The Structure of Mixed Method Studies in Educational Research: A Content Analysis

Lauren H. Bryant
Virginia Tech

Abstract

Educational researchers are beginning to use mixed methods designs to answer complex research questions. This content analysis investigates the structure and use of mixed methods in educational research in order to work toward a more standardized presentation. I used a concurrent mixed methods approach to analyze 30 studies from three prominent journals. Studies were analyzed to determine whether appropriate mixed methods terminology was used and a rationale provided for the use of mixed methods design. Six of 30 articles used mixed methods terminology and 11 studies provided no rationale. From the rationales provided, four themes emerged and are discussed. Data sets were merged to explore the use of terminology with respect to rationales provided. Suggestions are offered for the presentation of mixed methods in educational research.

Quantitative and qualitative purists have for decades advocated the *incompatibility thesis*, which contends that quantitative and qualitative research paradigms cannot be mixed (Johnson & Onwuegbuzie, 2004). The basis of this argument is that the underlying assumptions and philosophies of the quantitative and qualitative paradigms, positivism and interpretivism, hold competing ideas that can never be reconciled (Johnson & Onwuegbuzie, 2004). Some have argued that this reluctance to combine qualitative and quantitative data has prevented researchers in the humanities and social sciences from answering research questions in a holistic way (Johnson & Onwuegbuzie, 2004). The proponents of this argument present mixed methods research as the third research paradigm, with pragmatism as its underlying philosophy, (Johnson & Onwuegbuzie, 2004; Tashakkori & Teddlie, 2003). According to pragmatism, researchers should use an outcome-oriented rule with regards to methods; in other words, "research approaches should be mixed in ways that offer the best opportunities for answering important research questions" (Johnson & Onwuegbuzie, 2004, p. 16). Pragmatism rejects the dualisms of rationalism vs. empiricism, subjectivism vs. objectivism, and instead views knowledge as being both "constructed *and* based on the reality of the world we experience and live in" (Johnson & Onwuegbuzie, 2004, p. 18). Pragmatism prefers "action to philosophizing" and views current understandings or assertions of truth or meaning as fluid and changing (p. 18). Under pragmatism, researchers choose the methods that will provide them with the most complete answers to their research questions (Tashakkori & Teddlie, 2003). This paradigmatic stance most accurately represents research that is carried out in practice, since "in real world practice, methods can be separated from the epistemology out of which they emerged" (Patton, quoted in Tashakkori & Teddlie, p. 18) and this is often what researchers do (Greene & Caracelli, 2003). Although the "Paradigm Wars" are largely over (Tashakkori & Teddlie, 2003; Creswell & Plano Clark, 2007) this debate has slowed the development of mixed methods research and accompanying standards and nomenclature (Creswell & Plano Clark, 2007).

Background

Presenting Mixed Methods Studies

Methodologists have offered an overall language and system for mixed methods research, though they are often underused or confused in practice (Tashakkori & Teddlie, 2003). These issues, as well as some lingering doubts about the compatibility of quantitative and qualitative paradigms, have resulted in some trepidation over the use of mixed methods. There is currently no well-established structure for presenting mixed methods findings in a precise and intelligible way that will also fit the standard length for journal articles – approximately 20 pages. If researchers fear they will not be able to publish their mixed methods research or they are unsure how to organize it, they are less likely to make use of such methods. This is true within the field of educational research, even though the use of mixed methods is well-suited to the complex study of education (Tashakkori & Teddlie, 2003). However, there are four steps that researchers can take to present their mixed methods findings in a way that is more understandable and accessible to the reader: (a) identify the study as mixed methods; (b) identify the timing or design used in data collection and analysis; (c) explicitly address these factors within the abstract and the methods sections; and (d), explicitly state the rationale for using mixed methods design.

