) which covers Road Transport, Rail, Warehouse & Storage, Maritime and Aviation in Australia employs an estimated 500,000 individuals directly and over 1 million people in both direct and associated roles. The sector contributes \$90 Billion to the Australian economy annually (14.8% of GDP).

Notwithstanding a number of large national transport organisations the road transport sector is dominated by small to medium sized businesses, 65% with fewer than 100 employees.

In terms of future growth in the sector the Australian Bureau of Transport and Regional Economics (BTRE) anticipate the movement of bulk freight to increase 1.6 times over the next 20 years, interstate bulk freight to double in that time and the number of containers through Australian ports to triple.

Key challenges

Some Key challenges effecting workforce development, training and business growth in the industry include:

- A shrinking local labor pool
- Challenges around employee attraction and retention in some sectors
- An older than average workforce with high numbers set to retire over the next decade
- Increasing pressures on existing transport infrastructure
- Growing demands on freight to movement to meet the needs of the supply chain.

Our industry engagement strategy

A key role for the Skills Council is the ongoing dialogue and communication with Transport and Logistics businesses. In many ways this activity is critical in informing the core activities of the Skills Council including our communication and reporting to Commonwealth on future skill needs. To support this action the Skills Council has created a range of industry advisory (sector) committees. These committees are highly valued by the Skills Council and they provide a significant industry contribution to the national skills agenda.

Manufacturing Industry Skills Council,

This is the national Industry Skills Council that is recognised by the Australian Government and the manufacturing and automotive industries to ensure that the skills needs of enterprises are being met.

Manufacturing Skills Australia (MSA) is addressing the skills needs of over 250,000 manufacturing and other businesses employing over 1.1 million Australians. They are the national Industry Skills Council, owned by industry, that is recognised by the Australian Government to ensure that the skills needs of enterprises are being met.

It is a not-for-profit company limited by guarantee, owned by industry and managed by a board from across industry. They have a range of reference and advisory groups and are constantly seek information on industry workforce development and skills needs. They:

- Provide integrated industry intelligence and advice to Skills Australia, government and enterprises on workforce development and skills needs
- Actively support the development, implementation and continuous improvement of high quality training and workforce development products and services including Training Packages
- Provide independent skills and training advice to enterprises, including matching identified training needs with appropriate training solutions
- Work with enterprises, employment service providers, training providers and government to allocate training places

MSA receives funding from the Australian Government through the Department of Education, Employment and Workplace Relations.

Centre for Learning Innovation (CLI)

The Centre for Learning Innovation (CLI) produces high quality learning resources and provides leadership in the use of technology in education and training.

- CLI is part of the Department of Education and Training, a government agency within the state of New South Wales, Australia.
- CLI brings together existing educational expertise and educational technology infrastructure to form a hub of innovation for both schools and TAFE.
- CLI offers a range of educational services to schools and TAFE Institutes, as well as to external clients. These services revolve around our areas of expertise in teaching and learning design, multimedia development, online publishing, electronic storage and retrieval and the provision of other innovative teaching and learning solutions.

- CLI promotes high standards of quality in the design, development and production of teaching and learning resources by providing examples of best practice. We promote the use and re-use of existing educational resources by teachers and learners, reducing duplication of effort. We encourage teachers to adapt, rework and model these resources for their own contexts. We ensure that resources are accessible and available throughout the Department, via the Teaching and Learning exchange (TaLe).

Australian Electrotechnology Industry Skills Centre (Electro Skills) – NSW Australia

Formerly known as the Electrotech Skills Centre, Electro Skills was established in 1994 to provide quality, accredited training to the electro-technology industry.

Since then more than 5,000 people have studied at the college, completing:

- Electrical Apprenticeship Training
- Telecommunications Traineeships

Industry specific courses in Occupational Health and Safety, Telecommunications and Information Technology

Located at Rhodes in western Sydney, ElectroSkills College is a Registered Training Organisation (RTO) with the Vocational Education Training Advisory Board (VETAB) and the Department of Education and Training.

Our instructors all have a minimum of 12 years experience in the electro-technology/ telecommunications industry and have worked as tradespeople and technical instructors for private organisations and/or government utilities.

Our success stems from the experience of our team, our commitment to training excellence and our ability to customise our courses to meet changing industry requirements.

Facilities

- Air conditioned, multi-purpose training rooms
- Fully networked computer rooms
- Four workshops
- Electrical and telecommunications simulation facilities (replicating real life situations which allow students to master their skills in a “hands-on” way)
- Auditorium (seating up to 300 people)
- Kitchen area and break out rooms

MALAYSIA

Malaysia's real Gross Domestic Product (GDP) in the past 48 years has shown a marked improvement, having grown by an average of 6.5% per annum from 1957 to 2005. This has led to substantial improvements in the people's quality of life. Widespread advances have been made in education, health, infrastructure and industry.

