Curriculum Development in Mathematics Education in Japan: A Historical Perspective

Shizumi SHIMUZU

Teikyo University, Japan

Japan's rehabilitation and development after World War II can be considered as the fruit of the collaboration of the Ministry of Education, educational administration, and school teachers. Japanese national curriculum standard has been revised almost every 10 years.

School education up to the 1970s was characterized by emphasis on each subject's nature and quantitative increase in the contents and school hours. After the economical development, focus shifted to the qualitative improvement of education in the 1980s. This trend continued with education focusing on the willingness to study in the 1990s, and the education aimed to the zest for living in the 2000s. Especially in the 2000s, the number of lessons for oompulsory school mathematics has been reduced by about 15% (approx. 200 hours), and curriculum contents have been reduced by about 30%.

Decline in academic standards was a concern with the great quantitative reduction. In the OECD-PISA assessments in mathematical literacy, the top position within the OECD in 2000 is a result of the previous curriculum. In 2003 and 2006, Japan's position dropped to 4th and 6th, respectively, as a result of the current curriculum.

Under such circumstances, the curriculum standard was revised, and new curriculums were announced in 2008. The new curriculums, besides increasing the number of lessons by approx. 200 hours, aim at education through inquiry by focusing on mathematical activities (creating mathematics, using mathematics in daily context, communicating and sophisticating with mathematical representations) that stimulate students to learn for themselves.

This lecture gives an explanation of the curriculum development in Japan with its context, especially from a historical perspective. The challenge on the new curriculum standard of Japan, which emphasizes mathematical activities, will be also addressed.