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**What Counts as Research Evidence?
How Educational Leaders' Reports of the Research they Use Compare to ESSA Guidelines**

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Background

As the conference theme suggests, there is a need to understand the ways in which education leaders use and interpret research. Although there is a growing literature base on the extent to which leaders use research, little is known about what leaders are actually referring to when they report using research.

At the same time, the Every Student Succeeds Act (ESSA) requires leaders using federal Title I, Section 1003 funds for school improvement to choose interventions backed by research that meets one of three tiers of evidence. Studies meeting the “strong tier” must test an intervention using random assignment with a large, multi-site sample. “Moderate tier” studies do not use random assignment but control for differences in the comparison groups. The “promising tier” includes correlational studies that statistically control for differences between groups. For other types of Titles I-IV funding, leaders can also choose programs with ongoing evaluations that have “demonstrated a rationale” using other research methods (Civic Impulse, 2017).

Education leaders further report finding research useful to their work for a variety of purposes, especially when research is extended to offer practical frameworks and guidance (Coburn et al., 2009; Corcoran, Fuhrman, & Belcher, 2001; David, 1981; Kennedy, 1982; Penuel et al., 2016; Penuel, Farrell, Allen, Toyama, & Coburn, 2016; Weiss, Murphy-Graham, & Birkeland, 2005). The literature to date, however, is agnostic to the quality of evidence that characterizes the research that leaders report using. At the same time, researchers and practitioners might have different conceptions of “what counts” as research (Coburn & Talbert, 2006; Corcoran, Fuhrman, & Belcher, 2001; Dynarski, 2010; Finnigan, Daly, & Che, 2013; Lubienski, Scott, & DeBray, 2014).

Purpose

Through a descriptive analysis of the actual sources of research named by education leaders as useful to their work, this study contributes to a better understanding of leaders' conceptions of "what counts" as research evidence.

Research Design

This study draws from a nationally representative survey in which 733 school and district leaders reported on their research use (Penuel et al., 2016). In an open-ended item, we asked respondents to name in detail a particular piece of research that they found useful in their work. Here and elsewhere, the survey provided a definition of research as "an activity in which people employ systematic, empirical methods to answer a specific question."

A total of 366 respondents completed the item, naming 262 unique sources. Three researchers located each source online and coded for basic characteristics. (See table 1.) We then determined whether they presented original *research* or *theoretical analyses*; were *evidence-informed* in citing other research; or were *anecdotally-informed* without reference to systematic research. In addition to these bases of evidence, we further coded books as either *frameworks* that offered general ideas or strategies, *implementation guides* that focused on "how to" steps to implement strategies, or *edited volumes* of either original-analyses or evidence-informed chapters. For any sources reflecting original analyses, we examined the research methods described and determined whether the methods would qualify for ESSA's tiers of evidence.

The research team first coded 20 sources together in order to develop codes and understandings, then proceeded to code sources individually. Team members reconciled their coding on a weekly basis, with the first author making the final decision. The team conducted counts on the codes to summarize the types of evidence reflected in the sources named by education leaders, as well as the reasons for which the leaders claimed the research was useful.

Findings

A remarkable 57% of the 366 respondents named books, 16% named research/policy reports, 13% named journal articles, and 14% named other types of sources (see table 2). Of the 262 unique sources named, 44% were books, 23% research/policy reports, 18% journal articles, and 15% other formats.

Focusing on the 262 unique pieces named, we determined whether or not each source presented an original analysis, including a systematic synthesis (see table 3). Less than half (47%) did so, including less than one-quarter (22%) of books and two-thirds (67%) of all other formats. Of the 122 sources reflecting original analyses, 6% of sources qualified for ESSA's "strong" tier; 21% for the "moderate" tier; and 15% for the "promising" tier. In addition, 35% reflected non-tier qualifying syntheses/reviews; 13% were case studies, 5% were theoretical analyses, 3% reflected mixed methods, and 1% included various methods (in book volumes). It is important to note that evaluating the strength of the research designs and warrants for the

claims made was beyond the scope of this study, but our review revealed a wide range of quality in the methods that characterized these sources.

