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Examining the Characteristics of Effective School Leaders

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Background

- Leadership is "second only to classroom instruction among all school related factors that contribute to what students learn in school (Leithwood, Louis, Anderson, & Wahlstrom, 2004)
- Leadership effects (both direct and indirect) account for up to one fourth of total school-level effects (Hallinger & Heck, 1996, 1998; Leithwood & Jantzi, 2000).

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Goals for the session

- Discuss the research questions for the Characteristics of Effective School Leaders study
- Review the common types of literature examining principal effectiveness
- Discuss how to evaluate research on principal effectiveness
- Discuss how literature used to develop the Florida Principal Leadership Standards will be assessed

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What are we trying to learn from principal research?

REL-SE is starting with descriptive questions in the state of Florida to understand the characteristics of effective leadership before moving to more complex questions

<u>Assessment of the Research and Literature Review</u>

- What is the rigor of the research in the literature used by FL DOE to develop its Principal Leadership standards? How much of the literature meets the What Works Clearinghouse evidence standards?

- According to the current literature base, what principal characteristics (e.g., education background, education leadership training, career path, leadership style, content and pedagogical knowledge, etc.), are associated with higher student achievement?

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Characteristics of principal effectiveness questions

- What principal characteristics are associated with higher student achievement?
- Why are some principals more effective than others?
- Other Questions?

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Unpacking principal effects

- What principal characteristics are associated with higher student achievement?

- Three challenges:
  1. Achievement is affected by different factors
  2. It is difficult to distinguish the principal effect from other characteristics (e.g., outside of the principal influence)
  3. Some of the effectiveness of the school may be due to factors that were in place prior to the principal

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Identifying important skills for principals

- Data availability
  - Data in this area are scarce
  - Without comprehensive data, difficult to statistically separate the effect of a principal from the effect of other school-level characteristics

- Complexity of principals work
  - Conceptualization of leadership
  - Complex nature of the principal work makes categorization of behaviors difficult (Brewer, 1993)
  - Many possible dimensions to describe the work that principals do
    - Instructional leadership (emphasizes the principal's role in facilitating teaching and learning)

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Direct effects of school leadership on student achievement

- The direct effect model suggests that leaders' practices can have effects on school *outcomes* and that these can be *measured apart from other related variables*.

- Some researchers include antecedent factors (e.g., principal's gender, teacher experience) but these are not hypothesized as variables interacting with leadership or mediating its effects on the selected outcomes (Hallinger, Bickman, & Davis, 1996).

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Indirect effects of school leadership on student achievement

- Principal effects are largely indirect, operating through school organizational features (Hallinger, Bickman, & Davis, 1996; Hallinger & Heck, 1996, 1998; Witziers, Bosker, & Kruger, 2003)

- Strong leadership *practices* are intended to affect school *processes* that mediate the effects of leadership on student achievement.
  - the professional capacity of staff
  - the learning climate of the school
  - family and community involvement
  - and ambitious instruction (Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010).

Direct effects of school leadership on student achievement

"The lack of solid evidence on principal effectiveness can be partly attributed to the challenge of measuring leadership effects."

Corcoran, Schwartz, & Weinstein (2012)

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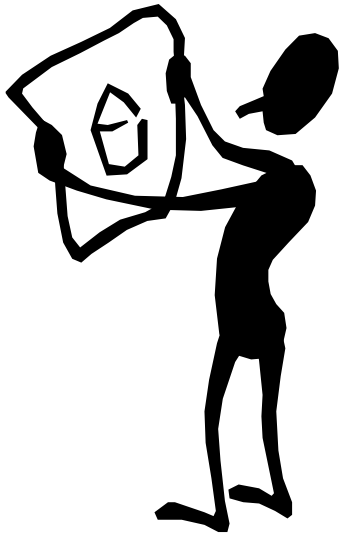
Reasons for lack of direct evidence on leadership

- Research Approach
  - **Design**
  - Method
    - **Sample**
      - **Size**
      - **Generalizability**
    - **Modeling**
  - Data Collection & Analysis
    - **Data Collection Instruments**
    - **Data analysis tools**



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Research types and associated evidence

- "**Quantitative methods** are essential for assessing the extent to which administrative effects are presents in schools.

- The use of **qualitative approaches** is essential, however, if we are to understand the more complex processes that underlie this complex set of interactions" (Hallinger & Heck, 1996)

"The picture one gains from the qualitative evidence for the impact of leadership is very different from that gained from quantitative analyses of direct and indirect effects of leadership on students' academic and social outcomes."

