



PRAIRIE VIEW A&M UNIVERSITY

A Member of the Texas A&M University System

WHITLOWE R. GREEN COLLEGE OF EDUCATION
Doctoral Proposal Defense Announcement

ABSTRACT

**THE MATHEMATICS ACHIEVEMENT OF AFRICAN AMERICAN ELEMENTARY
SCHOOL CHILDREN IN HIGH AND LOW ACHIEVING SCHOOLS**

(July 28, 2014)

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The purpose of this study was to compare the performance of third, fourth and fifth grade African American students' mathematic achievement in high and low achieving schools, and to determine and identify factors that will increase the probability of achieving much higher in mathematics. These grades and subgroups were chosen to seek out the factors that contribute to

students that achieve differently in mathematics, and schools designated as a Texas Education Agency (TEA) schools that receive ratings as a results of the Texas Assessment of Knowledge and Skills (TAKS) test.

As the literature of the study developed the conceptual framework took form. The framework consisted of three major factors that were consistently mentioned throughout the literature, those factors consisted of Parental Support, Teacher Quality, and School Climate. These factors were considered to be a major part of student achievement in any learning institution.

The following research questions helped guided a mixed methods approach in which a causal-comparative (quantitative) research method and a narrative (qualitative) research method were utilized to investigate certain variables that might have impacted the 2010-2011 mathematics achievement of third, fourth, and fifth grade African American students who were enrolled in TEA designated high and low performance schools in a North Central Texas Independent School District.

Quantitative Research Questions

1. As measured by scores on 3rd through 5th grade TAKS mathematics tests, what was the difference in the achievement of African American students who were enrolled in high achieving schools compared to those who were enrolled in low achieving schools?
2. What was the effect of high and low parental involvement on the academic achievement (as measured by scores on third-fifth grade TAKS Math Test) of African American students?
3. As measured by scores on third through fifth grade TAKS Math Test, what was the impact of teacher quality on mathematics achievement of 3rd through 5th grade African American students?

Qualitative Research Question:

1. How did the classroom climate in the north central Texas ISD high and low achieving schools affect 3rd through 5th grade students' performance on the 2010—2011 TAKS mathematics?
2. As perceived by teachers and administrators in a central Texas ISD, what are the major factors that could increase students' performance in mathematics regardless of the type of schools in which they are enrolled?

The research design for this study helped facilitate a mixed-method approach involving a quantitative phase in which a causal-comparative method was used; the second phase helped utilize a narrative approach as the qualitative method. The design that was utilized in the study was developed by John Creswell (2006), called The Explanatory Design (also known as the Explanatory Sequential Design) is a two-phase mixed methods design. This design started with the collection and analysis of quantitative data. This first phase was followed by the subsequent collection and analysis of qualitative data. The second, qualitative phase of the study is designed so that it follows from (or connects to) the results of the first quantitative phase.

The findings in this study revealed that there was no statistically difference in the mathematical achievement of African American students enrolled in high and low performing elementary schools. Parental support, teacher quality, and school climate are very essential in a student's ability to perform better on standardized tests. They play a huge role in student success within the school setting. Whether high or low performing all students are able to learn and receive a quality education with the help of every individual that are a part of the academic system.

Date: 7/28/2014 Department: Educational Leadership and Counseling
Time: 9:00 am Location/Room: Delco 308
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