In Malaysia, the Technical and Vocational Education and Training (TVET) system comprises the following key components:

- The Coordinating Body, Department of Skills Development (DSD);
- The National Skills Certification System;
- Training Providers - public institutions and private providers;
- TVET Programmes; and
- Legislation for Training Activities and Funding.

The Department of Polytechnic and Community College Education (DPCCE) under the Ministry of Higher Education Malaysia is an organisation responsible for conceptualising policies and setting the direction for polytechnic and community college education to develop human capital in the technical, commercial and service sectors.

A key funding instrument in Malaysia is The Human Resources Development Fund was established under the Ministry of Human Resources. The HRDF is a pool of funds that comprises Human Resources Development levies collected from employers of the manufacturing and service sectors. The establishment of the HRDF is part of the Government's initiative to encourage the private sector employers in the manufacturing and service sectors to retrain and upgrade the skills of their employees in line with the needs of their business and industrialisation strategy of the country. With effect from January 2005, the HRDF has been extended to include employers from 8 more industries under the services sector. The objectives of the HRDF are to:

- Increase the supply of highly-skilled workers.
- Enhance the knowledge of workers and equip them with up-to-date skills.
- Prevent the skills of workers from becoming obsolete in a changing technological environment.
- Upgrade the quality and productivity of workers.
- Cultivate a training culture amongst employers.
- Maintain and enhance the competitiveness of Malaysian products through skills retraining and
- Accelerate the process of technology transfer.
- Assist in the attainment of the industrialisation objective of the country.

The development of workers and enhancement of human capital has gained much attention over the years mainly because companies have come to realise its importance as a key factor for growth and business success.

Department of Skills Development

The Department of Skills Development, formerly known as The National Vocational Training Council, is one of the agencies under the Human Resource Ministry.

It is responsible for the co-ordination and control of skills training as well as career development in skills training, in line with the implementation of the National Skills Development Act, 652 (2006) on September 1, 2006.

While the mission of DSD is to develop skilled (k-pekerja) and competitive manpower resources, the vision is to be a world class leader in skills development of manpower resources. The Functions of DSD include:

- Assess training requirements,
- Develop, approve and revise the National Skills Standard,
- Implement the national training certification programmes,
- Promote skills training systems,
- Assist and enhance skills proficiency of individuals, and
- Guide learning/research programmes related to skills training.

The Department of Skills Development promises to:

- Develop skilled manpower resources of high quality through the development of National Occupational Skills Standards and achieve a minimum of 90% completion of NOSS development within a period of six (6) months for each NOSS,
- Produce skilled workers to meet the demand from national industries through the accreditation programme of skills training at accredited centres and to achieve a minimum of 90% completion of accreditation processes within three (3) months for each application,
- Process all applications for Attestation and Certification of Training Personnel and National Industrial Experts within 50 days of each completed application received.
- Produce skilled labour that quality through the Malaysian Skill Certification System, promote skill training and career, aiding in enhance the capability individual skill and guide that learning and research skill training to meet DSD requirements and objective aspiration.

Within DSD there are five key divisions:

- National Occupational Skill Standards Division (NOSS);
- Manpower Resource Management Division(KPSM);
- Planning, Research and Development Division (P,P & P);
- Expertise Development Division; and
- Malaysian Occupational Skill Qualification Division (MOSQ).

The National Occupational Skill Standards Division has a number of key sections.

The Standards Development Unit

- Plans and develops National Occupational Skills Standard (NOSS) as a document that determines the skill standard which has to be acquired by a skilled worker for all sectors of industries.
- Develops career paths for skilled and professional manpower resources.
- Plans and provides facilitation services in the development of teaching and learning materials for the requirements of all training institutions.
- Revises NOSS for it to be abreast with current technological developments.

Learning Materials Unit

- Develops Training Manuals and Internship Manuals as learning documents at all DSD Accredited Centres.
- Develops Training Guidelines for each NOSS that has been completed; this is to be used as a training guideline for all DSD Accredited Centres.

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National Occupational Core Curriculum Unit (NOCC)

- Develops NOCC for all fields by coordinating workshops involving the industrial experts and institutional instructors with a view to specify objectives, lesson requirements of institutions as well as workplace requirements.
- Develops Learning & Work Assignment (LWA) as a document for appraisal questionnaire, knowledge assessment criteria, knowledge and skill assessment criteria which will be utilised at institutions and industries by coordinating workshops which involve industrial experts as well as instructors in training institutions.

The MOSQ Division has a number of key sections with different functions.

