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A District-wide Agenda to Improve Teaching and Learning in Mathematics

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Abstract: In my fifth year as Superintendent of the Hessen District, Department of Defense Dependent Schools (DoDDS), Germany, the system's headquarters in Arlington, Virginia announced the adoption, world-wide, of a new mathematics curriculum, grades K-8, for implementation at the beginning of School Year 1995-1996. The success of the program implementation rested with each of the twelve district superintendents. This paper describes my personal journey in leadership of the change process within the district. To say that the road traveled had its bumps, twists, and turns acknowledges that the obstacles, doubts, and satisfying moments were real. That we, as a team, were courageous might be an overstatement, but that we were thoughtful and well-intentioned in our approach and hard-working in our efforts is true.

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Extent of Implementation of a Standards-based Approach to Teaching Mathematics and Student Outcomes

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Abstract: As the education reform movement has continued there has been an increasing expectation that the ultimate criterion of success is demonstrated improvement in student outcomes. With each wave of reform new approaches to classroom interactions have been espoused, which are assumed to lead directly to increases in student performance. Unfortunately, there is very limited evidence, at this point in time, that document the effects of important innovations such as state tests, new curriculum approaches, standards, and/or various forms of technology. In all cases, there is a significant gap between the forming of eloquent aspirations and documenting related changes in student outcomes (Hall, 1999).

In this article, the fundamental question is, "How do student outcomes relate to the extent of use of constructivist approaches to teaching mathematics?" The article begins with a brief review of literature related to mathematics education and implementation research, followed by a summary of the implementation and assessment plan. The remainder of the article examines implementation data, revealing relationships between extent of implementation of classroom practices to student outcomes.

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Change is Learning: It's as Simple and Complicated as That

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Abstract: Several years ago, a principal of a school that was reinventing itself to become more student-oriented and more focused on students' increased learning success noted, "Teachers are the first learners" (Hord & Boyd, 1995). Like the Philadelphia utility company wag who first stated the proposition, she meant that if the school continued to do what it had been doing, it would continue to get the same results. To obtain different results (i.e., increased student learning) she noted, staff would have to do things differently, that is change their practice.

What this principal made very clear was that teachers would have to learn new practices, that is, be the first learners of new practice if new practice was to be offered to students in classrooms.

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Reflections on Verifying Change in School Mathematics

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Abstract: In 1994, Congress directed the Office of Educational Research and Improvement to identify and recommend to the Secretary of Education those educational programs that should be designated as exemplary or promising. Beginning in 1998, a panel of experts reviewed 61 mathematics programs, and in October 1999, the panel reported its findings (U.S. Department of Education, 1999), listing 5 programs as exemplary and 5 as promising. On 18 November, 1999, in a full-page advertisement in the *Washington Post*, some 200 mathematicians and scientists called upon the Secretary of Education to withdraw the report, arguing that it was “premature” to recommend such programs and that “well-respected mathematicians” needed to be included in the review process. On 30 November, 1999, the National Council of Teachers of Mathematics (NCTM) replied by posting on its Web site (<http://www.nctm.org>) a letter in which the executive director, writing on behalf of the NCTM board of directors, expressed disappointment in the “attack” and applauded the service the Department of Education had provided. Other research mathematicians joined the fray by posting messages on the MATHEDU Web-based discussion site (see <http://forum.swarthmore.edu/epigone/>), including another letter to the Secretary, that indicated their opposition to the sentiments expressed in the advertisement. The question of what mathematics program a school district should have has clearly become fraught with controversy.

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