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Curriculum and implementation effects on high school students' mathematics learning from curricula representing subject-specific and integrated content organizations.

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Summary: This study examined the effect of 2 types of mathematics content organization on high school students' mathematics learning while taking account of curriculum implementation and student prior achievement. The study involved 2,161 students in 10 schools in 5 states. Within each school, approximately 1/2 of the students studied from an integrated curriculum (Course 1) and 1/2 studied from a subject-specific curriculum (Algebra 1). Hierarchical linear modeling with 3 levels showed that students who studied from the integrated curriculum were significantly advantaged over students who studied from a subject-specific curriculum on 3 end-of-year outcome measures: test of common objectives, problem solving and reasoning test, and a standardized achievement test. Opportunity to learn and teaching experience were significant moderating factors.

Classification: D34 C34

Keywords: secondary school mathematics; curriculum implementation; integrated curriculum; achievement; algebra; hierarchical linear modeling; teacher characteristics; classroom environment; use of technology; cooperative learning

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