

A Review of Research Methods Trends in Educational Leadership Journals

Karen Moran Jackson
Soka University of America

The aim of this exploratory study was to document aspects of research methodology for articles published in three educational leadership journals that are directed at emerging school leaders and the academic community that supports them. For articles published between 2013 and 2017, the research review surveyed types of studies, forms of data collection, participant characteristics, and method references cited. Qualitative work was more common than quantitative and mixed methods, with interviews and surveys as the most common data sources. While some articles included no methodological references, the majority of articles included recent citations, dominated by methods textbooks. Administrators and administrators in training were the most common groups of participants, but other demographic details on participants were irregularly included. Overall, the qualitative research showed greater variability in data collection than the quantitative research, with details on methodological design choices and practitioner-scholarship unevenly framed within the journals.

Keywords: research methods; research review; educational leadership

As educational decision makers are increasingly asked to respond to and incorporate research-based practice in their work, professors of educational leaders and new scholars in the discipline need to remain mindful of the variety of methods that are under the umbrella of academic research. The aim of this exploratory study is to document the types of methods found in articles published from 2013 to 2017 in educational leadership journals aimed at emerging school leaders and the academic community that supports them. The research goal of the present study is to explore the method choices made by researchers publishing in journals that focus on the teaching of educational leadership to gain an understanding of the state of the field regarding research methods. By gaining a precise view of the variety of methods present in these journals and how methods are discussed, academics and new scholars can recognize potential gaps in the literature and determine areas of methodological opportunity for their future research programs.

Literature Review

Hallinger (2013) noted that reviews of research methods can serve many roles for the academic community including: synthesizing knowledge, identifying gaps in the literature, and advocating for policy-making decisions. Yet Hallinger also stated that very few reviews of research in the educational leadership literature exist considering the number of overall published studies. His examination identified only 35 review articles in total over a 52-year period from nine selected peer-reviewed journals (2014), although the number of review articles appeared to be increasing as the field became more established. Concentrating on the most recent educational leadership specific studies, the following sections note what previous reviews have discovered about the types of studies and data collection methods used, the demographics of sample participants engaged, and the variety of method references cited.

Types of Studies

Hallinger and colleagues have examined the research literature on educational leadership and management across the globe. These reviews have found that across Africa (Hallinger, 2018), Latin America (Castillo & Hallinger, 2018), and Asia (Hallinger & Bryan, 2013) over 70% of articles published were empirical, as opposed to theoretical or commentary. In Africa, quantitative methods were used most commonly, while the majority of studies in Latin America and Asia used qualitative means. In all regions, mixed methods studies were the smallest group. Hallinger and Bryant (2013) also observed that at least in Asia, quantitative work was becoming more popular over time.

Examining three North American and three U.K. based educational leadership journals, Thomson (2017) offered a holistic, critical review of research methods in educational leadership, management, and administration. Based on fundamental questions of what methods are used and how (if) methodological decisions are discussed, Thomson found that about a quarter of articles included quantitative data collection, with the remainder using qualitative methods and some variation among journals. Few articles of any type, however, included a discussion of method choices, rendering silent debates in the field about how content knowledge is generated.

Looking at more U.S. centered literature, Gumus, Bellibas, Esen, and Gumus (2018) reviewed educational research that specifically focused on models of leadership. They found that over a 24-year time period (1990 to 2014) the number of qualitative studies, while numerically the most popular, showed a decrease, along with a decrease in the number of theoretical, non-empirical

works. Conversely, the number of quantitative and mixed methods studies on the topic of leadership models in education increased, similar to that observed in the general educational leadership research in Asia by Hallinger and Bryant (2013). The growth in quantitative work observed by these two studies matched with research by Tian, Risku, and Collin (2016) that focused specifically on the concept of distributed leadership in primary and secondary education across eight journals from 2002 to 2013. Tian et al. found that empirical studies dominated the reviewed articles, with a relatively even mix between qualitative, quantitative, and mixed method approaches, as opposed to an earlier review on the same topic that found a preponderance of qualitative case studies.

While the reviews above concentrated on either a specific geographic region or a specific topic, Murphy, Vriesenga, and Storey (2007) investigated 25 years of articles in a specific journal, the *Educational Administration Quarterly (EAQ)*. They found that slightly over half the articles published in *EAQ* were empirical, as opposed to conceptual or theoretical, with a slight upturn in that percentage in more recent years. Qualitative work overall remained the most common with between 45% and 58% per publication year, while quantitative works fluctuated between 35% and 42% and mixed methods works made up the remaining. These proportions are similar to the ones found by Papa and English (2010) in their examination of educational leadership dissertations published in ProQuest.