Accreditation Unit

- Operating the Malaysian Certification System (MOSQ) by monitoring the implementation of skills trainings:
- Arranging for verification visits.
- Ensuring that the quality standard at Accredited Centres are not breached (personnel, equipment and learning materials).
- Updating all information on accreditation system.
- Handling of registration and issuance of certificates by accreditation, tests and Prior Achievements Accreditation (PAA).
- Handling and managing of National Skills Tests for Accredited Centres, including among others:
- Organising the registration of candidates for SKM NDT Tests.
- Organising meetings for NDT Tests Panels.
- Arranging for the appointment of Duty Officers for NDT Tests
- Implementing SKM NDT Tests.
- Organising for the printing and delivery of certificates, wallet card, result slips.
- Provision of advisory and information services as well as carrying out promotional activities on the administration of certification process to applicants, public and private training institutions, industries and the general public.
- Organising Skills Competition at national and international level.

Skills Certificate Unit

- Implementing Certification System by Prior Achievement Accreditation (PAA) for skilled employees, including among others:
- Evaluate and certify skills of foreign workers who have been employed in Malaysia for five years and intend to extend their work permits.
- Managing the appointment of Assessment Officers who are to conduct the evaluation of skills competencies of foreign workers.
- Organising visits for the evaluation of the foreign workers' skill competencies.
- Managing the release of evaluation results and Foreign Workers Skills Certificates.
- Coordinating the process of induction courses for foreign workers abroad.
- Handling of applications for the issuance of Certificate of Eligibility certificates.

Advanced Technology Training Centre (ADTEC)

The Advance Technology Centre Batu Pahat, also known as ADTEC Batu Pahat, has been operating since January 2001 and is among one of the 26 Human Resource Department Training Centre (Institut Latihan Jabatan Tenaga Manusia) ILJTM which funded and operated fully by Human Resource Department under the Ministry of Human Resource, Malaysia. The main objective of ADTEC's founding is to produce a ceaseless skilled workforce majoring on advance technology and to improve the quality of skilled worker in the industrial sector.

ADTEC also providing opportunities for the school leavers to pursue skill training in any major courses as a preparation for them to get a job in engineering and technical fields. Activities such as seminars, exhibition and industrial training program are organized to promote ADTEC to the public.

Within the short period of time, ADTEC Batu Pahat has organized several programs and activities to fulfill the nation needs of a fast, productive, and effective ICT literated service. All workforce of ADTEC Batu Pahat are committed towards training and maximizing human resource usage to help the nation achieving the targets of Vision 2020.

Ministry Centre for Instructor and Advanced Skill Training (CIAST)

The Centre for Instructor & Advanced Skill Training is under the aegis of the Manpower Department, Ministry of Human Resources and has been operational since 1984.

Its establishment was sponsored by the Government of Japan under ASEAN Human Resources Development.

The centre offer courses in Instructor Training, Supervisory Training and Advanced Skill Training for instructors, supervisors and skilled workers from the private and public sectors.

Early in year 1994, the new department "National Instructor Training Program" (NITP) was established. The objective is to prepare skilled and competent instructors for training centres and industries.

Ministry of Higher Education (Department of Polytechnic & Community College Education)

In 1964, the Technical and Vocational Educational Division (TAVED) of the Ministry of Education, Malaysia was established to promote technical and vocational education in the country. Later in October 1995, it was accorded departmental status and was known as the Technical Education Department (TED). Apart from conceptualising policies, the newly-upgraded department also set the direction for technical and vocational education to ensure compliance with the industrialization and modernization programmes of the country. The first polytechnic was established in 1969 and in 2001 the first community college was set up.

In March 2004, the government's quest for a quality delivery system of tertiary education in Malaysia led to the formation of the Ministry of Higher Education (MOHE) which plays an important role in determining the policies and direction of the higher education sector in order to build an excellent and outstanding nation, rich in knowledge, culture and civilization. This new development saw the birth of the Department of Polytechnic and Community College Education (DPCCE).

DPCCE is one of the four departments / sectors under the jurisdiction of MOHE. The other three departments / sectors are the Department of Higher Education, the Management Sector and the Development Sector.

Bringing MOHE a step closer to realizing its aspiration, i.e. to build an excellent and outstanding nation, rich in knowledge, culture and civilization, DPCCE has taken the initiative to review its vision, mission, objectives, strategies and activities.

DPCCE provides education and training at Polytechnics and Community Colleges to fulfill the human capital needs of Malaysia through strategic management, relevant and dynamic curricula, effective training and career development programmes, continuous quality assurance and strong support services based on the National Education Philosophy.

Objectives of Department of Polytechnic and Community College Education

- Produce quality graduates through dynamic and relevant education and training programmes in line with the advancement of technology and the needs of industries.

Provide quality learning environment and resources.

- Provide adequate and competent staff.
- Ensure an efficient and effective management system.
- Increase internationalisation programmes.