

7. Summary Conclusions

Back to the first page of this guideline, *it would be idealistic situations students in schools or universities are educated about the fundamentals and implications of standards and conformance, and start their career in government, businesses, standards and conformance related organizations or research institutions.*

We put forward that standards and conformance be incorporated into education to make students 'be ready to work', and the objective of this guideline is to provide a handbook to support you in developing policy and in planning or implementing education programs about standards and conformance via case studies and presenting strategic curriculum model.

The case study of how to set up strategy, in chapter 3, shows following facts:

- Majority of APEC members have reflected the importance of standards education in their national strategy. The strategy of Japan, Korea, Vietnam and USA can be considered as good practice
- However, More in-depth with specific action plans and wide-ranging strategies with formal education need to be considered.
- APEC Economies give priority to Undergraduate Education in formal education, to Government official and committee members in professional education.
- Organizing a committee for standards education will be Useful.

The case study of how to plan and operate education programs, based on analysis of 118 cases worldwide in Chapter 4, briefs you that:

- International organizations have been more and more paying attention to higher education, and trying to reach out universities and academia. It is worthwhile to recognize that ICES, the first international forum on standardization education is now discussing formalization.
- In primary/secondary education, leadership by government or national standards bodies is call for to initiate education programs
- In primary/secondary education, most reasonable approach will be developing modules or chapter to be part of formal education curriculum in primary/secondary education. The case of Annex C #7 Turkey, #6 Thailand, #3 Philippines, and #8-10 UK can be considered as good practices.
- In under undergraduate level of higher education, The case of #12 China Jiliang University(most intensive), #27 KSA UEPS program (most expanded), and #28 RSM Erasmus University can be considered as good practices.
- In under graduate level of higher education, Noteworthy enough is that six graduate courses (F4) - the cases of #25 Tokyo Univ, #29 RSM Erasmus, #34 Catholic, #20/21 ZFIB, #24 JSA and #30 Moratuwa – are targeting for similar spectrum of students in engineering, MOT or MBA, and the contents of those are more focusing on how standards function as strategic management tool. With the interdisciplinary characteristics, at graduate level, standards education seems to be fitting well as part of MOT or MBA curriculum.
- In professional education, majority of the professional education programs are designed to build particular capacity or skills. Based on the 65 practices a classification of skill-set is presented.

The case study, in Chapter 5, also analyzed lessons learned from survey as follows:

- Clear Objectives and Target Oriented Programs are key to success
- Try to Make Teaching Materials Sexy.
- 'Daily Life Examples or Case Studies' are preferred by all levels of student
- Exciting is 'Learning by Doing' – recommending of hands-on learning
- Teacher's Training and Networking is important
- Leadership and Collaboration needed particularly

Finally, a Strategic Curriculum Model is proposed in Chapter 6 as follows.

- Consolidating all of the preceding discussions about who, why, what, and how, we are able to categorize the contents for standards and conformance into following six modules. The six modules could be grouped into three domains.
<Module 1> Example standards in daily life related contents
<Module 2> Factual or Fundamental information related contents.
<Module 3> Academic/ Theoretical aspects related contents,
<Module 4> Case Study of standardization related contents.
<Module 5> Skill-set related contents
<Module 6> (How to use) Specific Standards related contents
- First, Common Core Domain includes two centrally located modules: <Module 1> Example standards in daily life related contents and <Module 2> Factual or Fundamental information related contents. We place these two modules in central part of the map as they are common core contents and are considered part of any level of educations.
- Second, Higher- Education Oriented Domain includes two left located modules: <Module 3> Academic/ Theoretical aspects of standards and conformance related contents, and <Module 4> Case Study of standardization related contents. We place these two modules in left part of the map, as they are commonly found in the courses in higher education, universities. However, you always have freedom to use these higher education oriented modules in professional education, either to meet specific objectives or to increase variety of an education program.
- Third, Professional Education Oriented Domain includes two right located modules: <Module 5> Skill-set related contents, and <Module 6> (How to use) Specific Standards related contents. We place those two modules in right part of the map, as they are commonly found in the course in professional education. However, you always have freedom to use these higher education oriented modules in professional education, either to meet specific objectives or to increase variety of an education program.
- In the end with chapter 6.5, Strategic Curriculum Model Abridged for Standards and Conformance Education is presented; the abridged model is composed of the major factors who, why, where, what and how in planning and operating education programs.

We hope this guideline function as foundation stone, getting close to the idealistic situation that all the students are educated about the importance of standards and conformance in schools and universities and 'be ready to work' in their career when they face relevant challenges and ultimately strengthening the overall competitiveness in trade and investment of APEC member economies.