Data Collection Methods

In terms of data collection methods, surveys and interviews dominate across the globe. In Latin America, surveys were the most popular data collection method, while interviews, direct observation, and document analysis were also used (Castillo & Hallinger, 2018). For the quantitative and mixed methods studies observed in Latin America, over half of the studies used correlational and multivariate statistics in their analysis. In Africa, the quantitative work again used mostly surveys, with about half relying on descriptive statistics and another half using inferential tests (Hallinger, 2018). No details were provided about the types of qualitative or mixed data collection methods used in the studies. Tian et al. (2016) found data collection methods in their observed articles to include interviews, observations, and case studies for qualitative work, while quantitative work again was dominated by surveys. Thomson (2017) found that interviews, surveys, and case studies were especially popular, but few quantitative papers employed advanced statistical techniques such as model testing and few qualitative papers employed critical analytic techniques, using instead more constructivist approaches. Murphy et al.'s review of work in *EAQ* (2007) found that quantitative data were collected mostly by surveys. However, they also found that secondary data analysis was employed by about a quarter of the studies and a small number used experimental or quasi-experimental means. For qualitative work in *EAQ*, the most popular framework was content analysis, followed by inductive analysis, but with many types of additional frameworks, such as narrative analysis and phenomenological analysis, also represented.

Participant Characteristics

Few of the papers reviewed discussed the demographics of participants that were included in the empirical work. This is in-line with other social sciences that reviews have found to be inconsistent in the reporting of demographics such as organizational psychology (Casper, Eby, Bordeaux, Lockwood, & Lambert, 2007). Gumas et al. (2018) did find that of the empirical papers with a

distinct sample group, most of the studies focused on principals, with an increase in work on leadership models with teachers and other educational workers over the period of review.

References Cited in the Methods Section

The only review that discussed method reference citations specifically was Murphy et al.'s work (2007). They found that references on research methods cited most frequently included the *Handbook of Research on Teaching* by Wittrock, *The Discovery of Grounded Theory* by Glaser, *Qualitative Data Analysis* by Miles, *Research in Organizational Behavior* by Shaw, and *Naturalistic Inquiry* by Lincoln. These were mostly textbooks that focused on research methods in general or on qualitative work.

Overall, recent reviews of the educational leadership literature document a pluralistic methodological landscape in many ways. While mixed methods are not particularly prevalent, qualitative and quantitative methods are both very common, with the advantage going to one or the other depending on the topic and region included in the review. In terms of data collection methods, quantitative work everywhere is dominated by surveys, with qualitative work showing more variety. There is little information on data collection types for mixed methods studies. There were also few reviews that provided demographic information on the people who participated in the studies, an important concern in terms of designing a study that can address potential gaps in the literature. Additionally, there is little information on what methodological references have been consulted by previous researchers and would be considered seminal in the field. The current study aims to address some of the information gaps highlighted here for a variety of empirical studies and document these details, including data collection types, references cited, and participants included. Finally, the work serves as evidence of possible gaps in the literature for those designing studies and who seek to publish in these outlets.

Methods

Following the terminology for research reviews advocated for by Hallinger (2013; 2014), this study has a methodological thematic focus and is largely exploratory, as I sought to document and describe the existing method choices of the focal articles. The current study could also be classified as a *topographic review* (Hallinger, 2013, 2018) in that it looks for trends in the literature, rather than engaging in deep content analysis and comparisons. Using the terminology of Thomson (2017), the review could also be considered a *snapshot* of research methods, as the researcher acts as a photographer in limiting and choosing what data are included and emphasized.

The current analysis summarizes the methods section of articles published in a five-year span, from 2013 to 2017, for three journals: *Education Leadership Review (ELR)*, *International Journal of Educational Leadership Preparation (IJELP)*, and *The Journal of Research on Leadership Education (JRLE)*. These three educational leadership journals were chosen because they have an explicit aim to engage with educational leaders and academic professionals who teach educational leadership. To the author's knowledge, they also have not been included in previous research reviews.

The framework guiding data collection for the study was the *research methods typology* used by scholars across the social sciences that divide research methods into quantitative (largely numerical and measurement based), qualitative (largely non-numerical such as text, visual, or audio), and mixed methods (a combination of both numerical and non-numerical; Tashakkori &

Teddle, 2003; Creswell & Creswell, 2018). These broad levels of distinctions between methods based on the type of data collected are well-known and referenced in previous reviews of research cited above, as well as in basic research methods textbooks.