The remaining 140 (53%) sources did not reflect original analyses. Of these, we coded 69% as *evidence-informed* pieces, including 48% of all books and 21% of all other formats. Because these referenced existing evidence in order to make claims, the reader would need to be familiar with the research base and authors cited in order to evaluate the warrantability for the claims made, which varied widely. In addition, 21% of these 140 sources represented *anecdotally-informed* pieces, including 10% of all books and 12% of all other formats. These only pointed to anecdotal examples to make their claims, perhaps indicating misconceptions about “what counts” as research. Finally, 11% of these 140 sources did not state any reasons for their claims; this occurred with some of the books we categorized as “implementation guides.”

Table 4 further summarizes the evidence basis compared by the purpose for which leaders stated the piece they named was useful, indicating differences in the quality of evidence used depending on the purpose for which it was used.

Conclusions

The descriptive findings shared here point to potential differences in policy makers’, researchers’, and practitioners’ conceptions of “what counts” as research, with implications for education leaders’ use of research for educational improvement. Where these conceptions of research diverge, it will be important to build understanding about how to evaluate the quality of evidence that informs decision making in education, such that educators can be critical consumers when programs and strategies are marketed as “research-based.”

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Table 1

Code List

Code	Subcode
Format	Book Research/ policy report Journal article Practitioner-oriented magazine article Book chapter Research-based tool Media-based piece Dissertation Other
Why Useful	Selecting programs/interventions Designing programs/policies Supporting and monitoring implementation Supporting leaders' own learning Providing instructional leadership for others Not specified
Basis of Evidence	Single study: Single site Single study: Multiple sites Multiple studies Evidence-informed Anecdotally-informed No basis specified
Methods	Experimental Quasi-experimental Correlational Case study Mixed methods Synthesis/review Theoretical analysis Not specified Not applicable
Investigated intervention/ program/ strategies?	Yes No Not specified Not applicable
Group Comparisons	Random assignment Controlled for differences Did not control for differences Did not compare groups Not specified Not applicable

ESSA Tier

Strong
Moderate
Promising
None

Table 2

Format of Sources Named

	% of Respondents (n = 366)	% of Unique Sources (n = 262)
Research/policy report	16%	22%
Journal article	13%	18%
Research-based tool or program	6%	7%
Magazine article	4%	5%
Media	2%	2%
Dissertation	1%	1%
Book chapter	1%	1%
Book: Framework	39%	26%
Book: Implementation guide	18%	18%
Book: Edited volume	1%	1%

Table 3

Basis of Evidence for Sources Named

	All Formats (n = 262)	Books (n = 122)	All Other Formats (n = 140)
Original analysis	47%	22%	67%
"Strong" tier	6%	0%	5%
"Moderate" tier	21%	0%	16%
"Promising" tier	15%	3%	9%
Other systematic synthesis/review	35%	8%	29%
Case study	13%	5%	6%
Theoretical analysis	5%	3%	1%
Mixed methods	3%	1%	1%
Various (edited volume)	1%	3%	1%

Evidence-informed	37%	56%	20%
Anecdotally-informed	11%	10%	12%
No basis specified	6%	12%	1%

Table 4

Basis of Evidence by Why Useful

	Supporting leaders' own professional learning	Designing programs and policies	Providing instructional leadership for others	Supporting and monitoring implementation	Selecting programs or interventions
<i>n</i>	83	75	68	25	25
Original analysis	47%	39%	44%	52%	76%
Strong	0%	3%	1%	0%	16%
Moderate	10%	7%	6%	16%	16%
Promising	6%	11%	1%	12%	8%
None	84%	80%	91%	72%	60%
Evidence-informed	35%	47%	49%	36%	12%
Anecdotally-informed	11%	5%	4%	4%	8%
No basis specified	7%	9%	3%	8%	4%

n = 276 leaders