

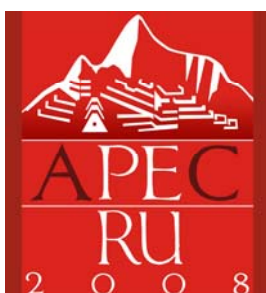


**Asia-Pacific
Economic Cooperation**

2008/AEMM/003

Career and Technical Education/Technical Vocational Education and Training

Purpose: Information
Submitted by: Philippines



**4th APEC Education Ministerial Meeting
Lima, Peru
10-12 June 2008**

CAREER AND TECHNICAL EDUCATION (CTE)/ TECHNICAL VOCATIONAL EDUCATION AND TRAINING (TVET)

“Quality Education for All in the 21st Century”

A. Background

In preparation for the 4th APEC Education Ministerial Meeting to be held in Lima, Peru in June 2008, the education ministries of the People’s Republic of China together with Peru and the United States of America hosted the APEC EDNET Symposium in Xi’an, China on January 15-17, 2008. From the Xi’an Symposium, APEC Member Economies recommended building on the Symposium priority areas and focus on providing students in the APEC region with competencies – knowledge, skills and attitudes – relevant to function in a 21st Century global economy. Career and Technical Education (CTE)/ Technical-Vocational Education and Training (TVET) has been identified as one of the priority areas for the APEC Education Ministerial Meeting (AEMM) with China and the Philippines, as priority leaders.

With the fast growth of the knowledge-based economy, 21st Century employees need relevant competencies to respond to the demands of the workplace. While Career and Technical Education (CTE)/ Technical Vocational Education and Training (TVET) is a new area for EDNET, it is at the very core of the APEC mission. CTE/TVET is beneficial for economic development, especially youth development. High-quality CTE/TVET can help students gain 21st Century competencies, skills and required qualifications in settings that are often highly flexible, affordable and focus on the practical application of what is learned.

CTE/TVET in the 21st Century must recognize the importance of meeting demand-driven private sector workplace requirements. Today’s workplace requires a higher level of content, technical skills, and mastery of 21st Century competencies and skills from all its employees. This is a shift from the past when higher-level skills were for a minority of workers. Quality CTE/TVET program integrate academic and technical skills to meet 21st Century, industry-based occupational standards. However, in many APEC Economies, the public image of CTE/TVET is much lower than the traditional academic sequence. There exists traditional bias on CTE/TVET as being associated to occupations that are dirty, difficult and dangerous (3D’s) and are only for the less academically gifted.

The Policy Survey for CTE/TVET undertaken by China and the Philippines showed that there are very real transition issues as students move from the school to work environment, especially in the areas of 21st Century competencies that an employer values. In addition, students from different Economies enter into CTE/ TVET programs at different ages. The required number of years required to obtain CTE/ also varies among survey respondents.

No matter the economies or the mode of CTE/TVET, training supplemented by real-world application will become more and more vital as the workforce is constantly adapting to new technological innovations and workers transition to multiple jobs over a lifetime.

B. CTE/ TVET Environment

Globalization

Globalization of economies is a major trend that impinges on human resource development. With globalization, the world has become to be one global marketplace. The competitiveness of both nations and enterprises will not be limited to domestic concerns but on international basis. In order to thrive in the global economy, nations of the world will be able to compete by their ability and capacity to provide value-adding interventions in their products, services and processes. The skills and talent of the workforce will be a key factor in this regard. The enterprises must regularly update the skills mix of their workers in order to respond to the opportunities brought about by globalization and rapid technological change. The global workplace scenario would be characterized by steady growth of knowledge and rapid change in science and technology. The resultant effect on HRD would be the rapid obsolescence of knowledge and skills of workers.