To create the database for this study, the researcher downloaded or accessed online all articles through the open access websites provided by the journals or through the researcher’s academic library. Data notes were collected in a specially created Google Form that was converted to a spreadsheet, allowing for data cleaning and data analysis preliminarily in Excel and later in Stata (StataCorp, 2017), a specialized statistical software program with extended graphics capabilities. Aspects of data collected included the journal number and date, article title, authors, methods and types of data collection materials, citations given in the text that described the methods, and description of any sample participants, including occupation (teacher, administrator, etc.), race/ethnicity, and gender. The researcher made a determination of the type of method used (qualitative, quantitative, mixed method, non-empirical) based primarily on how the study was described by the authors in the text, and, if a description was not explicitly provided, by the researcher’s own assessment using the framework of Creswell and Creswell (2018). Articles appearing in separate sections in the journals for non-empirical work or clearly labeled as editorials or book reviews by the journal were excluded from the final sample of 200 articles.

Results

This results section is divided into four subsections. The first two subsections contain descriptions of the types of studies and the types of data collection used in articles from the three focal journals over the five years of data. The third subsection includes an overview of the demographics of sample participants. The final subsection contains descriptions of the references cited in the methods section of the texts.

Types of Studies

In all 200 articles fitting the inclusion criteria described above were published by the three journals over the five-year period from 2013 to 2017, with 59 from *ELR*, 85 from *IJELP*, and 56 from *JRLE*. Of these, 91 (45.5%) were qualitative, 43 (21.5%) were quantitative, 40 (20%) were non-empirical, and 26 (13%) were mixed or multi-methods. The journals displayed a relatively similar distribution of studies (see Table 1). While a chi-square test showed a statistically significant difference in the distribution, the real effect was small, as seen in the small size of the adjusted residuals in Table 1. The difference was largely due to fewer quantitative studies published in *JRLE* over the time period than expected, as well as more non-empirical articles, while *ELR* had fewer non-empirical articles. Readers should note, however, that *JRLE* also provided separate sections in their pages for non-empirical articles, such as editorials and book reviews, and these were not included in the analyzed sample.

Table 1
Distribution of common method types used in articles published in three educational leadership journals between 2013 and 2017.

Journal		Qualitative	Quantitative	Mixed methods	Non-empirical
<i>ELR</i>	Observed frequency	26.00	17.00	10.00	6.00
	Expected frequency	26.85	12.69	7.67	11.80
	Adjusted residual	-0.26	1.63	1.07	-2.25

<i>IJELP</i>	Observed frequency	34.00	22.00	12.00	17.00
	Expected frequency	38.68	18.28	11.05	17.00
	Adjusted residual	-1.34	1.30	0.40	0.00
<i>JRLE</i>	Observed frequency	31.00	4.00	4.00	17.00
	Expected frequency	25.48	12.04	7.28	11.20
	Adjusted residual	1.75	-3.08	-1.54	2.28

Note: Pearson $\chi^2(6) = 17.51$, $p = 0.008$; likelihood-ratio $\chi^2(6) = 19.60$, $p = 0.003$. The journals are *Education Leadership Review (ELR)*, *International Journal of Educational Leadership Preparation (IJELP)*, and *The Journal of Research on Leadership Education (JRLE)*.

A similar analysis, but by year rather than journal title, showed no apparent trend in the publication patterns of methods over the five-year period (see Table 2). The most common method used in studies every year was qualitative, with both quantitative and non-empirical articles published at roughly the same rate, and mixed methods research as the most infrequent.

Table 2

Observed counts of common method types by year published, from 2013 to 2017, for three educational leadership journals.

Year		Qualitative	Quantitative	Mixed methods	Non-empirical
2013	Observed frequency	27.00	11.00	8.00	10.00
	Expected frequency	25.48	12.04	7.28	11.20
	Adjusted residual	0.48	-0.40	0.34	-0.47
2014	Observed frequency	17.00	8.00	8.00	8.00
	Expected frequency	18.66	8.82	5.33	8.20
	Adjusted residual	-0.58	-0.35	1.39	-0.09
2015	Observed frequency	14.00	9.00	2.00	5.00
	Expected frequency	13.65	6.45	3.90	6.00
	Adjusted residual	0.14	1.23	-1.12	-0.50
2016	Observed frequency	21.00	12.00	4.00	10.00
	Expected frequency	21.39	10.11	6.11	9.40
	Adjusted residual	-0.13	0.77	-1.05	0.25
2017	Observed frequency	12.00	3.00	4.00	7.00
	Expected frequency	11.83	5.59	3.38	5.20
	Adjusted residual	0.07	-1.33	0.39	0.95

Note: Pearson $\chi^2(12) = 7.12$, $p = 0.849$; likelihood-ratio $\chi^2(12) = 7.31$, $p = 0.836$

Data Collection Methods

Many studies used more than one form of data collection. For the 91 qualitative studies, the most common data collection method was interviews ($n=48$), with content analysis of artifacts and/or documents as a popular secondary method ($n=44$). Other relatively common data collection methods included field notes ($n=11$), observations ($n=14$), open-ended discussions ($n=8$), focus groups ($n=7$), and secondary analysis of existing data ($n=7$). Other qualitative data collection methods, such as video recordings, mapping, and discussion threads, were only used in one or two studies apiece.