Openly identifying a study as mixed methods is one of the easiest ways researchers can help readers begin to understand how the data in the study was collected and analyzed. Discussing timing is another important part of presenting mixed methods research for several reasons. First, using the terminology "concurrent" or "sequential" allows the researcher to convey in a precise manner the way in which the data were collected. This information is useful to readers of the research, as it allows them to make sense of the procedures used by the researcher. Second, discussing the timing of data collection is also necessary in mixed methods research because timing that is not well-planned by the researcher can confound or compromise the research findings. An example of this would be a researcher who plans to collect and analyze quantitative and qualitative data on the same sample. If the quantitative data are collected and analyzed before the collection of the qualitative data, it is possible that the quantitative findings would influence the emerging themes discovered by the researcher during qualitative analysis. In the interest of transparency it is necessary for the researcher to divulge when the data types were collected.

Creswell and Plano Clark (2005) argue that it is important for mixed method research to be driven by the research questions, and for this reason it is especially important for researchers to address the rationale for collecting both types of data and using a mixed methods design. When methods are used without a clear rationale, researchers can end up answering the wrong question, or failing to answer a question at all. This is especially problematic in mixed methods research, which usually involves more time and funds than a single method study. Providing a rationale also allows the reader to see how the research questions drove the research design. Developing a well-structured rationale stating the need for collecting qualitative and quantitative data is an important part of designing and conducting mixed methods research (Creswell & Plano Clark, 2007).

Content Analyses of Mixed Methods Studies in Other Fields

Content analysis has been used previously to understand how mixed methods design is currently being used within a field of research (Bryman, 2006; Hanson, Creswell, Plano Clark, Petska, & Creswell, 2005; Plano Clark, Huddleston-Casas, Churchill, Green, & Garrett, 2008). These content analyses were used to investigate how researchers were currently using mixed methods and to then make recommendations for the development of this practice (Hanson et al., 2005; Plano Clark et al., 2008). Researchers undertaking this kind of project almost immediately bumped up against the issue of locating mixed methods articles within the chosen field, often using a number of different methods to search for relevant studies (Bryman, 2006; Plano Clark et al., 2008). Researchers also had to determine the criteria for the selection of articles, as few articles would self-identify as mixed methods. Plano Clark et al. (2008) used articles that self-identified as having used both quantitative and qualitative methods. The content analysis conducted by Bryman (2006) included any studies using the terms qualitative AND quantitative, multi-method, mixed method, or triangulation in the title, as key words, or in the abstract. After initial difficulties locating articles, both studies found that mixed methods designs within the target field were rare, with one study noting that less than 1% of publications within the selected time frame were mixed methods (Plano Clark et al., 2008). Bryman (2006) noted a lack of rigorous standards for mixed methods research in some articles, as some researchers used methods that did not meet the standards of the paradigm from which they emerged. Both studies noted a lack of a common nomenclature between the studies within the samples (Bryman, 2006; Plano Clark et al., 2008). Plano Clark et al. (2008) chose to summarize the types of mixed methods designs used and the topics investigated in the sample studies. Bryman (2006) analyzed the specific methods employed and the rationales for collecting both types of data. By summarizing the topics and methods involved in the sample studies, these content analyses helped to organize and present the mixed methods research currently being used successfully within their respective fields. Plano Clark et al. (2008) and Hanson et al. (2005) both conclude their content analyses with recommendations for future mixed methods studies within their fields, such as reminding researchers to be mindful of the paradigmatic lens that they apply to their research (Hanson et al., 2005), or urging researchers to adopt a common terminology (Plano Clark et al., 2008). Since these outcomes are similar to the aims of this study, content analysis is an appropriate technique.

