

Institutional arrangements and students' behaviors:

A comparative analysis between the United States and Japan

Ryoji Matsuoka, Survey Research Center, Project Researcher

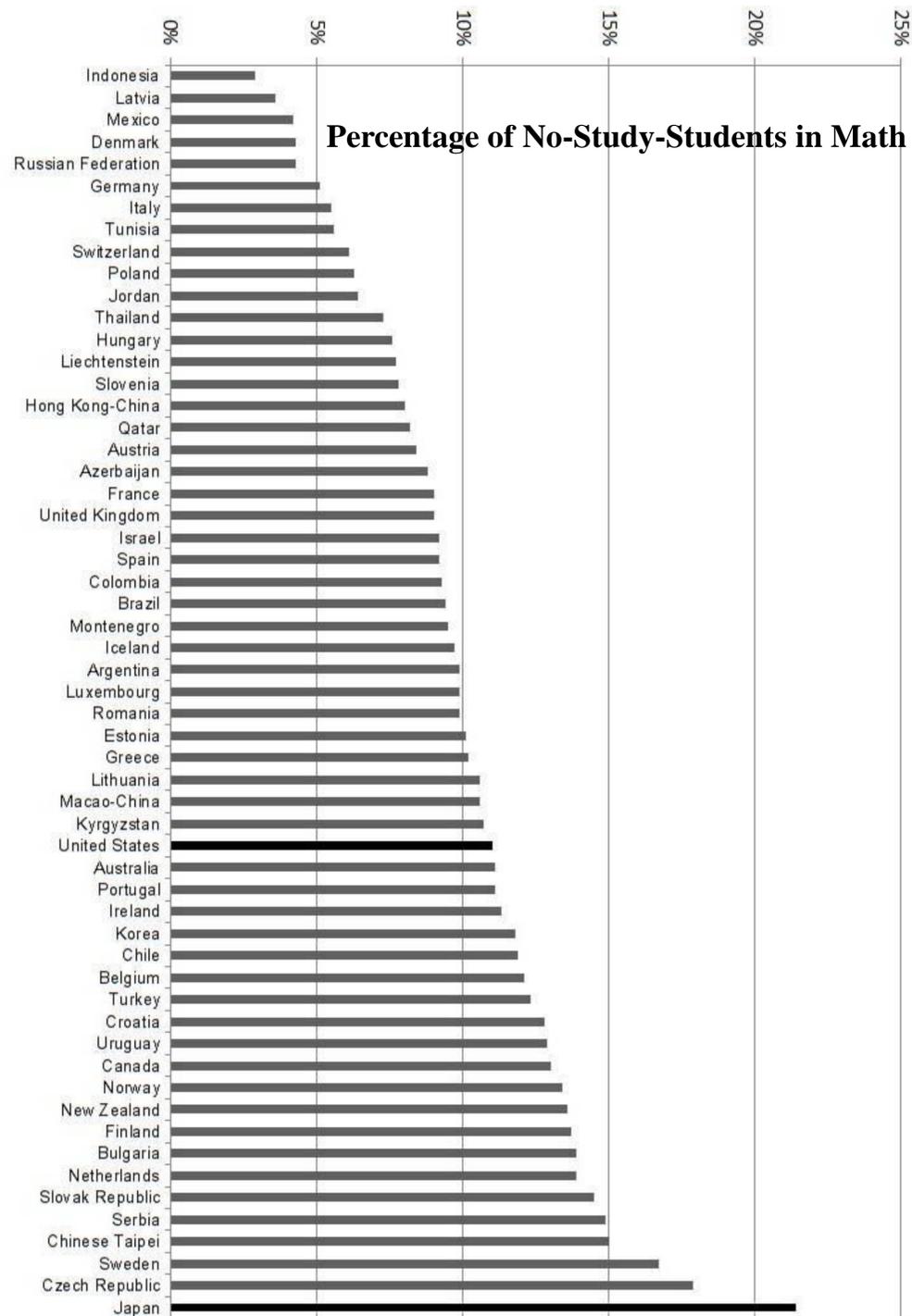
No studying-behavior and School System¹

This study attempts to uncover whether two national educational systems, the United States and Japan, differently shape students' study habits at the age of 15 year-old in order to offer an explanation of how differentiated educational systems magnify unequal achievement. These two countries were selected as they contrast starkly in how students are sorted into different tracks at the upper secondary education; U.S. students attend comprehensive schools that offer different levels of courses, while students in Japan study at different high schools, according to their academic performance tested on high school entrance examinations. In other words, U.S. sorts students into different trajectories inside schools, while Japan has between-school tracks.