Of the 43 quantitative studies, the majority of data came from surveys (n=33). Secondary data use was the next most common format (n=9), with the use of assessment data, the third most common (n=4). The least common was the use of data from alternative sources, such as GIS (n=1) and documents (n=2), and testing of an existing survey (n=1).

The 26 mixed methods studies used a smaller cross-section of typical qualitative and quantitative data sources. Data sources overall included surveys (n=21), interviews (n=11), open-ended discussions (n=11), artifacts and documents (n=6), focus groups (n=5), secondary data (n=4), assessment data (n=1), and testing/validation of existing surveys (n=2). The most common combination of mixed methods studies (n=6) was to use a survey that included both closed- and open-ended questions. Five additional studies used these methods as well as an additional qualitative data source, such as interviews (n=3), focus groups (n=1), and artifacts (n=1). Four studies combined interviews with quantitative survey data only, with three additional studies using these two sources along with various other methods.

Participant Characteristics

Of the 160 empirical articles reviewed, 30 did not include specific sample participants, as the research used alternative data sources, such as documents, or was not based on individual level data, such as district level assessment data. Of the 130 articles that collected data directly from participants, the most common participants were school or district based administrators (n=57), followed by principal and administrator candidates (n=39) and K-12 teachers (n=30). Less frequent sample participants included college or university professors (n=17), students (n=11), and other persons (n=15), such as community members, school board members, and school staff. Data from more than one group were collected in 36 of the studies, with eight studies gathering data from administrators and teachers as a pair and four additional studies gathering data from administrators, teachers, and at least one other group. The next most popular combination were data from administrators and administrator candidates (n=5).

Race and gender of participants were unevenly revealed in the articles. Of the 130 relevant empirical articles, 60 (46%) did not report any information on participant gender. Of those that did report, 52 (40%) reported a majority female sample, 14 (11%) a majority male sample, with the remainder reporting either an even distribution or a mixed sample, with no further information. Regarding information on the race and/or ethnicity of participants, 95 (73%) did not report information. Of the 35 studies that did report, 20 reported a majority White sample, 7 reported no racial or ethnic group majority among sample participants, 6 reported a majority Black sample, and 1 study each reported a Latino majority and a Native American majority sample.

While 63 of the empirical articles reported information on both gender and race of participants, 58 did not report either participant demographic information, 37 reported gender without information on participant race, and 2 reported information on race, but not gender. There was some variation in demographic reporting by research method type. Quantitative and qualitative projects were just as likely to note participant gender (63% and 67%, respectively) and participant race and/or ethnicity (42% and 44%), while the small number of mixed methods projects were less likely to do so (46% for gender and 27% for race).

References Cited in the Methods Section

Of the 160 empirical papers examined, 42 cited no references in the methods section. The most cited individual reference was the second edition of Miles and Huberman's *Qualitative Data Analysis* which was cited 17 times, while the third edition, with a new co-writer, Johnny Saldaña, was cited three times, for a total of 20 citations. This was the most popular reference overall. Twelve other works were cited at least five times (see Table 3), although it should be noted that different editions of books were individually counted. For example, Patton's work entitled *Qualitative Research & Evaluation Methods* is on the list two times; once for the third edition, published in 2002, and once for the second edition, published in 1990, as well as two citations for the fourth edition, published in 2015 (not featured in the table). Taken together, this work was cited 17 times in the articles reviewed, making it the second most popular reference.

Table 3

Top cited references in the methods sections of reviewed empirical articles published between 2013 and 2017. Different editions of the same book are counted separately.

Citation	Title	Number of citations
Miles & Huberman, 1994	<i>Qualitative Data Analysis</i> (2nd ed.)	17
Merriam, 2009	<i>Qualitative Research: A Guide to Design & Implementation</i> (2nd ed.)	12
Patton, 2002	<i>Qualitative Research & Evaluation Methods</i> (3rd ed.)	12
Saldaña, 2009	<i>The Coding Manual for Qualitative Researchers</i> (1st ed.)	7
Strauss & Corbin, 1998	<i>Basics of Qualitative Research: Techniques & Procedures for Developing Grounded Theory</i> (2nd ed.)	6
Creswell, 2003	<i>Research Design: Qualitative, Quantitative, & Mixed Methods Approaches</i> (2nd ed.)	6
Creswell, 2007	<i>Qualitative Inquiry & Research Design: Choosing Among Five Approaches</i> (2nd ed.)	5
Creswell, 2013	<i>Qualitative Inquiry & Research Design: Choosing Among Five Approaches</i> (3rd ed.)	5
Marshall & Rossman, 2011	<i>Designing Qualitative Research</i> (5th ed.)	5
Patton, 1990	<i>Qualitative Evaluation & Research Methods</i> (2nd ed.)	5
Stake, 1995	<i>The Art of Case Study Research</i>	5
Strauss & Corbin, 1990	<i>Basics of Qualitative Research: Grounded Theory Procedures & Techniques</i> (1st ed.)	5
Yin, 2009	<i>Case Study Research: Design & Methods</i> (4th ed.)	5