Present day realities call for the development of skills that would meet not only the need of today but more so of the future. Significant contributors to this phenomenon are the rapid pace of technological developments and increasing acceptance of the benefits of globalization. In view of these, relevant skills changes occur as it transformed jobs in terms of skill content and organizational structures, including the location of work and the way it is organized. Progress towards a more knowledge-based, service-directed and information-oriented businesses call for a new type of skills training that will enable firms and nations to become more competitive.

Technological Advancement

Advances in technology and telecommunications brought about changes in skills structures demanded by industries. Production processes will be greatly altered on account of technological developments. Industry requirements would focus on workers with the skills and knowledge required of the job. With the proliferation of new industries employing technology-intensive approaches, the need for specialized human resource development (HRD) interventions has become more pronounced.

Changes in skill composition are gearing towards the mental or problem solving type of skills rather than physical. Future skill challenges brought about patterns like shorter life cycles of jobs and faster onset of product and skill obsolescence while breeding greater premium for highly-skilled, specialized and knowledge-based workers.

CTE/TVET plays a crucial role in the development of 21st century workers. With knowledge-based economy, the production of goods and services have become flexible and customized instead of the traditional ways of being mass produced in long production lines. Thus, 21st Century employees need to be equipped with relevant competencies to respond to the demands of the sophisticated workplace. As skills obsolescence will be prevalent in the global arena, the workers of today must be taught of "knowing how to learn" or lifelong learning. They must develop their skills and knowledge as sophistication brought about by rapid technological change is evolving at a rapid pace.

C. Common Concerns in CTE Area

In the Xi'an EDNET Symposium with the theme *“Education to Achieve 21st Century Competencies and Skills for All,”* participants from 12 APEC Economies (Australia, Brunei, China, Hong Kong, Japan, Korea, Mexico, New Zealand, Philippines, Chinese Taipei, Thailand, USA) discussed CTE-related issues relevant to APEC EDNET in a separate breakout session. The most common concerns raised were:

- (1) The portability of skills and qualifications within APEC for mobility
- (2) The involvement of industry in defining competencies, curriculum, and assessment
- (3) The enhancement of curriculum development, teacher training, and public image to elevate the status of CTE/TVET

The following topics were also discussed:

- Establishing a common understanding for the different definitions of the terms CTE and TVET.
- Understanding and acknowledging the different challenges and approaches in economies' CTE/TVET systems.
- Compiling, analyzing, and sharing information about each Economy's education system and methods for comparing and recognizing qualifications.
- Integrating industry (employers, industry groups, service sector, etc.) in:
 - a. Defining the competencies required in the workplace
 - b. Developing curriculum
 - c. Developing assessments

APEC economies stressed the importance of collaboration to advance CTE issues in the APEC region.

D. Priority Areas for CTE/TVET

Based on the issues and concerns raised, the following priority areas and project directions are recommended:

Standards and Assessment

Through the sharing of the competency/ skills standards, workers in the APEC Economies can be trained to achieve higher levels of competencies prevailing in the region. This will facilitate trade, business and investment in APEC and help develop globally competitive workers. Along this line, the following projects/ initiatives shall be pursued:

- Comparability and Benchmarking of Skills and CTE/TVET Qualification frameworks across Economies. Learning about standards and levels of competencies across the APEC region, including effective policies and practices in CTE/TVET will help ensure appropriate workplace preparation and make the workers more competent and globally competitive. This will also elevate the prestige of CTE/TVET training in APEC Economies.

Initially, in order to push the CTE/ TVET agenda, China and the Philippines proposed to collaborate in the implementation of a project in this area. Entitled “Comparability and Benchmarking of Competencies and Qualification Frameworks in APEC Region (Pilot Area: Construction/ Welding), this will be a multi-phased project in response to APEC's call to have

projects that are more strategic, sustainable and longer term.

