EFFECTS OF EXPERIENCES AND BELIEFS OF SCHOOL ADMINISTRATORS ON THE IMPLEMENTATION OF MATHEMATICS REFORM

A Dissertation

by

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ABSTRACT

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The purpose of this study was to analyze the relationship between the educational experiences, beliefs about mathematics instruction, and leadership practices of middle school principals. A survey was developed from instructional practices identified in the 1996 Third International Mathematics and Science Study (TIMSS; NCES, 1996) and from the research reviewed. The focus of the study was on the behavior of the school leader with respect to mathematics reform and did not consider teacher efficiency relative to student achievement.

In this study, surveys were distributed to 600 middle school principals in the United States and Japan. Principals were asked to rate their agreement with statements that represented experiences, beliefs, and practices identified in the research reviewed. Statistical tests were conducted to determine if correlations existed between the principal’s experiences, beliefs, and practices. Statistically, significant correlations between constructs were not common in the characteristics tested.
An ANOVA test (SPSS, 2003) indicated that principals in the United States were using a statistically higher number of the effective practices identified in this study's supporting research than were principals in Japan. However, there were no significant differences between the average numbers of practices being used between schools with respect to level of achievement.

A second ANOVA (SPSS, 2003) test was performed using practices identified in the TIMSS Video Study. The results did not indicate any statistically significant differences between the uses of practices nor interaction between levels of achievement. Frequency tables with respect to practices in use as reported by school principals were presented in the study.