John Creswell was the most cited single researcher in the methods sections of these articles. His work was cited 35 times, represented either by research methods textbooks as noted above or in collaboration with others in journal articles. The next most frequently cited author was Anselm Strauss at 25 times, with both Miles and Huberman cited 24 times. The frequency of author name citations in the methods sections is illustrated in Figure 1 for the top 16 authors.

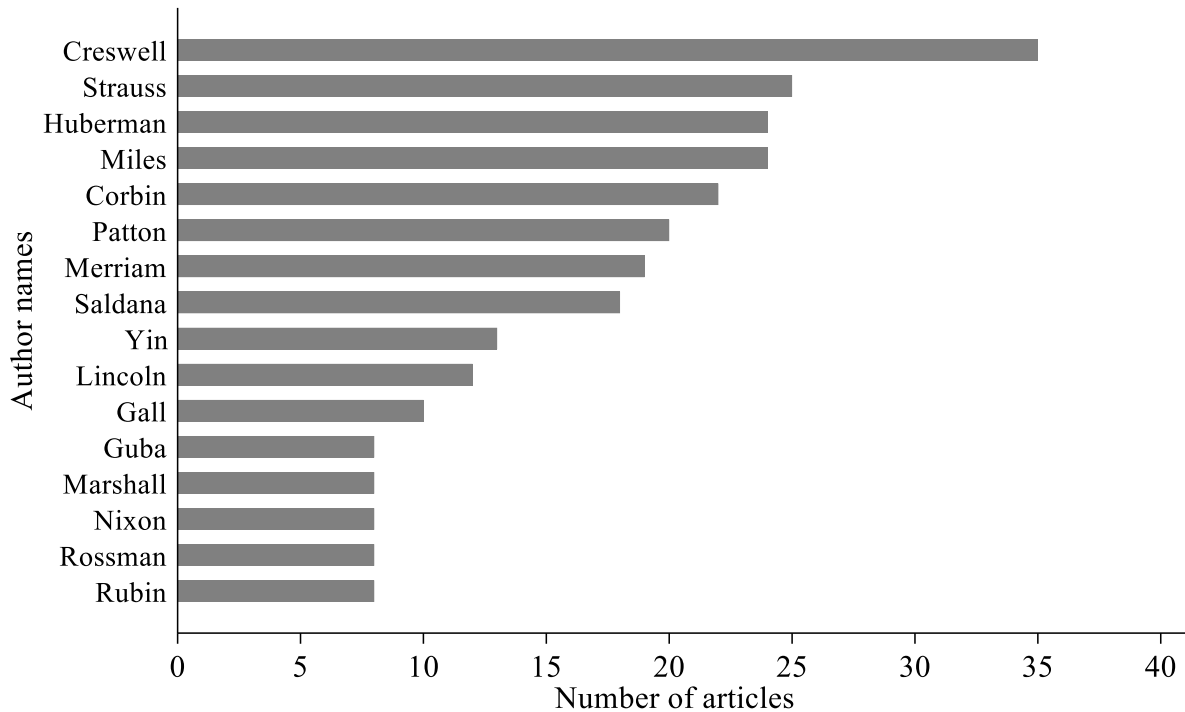


Figure 1. Frequency of author name citations in the methods sections of empirical articles published between 2013 and 2017. Creswell was the most cited author while 15 additional authors were cited at least eight times within the 160 reviewed empirical articles.

In general, the references cited were relatively recent publications, with the inclusion of some seminal, older works. See Figure 2 for a display of the frequency of publication year for cited references, excluding three references from 1933, 1951, and 1963 for ease of viewing. The earliest work cited more than once is Glaser and Strauss's *The Discovery of Grounded Theory* (1967) which was cited four times. The year with publications most cited was 2009, largely due to the three books published that year by Merriam, Saldaña, and Yin noted in Table 2. The large spike in 1994 is largely due to the publication of the second edition of Miles and Huberman's *Qualitative Data Analysis: An Expanded Source Book*, the most cited book overall, and Moustakas' *Phenomenological Research Methods*, cited four times. The large number of publications from 2007, 2008, and 2011, however, are almost entirely due to citations for individual articles published in that year, rather than popular textbooks.

