

Computational and Statistical Thinking for Thailand junior high school curriculum

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In 2017 government of Thailand issues “Thailand 4.0”, which is the fourth Industrial Revolution of Thailand, as the national agenda to drive Thailand out of the “middle-income” trap country. To response this national agenda, the Basic Education Core Curriculum of Thailand is revised in 2017 by integrating STEM (Science Technical Engineering and Mathematics) education across the whole spectrum of core curriculum and Computational thinking only for Junior and Senior High School core curriculum.

The main concept of STEM education in Thailand is pedagogy approach applying the expected STEM competences with any practical knowledge of all eight subjects (1.Thai language, 2. Mathematics, 3.Science, 4.Social Studies, Religion, and Culture, 5. Health and Physical Education, 6.Art, 7.Occupation and Technology, and 8.Foreign Languages) to solve daily life problems. Systematic thinking through Engineering design process is also embedded in all project. This is a uniqueness of the Thailand STEM education.

To make the new policies worked the ecosystem ready for STEM Education must be prepared ahead of time. The STEM Education Network composes of the National STEM Education Centre and 13-Regional STEM Education Centers were established since 2014. The mandate of this network is to encourage and train the integrated learning activities. The STEM Education Network is also be a liaison linking schools with public and private organization and personnel since the daily life problems are the key issue for learners to transform their STEM knowledge.

Besides the STEM education, the Computational thinking is also integrated in Junior and Senior High School core curriculum as part of learning standards. The principle of Computational Thinking core curriculum in Thailand is more a process of thinking and how to apply the concepts of computational thinking and ICT to solve problem through programing. Starting from G7, students have to design algorithm to solve simple Mathematics and Scientific problems and then the more complicated real life problems will be assigned to students when they are in G8 and G9.