Continue Development and Validation of a Measure of Reformed Teaching and Learning Environments in Science and Mathematics

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ABSTRACT

This paper describes the continued development and validation of the Inventory of Teaching and Learning (ITAL) as a teacher self assessment measure of the emphasis given to reformed and traditional teaching and learning environments. The ITAL was administered to 4,364 K-12 teachers during the spring of 2005 as part of the larger evaluation of the Partnership for Reform in Science and Mathematics (PRISM) project in Georgia funded by the National Science Foundation. Principal Component Analyses identified three distinct ITAL measurement dimensions: 1) Inquiry-Based (32 items); 2) Standards-Based (10 items); and 3) Traditional (7 items). Alpha reliability coefficients for these three dimensions were .97, .88, and .80 respectively. As expected, Inquiry-Based and Standards-Based dimension scores were positively correlated ($r=.63$, $p<.0001$). Comparisons by school level showed somewhat higher scores for elementary than for middle and high school teacher groups, and greater emphasis placed on Standards-Based practices than on Inquiry-Based or Traditional practices. Implications of the findings for the longitudinal evaluation of PRISM, for making comparisons with direct classroom observations in the PRISM database, and for teacher professional development and learning community activities are discussed.

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