

Stony Brook University The Graduate School

Doctoral Defense Announcement

Abstract

**Stuck in the Middle: The Challenges of Implementing the New York State
Science Learning Standards in Middle Schools**

By

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The purpose of this study was to investigate how school districts dealt with the challenges of implementing new science learning standards in their middle schools. Six Long Island school districts of varying size and levels of need, with different curricula models, and distinct building grade-level configurations were purposefully selected as case studies for this qualitative study. Interviews were conducted with science teachers, science supervisors and assistant superintendents of curriculum and instruction. The interview data were transcribed and open coded to determine a series of themes. Data analysis followed a three-cycle process: individual interview analysis, intra-school district analysis and finally inter-school comparisons. The first research question focused on the factors that impact the implementation of the New York State Science Learning Standards (NYSSLS) for the middle school. The second research question focused on the roles and responsibilities of the science supervisor and how the position fit within the district's organizational structure. The third research question investigated the logistics of how curricular changes were developed and implemented.

The findings indicate some of the issues that school districts face when implementing new science standards. These issues included a lack of alignment between: teacher science certifications, building grade configurations, the school district's policy on student curricular acceleration, and the demands of new learning standards. Those districts that had a K-12 district-wide science supervisor seemed able to navigate issues of the horizontal and vertical articulation most effectively and led to a more singular, common vision in which their middle schools were less 'stuck in the middle'. The utilization of the secondary science teachers in the decision-making process varied widely across districts leaving teachers in some of the districts uninvolved in the process.

Recommendations are made for the State Education Department and include aligning teacher certification with the core curriculum and specifying in the curriculum the content for each grade. Districts are advised to have a K-12 district-wide science supervisor to open lines of communication and prepare staff for the changes required by NYSSLS.

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