The data is from the Programme for International Student Assessment (PISA) 2006 conducted by OECD. Two sets of nationally representative data include 5611 15-year-old students in 166 schools in the United States and 5,952 tenth grade students in 185 high schools in Japan. The results of the study descriptively show that Japanese educational system is distinctive as a relatively large percentage of students reports that they are no-study students. These 15-year-old students do not take any additional lessons inside/outside high schools and do not even work on homework which may be assigned by their school teachers; they study mathematics only in regular lessons of their high school. On the contrary, in the United States, a relatively small percentage of students do not engage in learning outside of regular lessons. To put this issue in an international context, all data of the PISA2006-participating countries were descriptively analyzed. The graph shows each educational system's percentage of no-study-students who do not study mathematics outside of regular lessons. In this regard, Japan ranks top across every subject among the 57 PISA-participating educational systems: mathematics (21.4%), test language (32%), science (42.1%) and "other subjects" (28.5%). The results of the multilevel analyses show a sharp contrast between the two countries; the findings imply that students who attend low socioeconomic schools in Japan are more likely to become non-studying students in addition to student-level-socioeconomic effect in Japan; the institutional arrangement between schools in Japan facilitates disadvantaged students not to participate in academic competition at the age of 15 year-old. This became clearer when the result is compared to that of the U. S. with comprehensive upper secondary education system; although lower socioeconomic students in U.S. tend to show non-studying behavior, they are not under the influence of the school-effect.

Excessive TV/Video viewing-behavior and School System²

This part of the study investigates if SES-disparities between schools shape students' behavior in compulsory education. A nationally representative sample of each educational system was drawn from the Trends in International Mathematics and Science Study (TIMSS) 2007: 7377 eighth grade students in 239 schools in the United States and 4312 counterparts in 146 schools in Japan. This study's dependent variable identifies who spends more than four hours watching television and videos in a normal school day; this non-academic behavior should negatively relate to students' engagement in schoolwork and academic performance by taking time away from academic activities. To test if this behavior is under the influence of school-level factors, four multilevel logistic regression models were carried out for each compulsory education system respectively. The results of the analyses indicate (1) School SES (socioeconomic status) influences if eighth grade students spend a substantial amount of time watching television/videos in the United States and (2) higher SES students in higher SES schools are less likely to demonstrate the non-academic behavior in U.S.. Meanwhile, these effects were not observed in Japan as SES disparities between schools are small in compulsory education.



Summary of the Findings

A particular type of institutional arrangements influences students' behaviors at the upper secondary education.

In Japan where students are sorted into different school-based tracks through entrance examinations, a population of each high school becomes homogenous in terms of socioeconomic status. As a result, students in low socioeconomic-schools tend to become disengaged in learning.

SES disparities between schools shape students' behavior in compulsory education (lower secondary education).

In the United States, lower SES students are shaped to watch television and videos for more than four hours in a normal school day when they are surrounded by similar low SES peers in school: One possible mechanism why large SES disparities lead to/widen the achievement gap derived from inequality in family-SES.

These results indicate that socioeconomic inequalities between schools differentiate students' behaviors outside of schools.

1. Matsuoka, R., Comparative analysis of institutional arrangements between the United States and Japan: Effects of socioeconomic disparity on students' learning habits. 比較教育学研究[Comparative Education], 46, p.3-20, 2013
2. Matsuoka, R. Socioeconomic inequality between schools and junior high school students' non-academic behavior: a comparative investigation of compulsory education systems using TIMSS 2007. 比較教育学研究[Comparative Education] 47, p.140-159, 2013