



SPOTLIGHT ON RESEARCH

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Department of Educational Leadership, Western Illinois University

Editors' Message

We hope you are enjoying the summer. We have two important announcements. Dr. Donna McCaw, our associate editor, has retired after twelve years working at the department. Dr. Jess House, our department chair, is leaving us after chairing the department for four years. We thank both for their contributions to the development of this publication and wish them best of luck in their new ventures.

We are delighted to introduce you to the third issue of *Spotlight on Research*. In this issue we present doctoral dissertation abstracts with topics ranging from Response to Intervention to the Everyday Mathematics curriculum, to Comprehensive School Reform programs, to leadership strategies and management techniques.

Dr. Chad Allaman's dissertation examined the effect of Response to Intervention on student achievement. In addition to reviewing the performance of all students, special attention was given to the performance of economically disadvantaged students.

Focusing on rural school mathematics performance, Dr. Michael Grady's dissertation compared the Everyday Mathematics curriculum to traditional programs and evaluated the effects on student mathematics achievement.

Dr. James McEnroe's dissertation utilized longitudinal achievement data from mandated standardized tests to investigate the effects of the various federally funded Comprehensive School Reform program models on student performance.

Do leadership strategies and management techniques represent two distinct constructs? Dr. Sarah Willey's dissertation explored this question. Her study went on to examine the relationship between leadership strategies, management techniques, and student achievement.

With the increased accountability of schools, it is not surprising that the studies presented in this issue all emphasize student achievement. We hope you find them relevant, and we value the opportunity to share these recently completed doctoral dissertation research studies. Please feel free to share these publications with your colleagues or to contact us or the authors about their research. We would be happy to hear from you.

Dr. Bridget Sheng (Editor)
Dr. Lloyd Kilmer (Associate Editor)

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The Effect of Response to Intervention on Student Achievement in Selected Illinois Elementary Schools

Author: Chad H. Allaman, Superintendent, Central School District #51

Abstract

Utilizing quantitative data analysis to discern causal-comparative relationships between a school district that implemented Response to Intervention (RtI) and a non-RtI school district, the study examined DIBELS Oral Reading Fluency scores from a sample consisting of students from the RtI pilot school and students in a demographically similar school that did not pilot RtI over a two year period (2006-2007 and 2007-2008). In addition to reviewing the performance of all students, attention was given to the differential performance between boys and girls and between disadvantaged and economically advantaged students.

Descriptive statistics such as mean and standard deviation and confidence levels about the mean were used to study the demographic information. Inferential statistics utilized in the study involved a mixed analysis of variance (ANOVA) with three between-subjects variables (RtI, gender, and economically disadvantaged status) and one within-subjects variable (time) to assess the study hypotheses. Power analyses were performed using G*Power software, and results indicated that a total sample size of 170 was adequate to detect a medium-size effect ($f=0.25$).

Results for four of the hypotheses tested utilizing the mixed analysis of variance did not reflect statistical significance. Findings were counter to the

expectation that districts with RtI programs would realize significant achievement gains compared to districts without RtI programs. Two hypotheses that were supported by the study relate to time effect and its impact on achievement for all students and time effect and its impact on achievement between economically disadvantaged students and economically advantaged students. For both hypotheses, the effect of time was favorable. Overall student achievement increased significantly over the two years of the study, and economically advantaged students' beginning and ending scores were significantly higher than economically disadvantaged students' scores over the same two-year period.

Practical Implication

Knowledge gained from the study provides insight in regard to whether Response to Intervention programs implemented in Illinois elementary schools impact student achievement. The study serves as a conceptual framework for future studies evaluating Response to Intervention programs and their impact on other components of public education, such as teacher training and professional development.

Citation

Allaman, C. (2008). *The effect of Response to Intervention on student achievement in selected Illinois elementary schools* (Doctoral dissertation). Retrieved from ProQuest Digital Dissertations Database. (Publication No. AAT 3338877)

Constructivist Mathematics Theory: The Effects of Everyday Mathematics on Sixth Grade Achievement on the Illinois Standards Mathematics Achievement Test

Author: Michael L. Grady, Dixon High School Principal, Dixon Public Schools #170

Abstract

International assessment data indicate students in the United States are not competing with their counterparts in foreign countries. The mathematics

curriculum and pedagogy in the United States are not preparing students to compete with their counterparts from foreign countries. This study compared student achievement using the sixth grade mathematics mean scale scores from three rural schools on the 2006 and 2007 Illinois Standards Achievement Test (ISAT). Specifically, students

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who received the entire K-6 Everyday Mathematics curriculum were compared to students who were taught exclusively using a traditional mathematics curriculum and those who were taught exclusively a traditional mathematics curriculum supplemented by Mountain Math through sixth grade. The results of this study indicated that the K-6 Everyday Mathematics curriculum did not outperform the traditional or modified traditional curriculum on the sixth grade ISAT mathematics test.

