

Promoting Research-Based Development in Science and Mathematics Education

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Promising new research-based pedagogical approaches are being initiated in a variety of math- and science-education disciplines at the university level. I will describe and illustrate the ways in which controlled and documented experiments are being used to investigate student learning and assess new instructional methods, and to strengthen programs in teacher preparation. I will discuss illustrative examples of research-based instruction for gifted children, and for college students preparing for teaching careers at both the elementary and secondary levels. This type of work is helping to build a field that experiences cumulative growth and progress, similar to that enjoyed by scientific, mathematical, and technical disciplines during the past century.