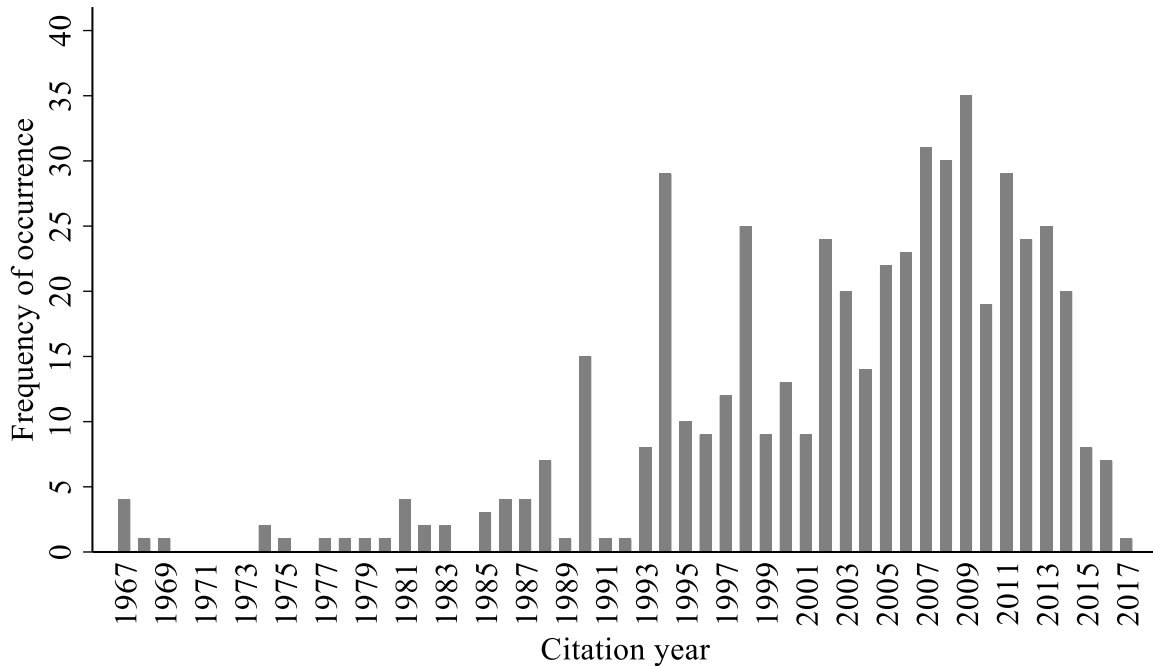


Figure 2. Frequency of references cited by year in methods sections of empirical articles. The majority of references cited were published recently. Older years with high numbers of citations correspond with publication dates of commonly referenced textbooks.

The number of references cited showed minor variations among research method types (see Figure 3). For all types of articles, citing no methods references or just one was relatively common with 26 out of 43 quantitative articles, 33 out of 91 qualitative articles, and 10 out of 26 mixed methods articles doing so. Qualitative articles cited slightly more references on average than the quantitative articles ($M = 3.60$, 95% CI [2.98, 4.21]; $M = 1.88$, 95% CI [.99, 2.78]; $t = 3.10$, $p = .007$), although neither was statistically different from the number of references cited by mixed methods articles ($M = 2.19$, 95% CI [1.04, 3.35]).