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Research Designs

Qualitative

- Case Study
- Ethnography
- Phenomenological
- Grounded Theory
- Other

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Pros and Cons

Design	Pro	Con
Case Study	Provides greater amount of description and more in-depth detail; Uses a triangulated approach to research (e.g., multiple data sources - observations, interviews, document analysis) used to construct a detailed account of a single case or multiple cases	Data analysis can be difficult due to multiple data sources; findings applicable to the single case itself
Ethnography	Usually conducted over an extended period of time which can provide extensive and in-depth findings	Often takes a longer period of time; research is reliant upon the observations of just one or a few people
Phenomenological	Examines perceptions and experiences of the individual primarily through the use of interviews	Relies heavily on interview data and the ability of participants to honestly and clear articulate information
Grounded Theory	More structure for data analysis [i.e., open coding, axial coding, and selective coding (Creswell, 2009)].	Limits a researcher's flexibility in data analysis and may "predispose the researcher to identify categories prematurely" (Leedy & Ellis Ormrod, 2010 p. 143); research designed to develop theory not specifically to describe behavior

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Research Designs

Quantitative

- Randomized Controlled Trial (RCT)
- Quasi Experimental Design
- Regression Discontinuity
- Single-Case
- Pre-Test/Post Test
- Post-Test only
- Correlational
- Survey or Descriptive

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Pros and Cons

Design	Pro	Con
Experimental research or Randomized Controlled Trial	Most rigorous, and the only way to get true effect and extract confounds	Cannot randomly assign most characteristics of interest in leadership
Quasi Experimental Design	May be easier to conduct and handles natural variation in schools	Same as with RCT but with added potential seen and unseen confounds
Regression Discontinuity	Predefined cut-points to identify who gets what treatment	Only applicable to those around that specific cut-point, does not control for all potential confounds
Single-Case	Individual serves as own control, can be done experimentally	Limited number of subjects, limited generalizability. Only know what works for those specific individuals
Pre-Test/Post Test	Serve as own control	Does not control for seen or unseen confounds
Post-Test only	It is data	Group (or individual) differences cannot be attributed to anything experimental
Correlational	Illuminates potential relations	Often interpreted as causal when it is not
Survey or Descriptive	Unpacks what's in the "black box"	Cannot be interpreted causally

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Strengthening research designs

- Sufficient sample sizes
- Theoretically defensible models
- Reliable data collection instruments
- Sophisticated data analysis tools

Issues with samples

- Number of principals included may be very small
  - Limited size samples may not provide accurate results
- Context of demographic locale of study
  - Urbane vs. rural
  - High vs. low poverty rates
- Not all grades researched equally
  - Issues associated with the context of the level of the school may impact effect size (e.g., structure of high schools; Robinson, Lloyd, & Rowe, 2008)

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Issues with Models

"Unless guided by strong theory, appropriate model specification can become a problem in non-experimental studies because one must include all relevant independent variables to specify the model properly" (Hallinger & Heck, 1996).

- Typical approaches to control for validity:
  - Probability sampling (Hallinger & Heck, 1996)
  - Statistical Adjustment (Pedhazur & Schmelkin, 1991)
  - Replication of results under varying conditions (Heck & Marcoulides, 1992)

Other Design Issues

- Overly simplified models often lead to over simplistic analyses and results that are highly ambitious and lack validity

- Appropriateness of the analytical techniques affects the strength of the conclusions
  - More rigorous analyses may uncover relationships in the data that are not revealed through other means.

Data Collection Concerns

- Survey data

  Most studies consist of surveys that depend on naturally occurring variation. This leads by definition to small effects. Given the restrictions in variability in leadership behaviors and the fact that school effects are by definition small (achievement differences are best explained by student characteristics), samples of schools tend to be too small to detect significant effects.

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Analytic concerns

- "Black Box"
  - The direct effect with no consideration for other variables
- We need to unpack what is in the "Black Box"
  - Related to, though not necessarily, looking at indirect effects
  - Potentially easier to quantify through direct measures & observations
- Important to know what's inside the "Black Box"
  - Control variables provide the ability to really parse out the principal effect from the "other" or "something else"
  - Rich contextual information – the who, when, where, what, and why
  - Provides a much more detailed picture of what is really going on

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Learning to Conduct Leadership Research

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Relationships among Research Types, Questions, & Design

Descriptive

- Questions
  - What is happening?
  - How often is something happening?
- Research Designs
  - Qualitative designs
  - Cross-sectional , correlational designs

Causal

- Questions
  - Does this work?
  - What is the effect/impact of…?
  - Does X cause Y?
- Research Designs
  - Experimental (aka randomized control trials - RCT)
  - Quasi-experimental (QED)

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Questions to ask when assessing studies on leadership

- Is sufficient background information, such as a theoretical or conceptual framework, provided?
- Is the purpose clearly stated and is the question something that can be answered?
- Is there a clear rationale for selection of participants?
- Is there an explanation for how variables (e.g., principal performance, student performance) in the study identified and measured?
- Are responses (e.g., results/findings) to the all research questions presented?
- Are the conclusions and generalizations connected to prior research?
- Are reasonable implications for practice and future research presented?
- Are limitations of the study discussed?

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Sources

- Brewer, 1993
- Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010
- Corcoran, Schwartz, & Weinstein , 2012
- Hallinger, Bickman, & Davis, 1996
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