

6. Tracking Survey on Changing Perceptions and Attitudes to Science and Mathematics among Schoolchildren

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(1) Purpose and Aim of Study

This is an ongoing study that tracks the impact of curricular changes and social conditions on schoolchildren's academic performance and attitudes—important considerations when planning amendments to the Courses of Study. It has been conducted since fiscal 1989. It involves surveys of current students and graduates of public elementary, lower secondary, and upper secondary schools in five regions of Japan. Second-year upper secondary school students were surveyed in fiscal 2006, and second-year lower secondary school students in fiscal 2007.

(2) Outline of Research Results

- The survey of second-year upper secondary school students revealed the following outcomes when compared with surveys conducted in the same eight schools in fiscal 1995. The percentage of correct responses to questions on science was 55%, the same in the fiscal 1995 survey. Correct response rates differed by 5% or more from fiscal 1995 in six out of a total of 20 science questions; the rates were higher in two of these questions, and lower in the four others. For mathematics questions, the correct response rate was 62%, the same as in the fiscal 1995 survey. Correct response rates differed by 5% or more from fiscal 1995 in four out of a total of 20 mathematics questions; the rates were higher in two of these questions, and lower in the other two.
- The survey of second-year lower secondary school students revealed the following outcomes from science and mathematics questions, when compared with surveys conducted in 14 schools in the same region in fiscal 1992 and fiscal 2003. The correct response rate to science questions was 59% in fiscal 1992, 53% in fiscal 2003, and 53% this time. Correct response rates differed by 5% or more from fiscal 2003 in two out of a total of 20 science questions; the rate was higher in one of these questions and lower in the other. The correct response rate to mathematics questions was 57% in fiscal 1992, 54% in fiscal 2003, and 55% this time. Correct response rates differed by 5% or

more from fiscal 2003 in three out of a total of 20 mathematics questions; the rates were higher in two of these questions and lower in the other one.