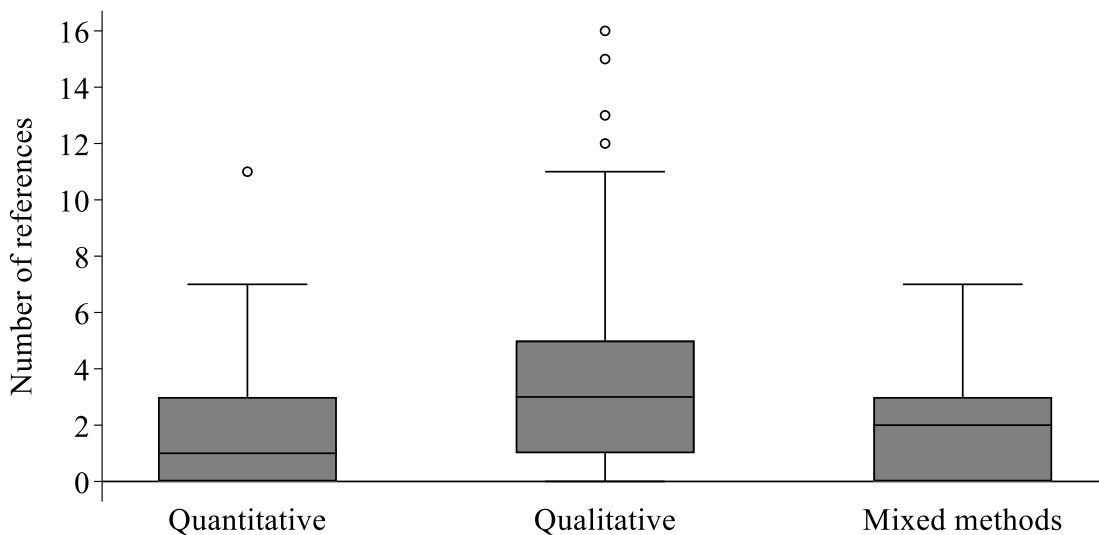


Figure 3. Box plot of the number of methods references cited in empirical articles by type of methods. For each article type, the box outlines the middle 50% of counts and the line within the box shows the median, while the circles represent outliers. Qualitative articles typically included the most methods citations, but there was significant overlap between all three article types.

Discussion

This study examined the methods employed in articles published in three educational leadership academic professional journals between 2013 and 2017. Overall, empirical articles made up the bulk of the articles published. Within these articles, while qualitative work dominated, both quantitative and mixed methods work were well-represented. The qualitative work showed greater variety in data collection sources, while single-time surveys dominated quantitative data collection. The majority of articles included recent method reference citations, with citations dominated by textbooks, particularly on qualitative methods, and a significant number of articles without methodological references at all. Not surprisingly for the field, administrators and administrators in training were the most common groups of participants. However, information on the gender and race of participants was irregularly included.

Some trends were also noted that might offer opportunities for further discussion on methods and methods discourse within the educational leadership field. First, while the qualitative research showed greater variety than the quantitative research, both showed little use of alternative data sources. Quantitative research is undergoing an explosion in new methods as big data and social media data have become more ubiquitous, yet the current literature in the field shows a reliance on one-shot surveys, often done with convenience sampling. Qualitative and mixed methods research, likewise, have also been impacted by technology, with alternative data sources such as video blogs, social media postings, and photos available online, worldwide. The lack of longitudinal studies as well as methodological variety, especially for quantitative work, is aligned with results found by Thomson (2017) and Hallinger (2018) in their reviews of research methods. Thomson (2017) in particular noted *conservatism* in method choices, with common data collection techniques of surveys and interviews used almost exclusively as was found here. One of the limitations of this study is that the author was unable to shed light on why articles display this imbalance in method choices. There are several possible reasons including: a lack of alternative research methods being taught in graduate classes and subsequently used in the field; a file drawer problem when insignificant results from alternative methods are not submitted for publication and the research remains unpublished; or a submission bias by researchers “playing the journal game” and choosing to send papers with these methods to journals not reviewed here (Thomson, 2017, p. 218).

A second noted trend was that details on methodological design choices were unevenly documented. For example, some studies that obtained documents for analysis clearly stated the methods of document data collection and modes of analysis, including a description of search terms employed and of coding choices. Other studies, also using documents as data sources, did not provide information on how documents were ultimately selected for inclusion in the study nor how coding, theming, or other analysis proceeded. This surprising lack of information about the methods used even with clear, empirical papers matches an observation made by Hallinger (2014) that even reviews of research do not always explain their own methods. As documented here, limited methodological descriptions were found not only in the procedures and analysis steps but also in discussions of sample participants and references.

The lack of methods information can make it more difficult for other scholars to replicate the studies, make conclusions about generalizability of results to a different context or population, or assess rigor and trustworthiness. For young researchers as well, without this information, building on a study of interest is made harder by this lack of transparency. While researchers often display a great deal of creativity in the creation of a project, they do not develop methods in a vacuum. Citing other works that served as methodological examples or inspiration can help younger researchers in the design of their own work as well and would not take up much in the way of valuable text space.

Finally, this review documented a variety of ways that practitioner-scholarship was framed within the journals. For example, within the qualitative articles, some authors presented research on their own teaching and clearly framed their papers as a type of empirical research by using a specific methodological description, such as autoethnography or action research. Yet others, with similar research on their own teaching, did not frame their papers as such and did not include explicit language about methods, despite the work containing elements of action research (Osterman, Furman, & Sernak, 2014), scholarship of teaching research (Cross & Steadman, 1996), or pragmatic practitioner research (Gordon, 2016). The definition for whether these articles would be considered *empirical* research was not always clear; using the descriptions provided by the authors sometimes resulted in placing two similar articles in separate categories. As such, the inclusion of papers in the sampling frame was impacted by how the authors wrote about their practitioner-scholarship research, how they chose to frame their own study and the inclusion of methods-related details in the article, rather than a substantial difference in methods employed. A discussion about how the field defines and promotes the scholarship of teaching might help practitioner-scholars engage further with this type of research as a methodology and discuss how to frame this important type of work so that it retains its value for educational leaders and professors of educational leadership.

