

# **A Comparative Analysis of the Content Elements of the National Curriculum for Elementary Technology Education in South Korea**

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## **Abstract**

The new technology curriculum was revised and published in December 2022. The design of the technology curriculum was organized according to the curriculum revision directions of "learning in connection with life" and "reflection on the learning process. The content areas of the elementary technology curriculum include technological problem solving and innovation, sustainable technology and convergence, and digital society and artificial intelligence. The purpose of this study is to compare and analyze how the content elements of an elementary school technology curriculum organized according to the principles of curriculum design were organized before and after its revision. The content of elementary technology education before and after the curriculum revision was analyzed in terms of retention, transformation, shifting, reduction/deletion, and creation.

The conclusions based on the analysis results in the technology area of the elementary school national curriculum are as follows. First, the unit with the largest reduction and deletion in the revised curriculum was information and communication technology. Second, the new contents in terms of connecting technology education at primary and secondary levels were construction technology and artificial intelligence. Third, in the Invention and Intellectual Property Unit, the concept of invention thinking techniques and patents was transformed and newly established from existing inventions and problem solving. Fourth, the robot unit was changed to emphasize robot convergence technology. Fifth, in the transportation technology unit, selection and concentration were focused on the means of transportation in the existing transportation technology and means of transportation. Sixth, a unit of construction technology was newly established to strengthen the connection between elementary and middle schools. Seventh, a unit of construction technology was newly established to strengthen the connection between elementary and middle schools. Eighth, in the information and communication unit, the content was reduced and changed from existing software to digital technology. Lastly, the artificial intelligence topic was newly established to strengthen the connection between elementary and middle schools.

**Keywords:** Design and technology curriculum; Technology curriculum; Elementary school technology