Teacher Quality and Instruction

In the CTE/TVET Policy Survey, China and the Philippines found out that virtually all Economies (90 percent) place great importance on the pre-service and in-service training of teachers/ trainers. However, issues regarding the quality of CTE/TVET instructors' education and professional development need to be explored more. To address these concerns, the following can be done:

- Identifying effective strategies for improving teacher training programs for CTE/ TVET instructors/ trainers with up-to-date resources and tools.
- Sharing evidenced-based practices for effectively involving employers, industry groups and the service sector in developing curriculum.
- Strengthening CTE/ TVET development of curriculum, especially through means such as on-line training programs available to APEC members.

The ICT revolution brought about paradigm shifts in the area of education and training provision. Today, hall marks of education and training services must not be devoid of computers, Internet and multi-media learning materials. Concepts of distance education, e-learning, virtual schools, on-line learning never heard of before became global by-word. Of course, this trend tends to widen the gap between developed and developing countries as this would entail huge capital investment.

ICT could be used for more innovative and/or efficient pedagogy, especially in the teaching of science and technology courses. Education and training providers must veer away from the traditional chalkboard, structured instructional learning methodologies into IT-based modes of instruction. With technology, there will evolve the new role of teachers and trainers. Today's teachers would necessitate striking a right balance between the traditional roles of delivering structured, content-based lessons and the emerging role of facilitator to encourage open, independent learning. This became extremely important with the growing acceptability of distance education, open universities and on-line education.

Policies and Research

Based on the CTE/TVET Policy Survey results, China and the Philippines presented recommendations on future research topics, including comparative analyses of curriculum standards, CTE/TVET policy, and encouraging women to engage in non-traditional career paths. It is also suggested to conduct a forum to share information on meeting market demands, industry involvement in curriculum reform, and teacher training. Overall, the CTE/TVET Subgroup expressed the importance of collaborating on CTE/ TVET issues in the APEC region. These can be done through:

- **Sharing good practices on involving employers, industry groups, and the service sector in drafting policy** related to competencies, curriculum, and assessments.
- **Undertaking analyses in one or more vocational sectors that compare CTE/TVET skills and qualifications** in order to create common benchmarks in the sectors.

Resources and Tools

As a new area for EDNET, the need for sharing information and leveraging existing CTE/TVET resources and tools in the APEC region was recognized. There is a need to identify existing resources and tools by utilizing the HRDWG wiki to create linkages with other APEC fora.

In the CTE/ TVET area, the recommended project activities should comprise the above framework.

The above lays out for APEC Education Ministers an action agenda in the CTE/TVET EDNET priority area over the next two to four years for their discussion and approval.

E. Conclusion

In the CTE/TVET area, the recommended project activities described above comprise the action agenda in the next two (2) to four (4) years. This is for consideration of the APEC Education Ministers in the Peru meeting.

Career and Technical Education (CTE)/ Technical Vocational Education and Training (TVET)

Project Directions and Recommendations

APEC Education Ministerial Meeting
Lima, Peru
June 10-12, 2008



Milestone Events

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**APEC EDNET Symposium
Xi'an, China
January 2008**

