

# OVERVIEW OF 21ST CENTURY COMPETENCIES AND SKILLS

## POLICY ANALYSIS

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### 1. INTRODUCTION

The 3<sup>rd</sup> APEC Education Ministerial Meeting “Skills for the Coming Challenges”, held in Chile four years ago, was an opportunity for Education Ministers from APEC economies to agree on four priority areas of development: Math and Science, Foreign Language Learning, ICT, and Systemic Reform.

Considering the previous work done, the co-leads and organizers of the II Pre Ministerial Symposium proposed the development of competencies and skills for the 21<sup>st</sup> Century as an overarching theme that includes the sub-themes mentioned before.

The following report is the compilation and analysis of the answers to the competencies survey presented by several APEC economies to Peru.

### 2. WHAT DO WE MEAN BY COMPETENCIES?

We live in a globalized world. Acknowledge of this, means accepting that we must adapt and prepare ourselves as best we can; so we need to redefine and make changes to meet the new demands of the 21st Century.

In education, this has generated a radical turn within classroom and school pedagogical processes. The core knowledge and competencies that support self learning and life-long learning have now a fundamental role in the student’s learning process.

Many new educational proposals suggest the need of rethinking education, so that students grow up to be good citizens, capable of living together in a democratic, inclusive and pluricultural society within a complex and changing social environment.

In 1996, The report entitled “Learning: the treasure within” presented to UNESCO by the Commission on Education for the 21<sup>st</sup> Century, lead by Jacques Delors, stated the need of learning the four education pillars or core knowledge: LEARNING TO DO; LEARNING TO KNOW; LEARNING TO BE; AND LEARNING TO LIVE TOGETHER.

A competency based education teaches students to develop the knowledge, skills and attitudes that allow them to solve daily problems; to keep learning

through out life; to be an ethically responsible person; and to respect and be able to work with others, as demanded by globalized world. It is a means of aiding in the personal development of students that will eventually prepare them for the challenges society and work sets before them.

### **3. THE SURVEY**

The survey was prepared by the Peruvian Ministry of Education, with the help of experts from U.S.A and New Zealand, to discover if APEC economies have:

- Identified a group of 21<sup>st</sup> century competencies their students must develop and
- Begun to make or actually made changes in their educational systems to incorporate these competencies in the teaching and learning

We believe that although we share problems, proposals and goals, it is not our place to tell other economies “this is what you have to do”. We appreciate and believe in the respect every economy’s process deserves in connection to its own educational system development. Nevertheless, we also believe in the importance of sharing experiences and the possibility of learning from one another.

### **4. SURVEY RESULTS**

We have received answers to the survey from 10 economies in total: China, Chinese Taipei, Hong Kong, Australia, New Zealand, Japan, Brunei Darussalam, U.S.A, Thailand and Peru.

We considered that a qualitative analysis of the answers would give us a more detailed and precise picture of how APEC economies are developing competencies in their educational systems.

Main results:

- Concerning the concept of “Competencies”, we did not find a consensus regarding the terms used. However, all the economies that answered the survey recognized the importance of promoting the development of knowledge, skills and attitudes/values through education in its different levels. This means that, regardless of the terms used, there is a consensus on the need to go beyond the teaching / learning approach, which is solely based on knowledge acquisition.
- Some economies use the “competencies” concept only for career and technical education. In this case this concept is associated to the development of skills for professional development in a specific area.

Nevertheless, their basic education programs also consider the development of knowledge, skills and attitudes.

- Concerning which competencies are considered as key for the 21st Century, we have cross checked the information taking as a reference the answers to questions 1.1 (concept of competencies in each economy); 1.3 (priority competencies in each education system) and 1.8 (what competencies does your economy consider vital...). We found the following coincidences:
  - a) **Life long learning:** in general the idea of life long learning is present in every survey, as one of the key competencies or as a part of the concept of “competencies” itself.  
This reveals that economies in general acknowledge the changing nature of our times and as a consequence, the need for developing skills for life through self learning. The idea of life long learning aligns with an education for a time of changes, and comprises the development of strategies for learning how to learn and the development of the will to learn (Japan, Australia). At the same time, it implies the skill to find in every life situation an opportunity for learning.
  - b) **Problem solving:** this competency is based on the “education for life” approach: to prepare students to react to diverse and concrete situations. It implies the development of skills such as creativity, initiative, critical thinking and decision making.
  - c) **Self management:** this competency refers to the development of the student as an independent and self directive person. It involves the development of critical, reflective and independent thinking, as well as decision making skills and self directed learning.
  - d) **Team work:** concurrently to the development of skills for autonomous thinking and learning, the economies that answer the survey acknowledge the need to develop capacities for team work. Within this item we have placed communication skills, self confidence, sharing information, as well as tolerant and democratic attitudes, among others that allow team work and living together in general.
- All these competencies relate to one another and reflect, in a general manner, what each economy’s education system consider as a must to be developed through education, without considering thematic areas. These are the competencies that must be developed in a transversal way from each thematic area.
- We shall mention some singularities that arouse our interest while revising the surveys. Within these, the idea of “zest for living” that Japan manages as a concept that includes those characteristics education must cultivate in

children. At the same time, some economies emphasize specific values and attitudes in defining key competencies and learning outcomes; for example, Peru mentions the development of attitudes for solidarity; Taipei highlights patriotism, respect for others and for different cultures. It also called our attention Brunei Darussalam's mention of physical skills, which is a key capacity for the overall development of a person, but not considered, or at least not explicitly mentioned by the other economies.

- Concerning specific competencies within the thematic areas established as priority by APEC economies, we found the following coincidences:
  - a) Math: competencies and skills related to problem solving, development of abstract thinking and decision making.
  - b) Science: following the framework presented by Brunei Darussalam, science teaching comprises: scientific knowledge and concepts within the different disciplines or areas (physics, chemistry, natural sciences, etc.); science process skills, like investigation skills; and science attitudes and values, like curiosity, environmental awareness, "concern for living things", among others.
  - c) Language learning: communication skills, like listening, speaking, reading and writing.
  - d) CTE (Technical education): in general, employability, entrepreneurship, teamwork and life long learning skills but in most cases, competencies depend on each specific career.
  - e) Information and communication Technologies (ICT): using technologies as a tool for communication, and life long learning.
  
- About the methodologies that contribute to interdisciplinary work, we found: carrying out projects, research activities, and activities within the community. These activities complement the curricular areas and, generally, help to establish a connection between learning and real life.
  
- About evaluation systems, there are different realities in each economy. Some of them have standardized evaluations, but no indicators for evaluation have been established to measure the level of development of competencies on students. We believe this is a critical issue to evaluate and measure the efficiency of each education system.

## **5. REFLECTIONS**

Finally, before concluding, we would like to leave the competencies theme for discussion to enrich it with the experiences(case study) that follow. We would also share some reflections that this theme and the analysis of each economy's survey have brought to us and we would like them to be taken into account throughout this Symposium.

As we mentioned at the beginning, a competency based education aims at giving a person the tools necessary to succeed in all aspects of life, not only the professional aspect; and we have to be careful with our ideas of success, because each child could be successful in its own way.

- Before pretending to establish standards or models of development, we believe in the need of protecting diversity as one of the main **resources** in global world. Diversity means we can learn from other people and widens our own horizons, through intercultural dialogue and the development of abilities for living together in democracy and peace. Although it has not been mentioned, in most surveys, I believe that this is a point that should be taken into account in the education of future generations.
- Before the new demands of education, Teacher training is crucial to reach the expected outcomes mentioned before. They must be ready to face the demands of education in a globalized world, they must be ready to propose innovations.