

Recommendations to AEMM

1. 21st Century Competencies and Skills

The main theme of the II Pre Ministerial Symposium “Education to Achieve 21st Century Competencies and Skills for All: Respecting the Past to move towards the Future” was “21st Century Competencies and Skills”.

A broad consensus is emerging from research and development about exactly what this competencies and skills comprise and which are more critical more employment, for social cohesion, for human development:

- Learn to Know
- Learn to Be
- Learn to Learn
- Learn to Live Together

It was also agreed that their development needs to take place in the context of content areas rather than as a discreet activity. It is important in the four theme areas being considered in the program for the contribution that each content area makes to the development of the competencies to be explicit. Competencies constitute the high level outcomes of education; they are imbedded in specific areas. So they must be included in content, curriculum, teacher development and assessment otherwise they risk being overlooked.

2. Math and Science

- Standards

Analyze Math/Science standards. Compare how standards incorporate skill levels and specify topics and sequences. (Economies' review analyses to ensure accuracy by using Wiki).

- Assessments

Develop bank of test Items. items should be identified by difficulty level and grade. In the future, compile full assessments for each Economy. Share innovative assessment practices and measures of their effectiveness.

- Instruction

Strengthen Math/Science instruction. Examine how to improve math-science connections through synthesis of research, discussion of practice and APEC conference. Evaluate different Math/Science instructional approaches (e.g. parallel, sequential, integrated) by documenting use of these different approaches and compare advantages and difficulties.

- Teachers

Strengthen teacher professional development. Encourage the expanded use of the lesson-study approach/method through on-line demonstrations and videos. Lessons should illustrate well-researched teacher practices and how the lesson study process can further improve teacher practice. (Draw on existing lesson study videos where already available (TIMSS)).

Launch multiyear collaborative work in online professional development drawing on existing experience. Explore how APEC can be a venue for external researchers to approach APEC to facilitate non-APEC support including studying teacher development

- Policies

Use evidence-based policies. Survey economies on the availability and use of evidence to support and guide policy changes in math and science.

- Wiki

Strengthen Math/Science education using Wiki technology as a tool for on-going APEC international collaboration and debate.

3. Learning of English & Other Languages

Learning of English and other languages is the key to enabling young people to develop the communicative and intercultural competencies and skills needed to participate effectively in the 21st century. Chinese Taipei and Chile have been the leaders in learning of English and other languages since 2004, focusing on standards and assessment and establishing a strong evidence base for future work. It is important to continue to work on these areas. However, in developing 21st century competencies and skills for all, key priority should be given to building teacher capacity as emphasized by ICT & Systemic Reform priority area.

Action Plans

1. Standards & Assessment

Year 1: Conduct a suitability study of Common European Framework of Reference (CEFR) & ACTFL Standards and develop & draft a framework for APEC

Year 2: Work with teachers, specialists groups in each economy to confirm suitability and pilot APEC standards framework in different economies

Year 3: Collect language samples and begin to build text, oral, audio, video samples from different contexts, levels, languages, etc. to exemplify the APEC framework

Year 4: Use the framework to begin development of assessment items (principles and tools for assessment items) and begin piloting assessments

2. Teacher Capacity Building (Lesson Study)

Year 1: Develop guidelines for what constitutes best practice in language instruction and how to collect samples to exemplify such practice, and workshop

Year 2 – 3: Collect annotate, & disseminate video samples

Year 4: Integrate with the APEC standard framework development

3. Language Policy Research

Conduct a survey on the policy status regarding multilingualism and multiculturalism in APEC economies

4. SUMMARY OF THE CVET/TVET GROUP MEETING AND RECOMMENDATIONS

On the 16th of January, 2008, during the Xi'an EDNET Symposium, "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 chaired by Dou XianJin of China. The principle themes of discussion included:

- Different definitions of CTE/TVET
- The need to respect each member Economies' respective CTE/TVET system and challenges they face
- Economy qualifications frameworks as a basis for comparability and mutual recognition of qualifications
- Involvement of industry (employers, industry groups, service sector, etc.) in:
 1. Defining the competencies required in the workplace
 2. Developing curriculum
 3. Assessment of CTE students

Each Economy representative expressed major concerns to their respective Economies. The most common concerns 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

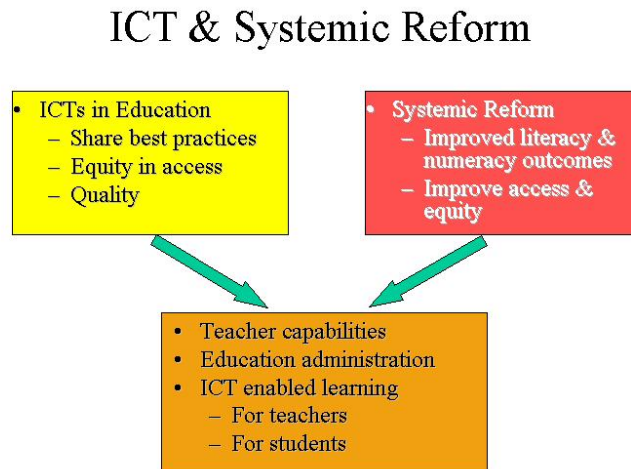
The group expressed the importance of collaborating on CTE issues in the APEC region. With the fast growth of the knowledge-based economy, 21st Century employees need relevant competencies and skills to respond to demands of the workplace. Quality CTE can prepare students with these competencies, skills, and required qualifications. CTE is beneficial for economic development, especially youth development.

As a first step in collaboration, the group recommended analyses in the area of tourism and hospitality that compare CTE skills and qualifications in order to create common benchmarks in the area. The group expressed much interest in this area because it was common to both developed and developing Economies and creates linkages between other APEC for a (Tourism WG).

5. From ICT and Systemic reforms group

Delegates from APEC economies put forward critical issues facing their education systems. All economies consider there would be benefit in sharing approaches to the challenges of attracting and retaining sufficient high quality teachers, and ensuring that teacher training and ongoing education improves outcomes for all students. Delegates recognized the prospects of a global shortage of qualified teachers over the next decade or two related to the shifts in labour market demands and opportunities, and demographics.

Second, all economies share the challenges of ensuring that the opportunities available through a quality education are extended to all members of their society, including those disadvantaged for reasons of geography, economics and social factors. All economies face the issue of reducing the digital chasm within and between economies.



Delegates recommended action research and program development and evaluation, to build on and share effective practices. These include:

- innovative approaches to teacher recruitment and development, including in the use of ICT;
- teacher exchanges among economies;
- incentives such as scholarships;
- career flexibility encompassing career switching, part-time teaching by professionals in specialist areas;
- open access approaches (e.g. *creative commons*) for resource sharing to address intellectual property rights issues; and
- development of self sustaining mechanisms for ICT implementation, e.g. hardware maintenance & avoiding obsolescence