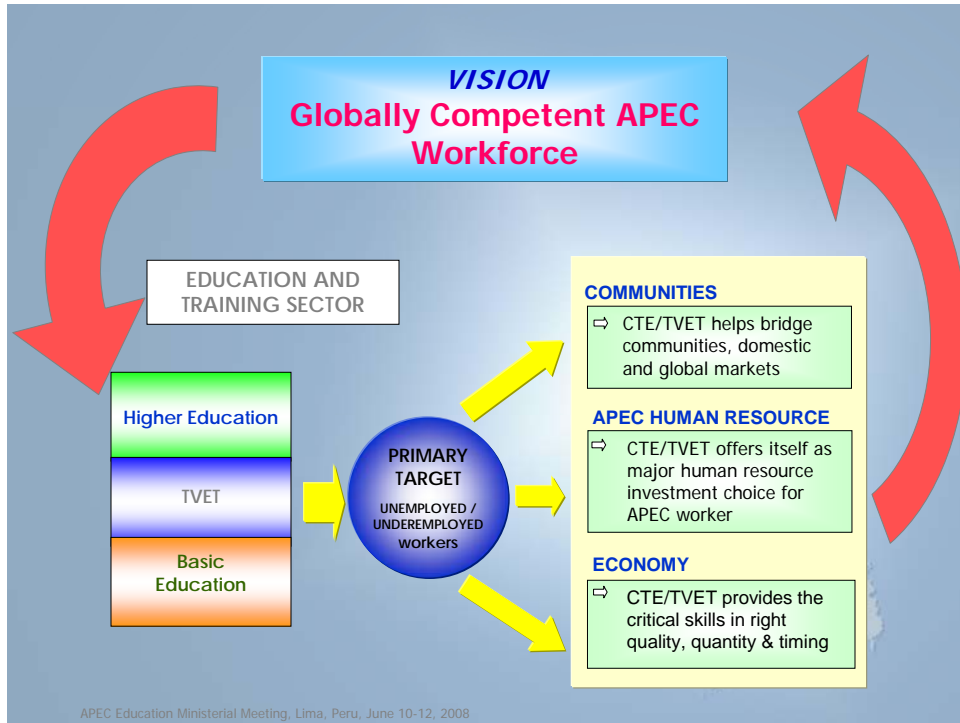


**30th APEC HRDWG Meeting
Bohol, Philippines
April 2008**

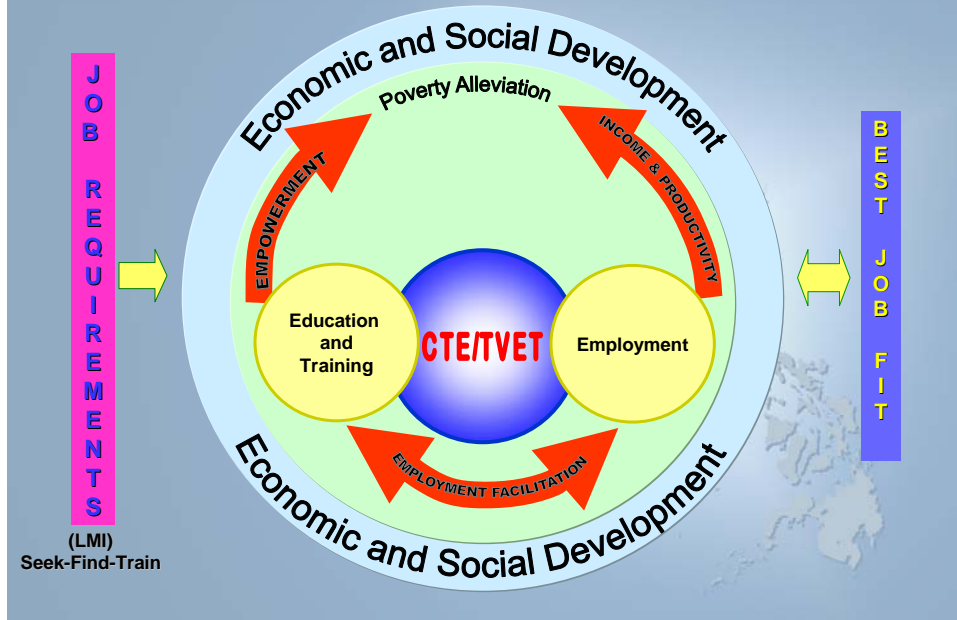


**4th APEC Education
Ministerial Meeting
Lima, Peru
June 2008**

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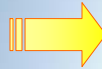


The Role of CTE/TVET in Education and Employment



Common Concerns

- Portability of skills and qualifications within APEC
- Involvement of Industry in defining competencies, curriculum and assessment
- Enhancement of curriculum development, teacher training and public image to elevate the status of CTE/TVET



Priority Areas

- Standards and Assessment
- Teacher/Trainer Quality and Instruction
- Policies and Research
- Resources and Tools

Thank you!

Mabuhay!

APEC Education Ministerial Meeting, Lima, Peru, June 10-12, 2008