There are several limitations to the current study that should be noted. First, as the study itself took a quantitative approach, choices were made that artificially constricted the data. The use of specific coding categories obscured a great deal of variation in both the articles and their methods as discussed above. A second limitation is the geographic boundaries of the included journals and articles. All three journals are associated with U.S.-based organizations and there were few international studies included in the sample. Thomson (2017), who reviewed both North American and United Kingdom journals, found that North American journals tended to have more empirical pieces, fewer reviews of literature, and greater use of secondary data, so the data reported here should be assessed with these limitations in mind.

While some may argue that the field of educational leadership needs more advanced quantitative studies because of this method's ability to support causal statements (Hallinger, 2018), the ability to tell stories of innovative interventions and move policy through rich descriptive case studies should not be lost, nor should theoretical discussions and philosophical debates be subordinated in the literature (Kowalski, 2009; Thomson, 2017). The need for methodological richness, of course, places a burden on those who teach educational leadership to remain current on emerging research methods and techniques of analysis (Bowers, 2017). Including explicit discussions in the methods sections about methodological decisions would also allow the field to debate how knowledge is generated, pointing out to young scholars that there are no absolutes in research, even for the methods section.

References

- Bowers, A. J. (2017). Quantitative research methods training in education leadership and administration preparation programs as disciplined inquiry for building school improvement capacity. *Journal of Research on Leadership Education, 12*(1), 72-96.
- Casper, W. J., Eby, L. T., Bordeaux, C., Lockwood, A., & Lambert, D. (2007). A review of research methods in IO/OB work-family research. *Journal of Applied Psychology, 92*(1), 28-43. <http://dx.doi.org/10.1037/0021-9010.92.1.28>
- Castillo, F. A., & Hallinger, P. (2018). Systematic review of research on educational leadership and management in Latin America, 1991–2017. *Educational Management Administration & Leadership, 46*(2), 207-225.
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage.
- Cross, K. P., & Steadman, M.H. (1996). Classroom research: Implementing the scholarship of teaching. *The Jossey-Bass higher and adult education series*. San Francisco: Jossey-Bass.
- Gordon, S. P. (2016) Expanding our horizons: Alternative approaches to practitioner research. *Journal of Practitioner Research, 1*(1), 1-18.
- Gumus, S., Bellibas, M. S., Esen, M., & Gumus, E. (2018). A systematic review of studies on leadership models in educational research from 1980 to 2014. *Educational Management Administration & Leadership, 46*(1), 25-48.
- Hallinger, P. (2013). A conceptual framework for systematic reviews of research in educational leadership and management. *Journal of Educational Administration, 51*(2), 126-149.
- Hallinger, P. (2014). Reviewing reviews of research in educational leadership: An empirical assessment. *Educational Administration Quarterly, 50*(4), 539-576.
- Hallinger, P. (2018). Surfacing a hidden literature: A systematic review of research on educational leadership and management in Africa. *Educational Management Administration & Leadership, 46*(3), 362–384.
- Hallinger, P., & Bryant, D. A. (2013). Accelerating knowledge production on educational leadership and management in East Asia: A strategic analysis. *School Leadership and Management, 33*(3): 202–223.
- Kowalski, T. (2009). Need to address evidence-based practice in educational administration. *Educational Administration Quarterly, 45*(3), 351-374.
- Murphy, J., Vriesenga, M., & Storey, V. (2007). *Educational Administration Quarterly*, 1979-2003: An analysis of types of work, methods of investigation, and influences. *Educational Administration Quarterly, 43*, 612-628.
- Osterman, K., Furman, G., & Sernak, K. (2014). Action research in EdD programs in educational leadership. *Journal of Research on Leadership Education, 9*, 85-105
- Papa, R., & English, F. (2010). The good, the bad, and the ugly: a critical review of trends in dissertation research in educational leadership, 2006-08. In F. English & R. Papa, *Restoring Human Agency to Educational Administration: Status and Strategies* (pp. 47-78). Lancaster, PA: ProActive Publications.
- StataCorp. (2017). *Stata Statistical Software: Release 15*. College Station, TX: StataCorp LLC.
- Tashakkori, A., & Teddlie, C. (Eds.). (2003). *Handbook of mixed methods in social and behavioral research*. Thousand Oaks, CA: Sage.

- Thomson, P. (2017). A little more madness in our methods? A snapshot of how the educational leadership, management and administration field conducts research. *Journal of Educational Administration and History*, 49(3), 215-230.
- Tian, M., Risku, M., & Collin, K. (2016) A meta-analysis of distributed leadership from 2002 to 2013: Theory development, empirical evidence and future research focus. *Educational Management Administration & Leadership*, 44(1), 146–164.