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The Relationship Between Principals' Leadership Characteristics and Colorado's Standardized Test Scores

Wayne Wolf, PhD

Problem

The popular answer to the question of what can be done to improve standardized test scores is to raise expectations. However, high expectations do not always result in high test scores (Tsiplakides & Keramida, 2010). The problem was a lack of research on when high expectations are productive and when they are not. Transformational leadership is embraced by principals, but exactly what behaviors that entails could be more fully explained.

Purpose

The purpose was to study specific principal leadership characteristics in order to find which behaviors best predict state standardized test scores. Specifically, the study was conducted to find the relative importance of high expectations and transformational leadership behaviors.

Significance

In order for the "popular antidote" to poor performance - high expectations - to be effective, the leader must supply what is needed in order for followers to meet expectations. Many teacher training texts consider raising expectations as the most important thing a teacher can do to improve academic achievement (Lemov, 2010). This is a serious problem if in fact raising expectations can be detrimental when the commensurate support is not there.

Social Change Implications

Implications for social change include public policy maker's support for relationship building with educators to make sure teachers and students have what they need in order to meet high expectations.

Theory

Bass (1998) described four components of transformational leadership. In deference to Senge (1990) I changed the name of one of them to systems thinking. The other three are modeling, inspirational motivation, and individualized consideration. Bandura's (2007) research confirms the importance of modeling for learning. Burns (1978), who developed the concept of transforming leadership said leadership and learning are closely related.

Relevant Scholarship

Jantzi and Leithwood (1996) developed a principal survey to better understand transformational leadership. Valentine and Bowman (1989) developed a principal survey to assess the effectiveness of managerial and instructional leadership. I added the categories of shared leadership, high expectations and transactional leadership. The result was a survey with nine categories and 32 items.

An analysis of research support for high expectations as a catalyst for improvement on test scores included Rosenthal and Jacobson (1968), a criticism of their work by Flashoff and Snow (1970), and a rebuttal by Rosenthal and Rubin (1971). My conclusion was that research on high expectations does not justify the popular thought that high expectations always leads to higher test scores.

Carter's (2008) doctoral dissertation details the negative effects of a mentor who had high expectations, but did not pay attention to the needs of the mentee.

Research Question

To what extent, if any, is there a correlation between principal leadership characteristics and results on participating middle schools' CMAS 2016 math scores?

Participants

Each of the 160+ public school districts in Colorado were invited to participate in the study. We only ended up with eight principals who fully participated. Fortunately, those eight were representative of each area of the state, various sizes, various economies, and most importantly were composed of four schools with above average test scores and four with below average test scores.

Procedures

Public data of school scores were gathered from the Colorado Department of Education website, which were analyzed for correlation with respective principal leadership characteristics. The principal leadership characteristics were measured by a 32 item survey that was given to respective teachers on which to rate their principals. **Teachers could anonymously give their principals from one to six stars.** Scores from each of 32 leadership characteristics were compared with 2016 8th grade math scores on the Colorado Measures of Academic Success.

Analysis

Descriptive statistics showed that the dependent variable of test scores was normal and linear thus allowing simple correlation, and multiple linear regression analyses. **The independent variables of beneficial modeling, inspirational motivation, systems thinking, individualized consideration, and empowerment were found to be significantly correlated to test scores at the .05 level.** Together these variables predicted when high expectations were effective and when they were not.

Findings

Principals who were high in transformational leadership characteristics and had high expectations correlated with high scores on Colorado standardized testing. Principals who scored lower in transformational leadership characteristics and had high expectations correlated with low scores on Colorado standardized testing.

Interpretation

Principals and other leaders who practice beneficial modeling, inspirational motivation, systems thinking, individualized consideration, and empowerment will enable students and other followers to achieve more. When these five behaviors are used then high expectations are productive.

Limitations

Eight participants was less than ideal. However, the data was such that it could be statistically analyzed. Similar results with more participants would add to external validity.

Recommendations

Along with high expectations a leader must supply followers with what is needed to achieve success. Followers need relevant materials and a good environment. The good environment includes a leader who provides transformational leadership characteristics. I would like to do this study again with more participants. I recommend that similar studies be done in other states.

Gold Star Leadership

- Beneficial Modeling
- Inspirational Motivation
- Individualized Consideration
- Systems Thinking
- Empowerment
- Appropriate Expectations

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