

DEVELOPMENT OF A HIGH SCHOOL STATISTICAL THINKING
FRAMEWORK

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The study sought to describe the statistical thinking of high school students. The two research questions guiding the study were: (i) What are the defining characteristics of different patterns of high school students' statistical thinking within the processes of describing, organizing and reducing, representing, analyzing, and collecting data? (ii) What levels of statistical thinking can be associated with each of the patterns? In order to answer the two research questions, high school students of various grade levels and mathematical backgrounds and recent high school graduates were asked to solve statistical thinking tasks during clinical interview sessions. The cognitive model described by Biggs and Collis (1982, 1991) was applied in differentiating among patterns of sophistication in the students' responses to the interview tasks. The study identified and characterized levels of thinking which provide the basis of a framework useful for advising instruction, curriculum development, and further research in the area of high school statistics.

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