Practical Application

The importance of this study is multifaceted. Rural schools understand the importance of mathematics education so that their students can compete on

national and international levels. The current research on Everyday Mathematics has focused on urban settings. This study adds to the research base on rural mathematics instruction by comparing a constructivist mathematics curriculum to traditional programs.

Citation

Grady, M. (2009). *Constructivist mathematics theory: The effects of Everyday Mathematics on sixth grade achievement on the Illinois Standards Mathematics Achievement Test* (Doctoral dissertation). Retrieved from ProQuest Digital Dissertation Database. (Publication No. AAT 3355823)

Comprehensive School Reform and Standardized Test Scores in Illinois Elementary and Middle Schools

Author: James D. McEnroe, Adjunct Professor, Governors State University

Abstract

The study examined the effects of the federally funded Comprehensive School Reform (CSR) program on student performance on mandated standardized tests. The study focused on the mathematics and reading scores of Illinois public elementary, middle, and junior high school students. The federally funded CSR program provided each participating Illinois school with an annual grant of at least \$50,000 for three consecutive years. Each school in the program was allowed to select from commercially available CSR programs, or schools could develop their own CSR program.

Using the reading and mathematics scores from 2004 through 2007, data were collected and analyzed using a number of statistical techniques. Changes in student performance in the schools using CSR programs were compared to changes in student performance in all Illinois schools classified as low income and then to all Illinois schools. Student performance from the Illinois Standards Achievement Test (ISAT) for grades three, five, and eight was utilized.

The analysis of data used a year-by-year approach similar to that of the *No Child Left Behind* law. A

second analysis was performed on data that was arranged to approximate a cohort approach.

By the year 2007, Illinois schools had received over \$42 million under the federal CSR program.

The research produced no evidence that any of these CSR programs produced a statistically significant improvement when compared to the state's averages or when compared to the state's low-income schools. When the CSR schools were compared to the state's low-income schools, the low-income schools had improved more than the CSR schools.

Practical Application

Administrators should apply a skeptical approach to CSR programs. Even grant-funded and federally acceptable programs need to produce evidence that they can accomplish what they promise. The energy and effort required to implement these programs is considerable. Administrators should require independent research that proves any CSR program they are considering is capable of producing the results needed.

Citation

McEnroe, J. (2010). *Comprehensive School Reform and Standardized Test Scores in Illinois* (Doctoral dissertation). Retrieved from ProQuest Digital Dissertations Database. (Publication No. AAT 3404716)

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Management Techniques and Student Performance as Perceived by Superintendents in Illinois School Districts: A Replication and an Extension of Byrd's 2000 Study

Author: Sarah A. Willey, Superintendent, Riverdale School District #14

Abstract

This study was an examination of the role of the superintendent in student success in school districts within Illinois. Only unit districts were included to remain consistent with the design of the study being extended and contribute to generalization. Participants were asked to respond to six demographic and 29 topical questions designed to assess their use of leadership and management practices in their districts.

The study had several purposes: (1) to determine whether there is a significant relationship between leadership strategies and management techniques, (2) to replicate Byrd's examination of the leadership strategies employed by the district superintendent to determine their relationship to student academic achievement, (3) to replicate Byrd's examination of the management techniques employed by the district superintendent to determine their relationship to student academic achievement, and (4) to replicate Byrd's examination of the demographic data of the school districts to determine whether selected demographic data affect leadership strategies and management techniques in relation to student achievement.

Descriptive statistics were generated and correlational analysis was used to identify relationships between the identified leadership strategies, management techniques, and student achievement growth. Structural equation modeling was used to evaluate the relation between leadership strategies and management techniques as well as the relationships between selected

demographics variables. Correlational analysis found a significant correlation between the factors of leadership strategies and management techniques. No significant relationships were found between the variables of leadership strategies, management techniques, and student achievement. The study found a very weak but statistically significant effect of gender on management techniques, suggesting further investigation may be warranted.

Practical Implication

Since this study found very little evidence of a relationship between the behaviors of the superintendent and student achievement, it must be interpreted with caution. Current research is indicating that the leadership of the superintendent may well have an effect on student achievement. Research indicates that both leadership and management functions are necessary for the CEO of a school district to operate; however, they may be difficult to measure discretely and accurately. In our current political climate of criticism of public education, it is critical that we understand these functions and can defend our choices of both people and behaviors.

Citation

Willey, S.A. (2011). *Management Techniques and Student Performance as Perceived by Superintendents in Illinois School Districts: A Replication and an Extension of Byrd's 2000 Study* (Doctoral dissertation). Retrieved from ProQuest Digital Dissertation Database. (Publication No. AAT 3457035)

