Executive Summary of Dissertation

Title: Educational Leadership Efficacy: The Relationship Between Data Use, Data Use Confidence, Leadership Efficacy, and Student Achievement

Author: Matthew C. Rhoads, Ed.D

Introduction: In twenty-first century schools, data use by its leaders is critical to success. However, there are varying degrees to which educational leaders perceive how well they use data as well as how well they use the data within their daily practice. Within the literature there was a discrepancy regarding educational leader (i.e., principals, assistant principals, superintendents, associate superintendents, coordinators, and teacher leaders) data use and student achievement and educational leader self-efficacy and student achievement (i.e., 2017-2018 CAASPP ELA and mathematics scores). Furthermore, there was a call from researchers to see how effective educational leaders use data and technology to establish a data-driven cultures in schools. By providing research on the efficacy of educational leaders regarding their data use, it may give insight to how we can improve the skills and abilities of leaders to utilize data by constructing formal mechanisms to build this capacity as well as how we can better implement data-driven cultures in schools through educational leaders.

Purpose: The purpose of the study was to determine whether relationships exist between the following variables: data use, data use confidence, educational leadership efficacy, and student achievement. Also, this study set out to further evaluate how educational leaders employ data practices in their capacity as a leader as well as how they establish and participate in data-driven cultures in K-12 settings.

Literature Review: Please refer to the full copy of the dissertation for the literature review. Major authors utilized for this study include: Bandura, Fleet, Fullan, Hattie, Levin & Schrum, Lunenberg & Irby, Mandinach, McCray, Moak, Tschannen-Moran, and Schneider.

Methodology: A mixed-methods methodology was employed for this study, which included a quantitative methodology utilizing a correlational research design in addition to a qualitative methodology. There were six quantitative research questions and two qualitative research questions. Surveys were sent out across the California using snowball convenience sampling. Surveys primarily asked participants to rate their self-efficacy regarding data use, leadership, and confidence in various data practices (i.e., data use confidence). Ultimately, 111 participants throughout California participated in this study to obtain the quantitative and qualitative data to be utilized for statistical analysis. Below is a description of each variable utilized in the quantitative portion of this study.

Variables:

1. **Data Use** – Self-Efficacy in terms of the types of data an educational leader utilizes, the amount of data they use in their capacity as a leader, and the supports in place within K-12 schools and districts to help them make data-driven decisions.

2. **Data Use Confidence** – The self-efficacy of educational leaders regarding utilizing various data practices (i.e., accessing data, warehousing the data, conducting basic/advanced statistical analysis, applying data to making decisions, etc.).
3. **Leadership Efficacy** – The self-efficacy of educational leaders in leadership skills (i.e., establishing a positive school environment, coping with the challenges of the job, and facilitating learning in a school or district.
4. **Student Achievement** – The 2017-2018 Smarter Balanced CAASPP English Language Arts and mathematics scores.

Findings: The quantitative findings related to how educational leaders believed they were highly efficacious regarding their data use, educational leadership, and data use confidence. Positive weak and moderate relationships were found between these variables. From these findings, it was noted that the majority of the participants had their lowest efficacy in conducting data analysis that included basic descriptive statistics and employing more complex statistical analysis like correlations/regressions in their capacity as school and district leaders. In addition, the data that is most used by educational leaders relate to data currently being tracked on the California Department of Education Dashboard as well as data relating to funding mechanisms (i.e., LCFF, LCAP, Title 1, etc.) and student formative and summative test scores. It must be noted, data use, data use confidence, and leadership efficacy did not relate to the student achievement variable. For the qualitative findings, participants noted educational leaders need to model data-driven cultures and data practices as well as how data is to be used in various contexts within the classroom and/or in school and district setting(s). In addition, participants felt there was a large need for professional development to learn the skills necessary to become data literate. Lastly, findings demonstrated that the lack of time for data analysis and resistance from teachers and staff to employing data was consistent in the findings.

Conclusions: The conclusions for this study relate to how the quantitative and qualitative findings depict a scenario where educational leaders believe they are utilizing various types of data and have confidence in employing some data practices to improve instruction, improve schools/districts through school improvement cycles, and setting and monitoring goals. Another major conclusion from this study is that educational leaders need training in the form of professional development and/or within administrative and teacher credentialing programs in the following areas: how to access and warehouse data from student information systems, utilizing various data practices (i.e., basic descriptive/advanced statistical analysis on data) and how to apply them to classroom and school/district settings, articulating data findings to stakeholders, and integrating new technology and practices within a school culture. Lastly, this study concluded that schools and districts need to provide time in an organized manner for educational leaders and teachers to learn data practices, access and disaggregate data, and make decisions as a team for school and/or district improvement.

Key Terms:

1. **Self-efficacy-** One's perceived belief in one's self to complete a given task.

2. **Data types** – Data types refer to various types of data being used in K-12 settings (i.e., attendance, test scores, discipline records, Special Education, Free/reduced lunches, English Language Learner Enrollment, school climate, etc.).

3. **Warehousing Data** – This term refers to taking data from various sources (i.e., student information system, grade book, district databases, etc.) and synthesizing the data onto one spreadsheet for a purpose to conduct data analysis.

4. **Data Literacy -** Data literacy can be defined as a skill or ability required to read and understand data. It is a concept that encompasses a vast array of knowledge and skills that are assumed to be essential for the effective use of data in education.

5. **Educational Leaders -** An educator may be considered an educational leader if they are engaged in one or more of the following leadership roles: participate in a leadership team, mentor and train staff, implement professional development, engage in best practice, being a role model, develop a learning culture, inspire and motivate staff, assist staff with research, find resources for staff support, ensure policy and practice is current, communicate with upper staff and management, build effective relationships with children, families, and staff, develop a learning and questioning culture, provide updates and insights to a team from research, develop curriculum and evaluation, develop professional networks, communicate with and educate families, conduct staff appraisals, demonstrate and encourage reflective practice, assist staff to manage change, utilize the strengths of the team, and encouraging and supporting educators. Leaders who fit this definition of school leaders include principals, assistant principals, district superintendents, teacher leaders (e.g., department heads and grade level leaders), and district coordinators.

6. **Leadership Efficacy** - Self-efficacy for leaders can be defined as "using social influence processes to organize, direct, and motivate the actions of others by requiring persistent task-directed effort, effective task strategies, and artful application of various conceptual, technical, and interpersonal skills" (McCormick, 2001, p. 28).

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Contact: Email - mattrhoads1990@gmail.com