The purpose of this study is to perform a content analysis of mixed methods studies within the field of educational research to gain a better understanding of what multiple method designs are currently being employed in these studies and why. A triangulation mixed methods design will be used, in which both quantitative and qualitative data will be collected from the same sample (Creswell & Plano-Clark, 2007). Since the purpose of this study is to address both a "what" and a "why" question, it is necessary to collect both types of data, as neither type alone would achieve this goal. Quantitative methods will address the "what" most effectively, while qualitative is most useful in addressing the "why." The two types of data will be collected concurrently. The findings from these two types of data will be merged at the interpretation phase for comparison; therefore, equal priority is given to the quantitative and qualitative data. The notation for this study is QUAN + QUAL (Creswell & Plano Clark, 2007). Mixing of the two data sets occurs at the design, collection, and interpretation phases of the study. At the

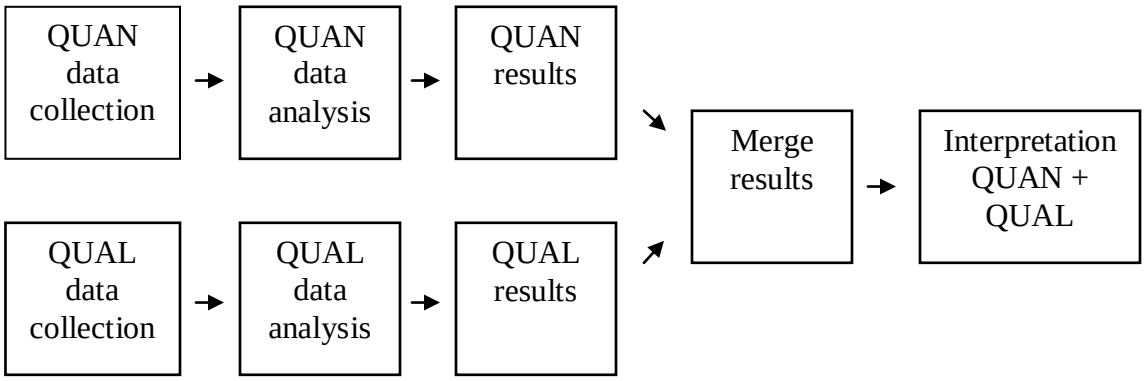
design stage because this study was intentionally designed as a mixed method content analysis, at the collection phase because the instrument used includes both the quantitative and qualitative protocol and data will be collected at the same time, and at the interpretation phase because the individual findings from each data set will be merged for interpretation (Creswell & Plano-Clark, 2007). Quantitative data will be collected in the form of a structured checklist of characteristics that will be used to analyze each study. Qualitative data will be collected in the form of one open-ended question included in the checklist that each study will be coded for. The sample for this study was taken from three major journals in the field of educational research: the *American Educational Research Journal*, the *British Educational Research Journal*, and the *Journal of Educational Research*. All articles self-identified as having collected qualitative and quantitative data. This sampling criterion was used by Plano-Clark et al. (2008) in their content analysis of family science research. The following research questions will guide this content analysis:

> Research question 1 (quantitative): Within the sample, what percentage of the studies makes use of mixed methods terminology?
> Research question 2 (qualitative): Within the sample, what rationales or reasons emerge for collecting both kinds of data?
> Research question 3 (mixed): How do the rationales of the studies associate to the use of mixed methods terminology?

The following flow chart summarizes the phases of this study:

Figure 1

Flow Chart of Content Analysis Design



(Adapted from Creswell & Plano-Clark, 2007)

Methods

Sample

Articles for the analysis were chosen from three major journals in educational research. These were the *Journal of Educational Research*, the *British Journal of Educational research*, and the

American Educational Research Journal. The sampling was done by starting with the most recent volume of each journal and searching backwards for articles that identified as having collected both quantitative and qualitative data. Further analysis was done to determine whether the two data sets had truly been integrated within each study. Articles were not searched for the term "mixed methods" as it was assumed that not all mixed methods articles would identify themselves as such. Thirty total articles were chosen for the analysis, ranging from 2002 to 2009. While one possible method to identify articles for the sample might have been to search the ERIC database for articles including the terms 'quantitative' AND 'qualitative,' 'mixed methods,' or 'multi-methods,' I instead chose to sacrifice breadth for depth and focus on three journals.

Instrument and Procedure

One instrument was used to collect quantitative and qualitative data from the sample. The quantitative portion of the instrument involved determining whether or not the authors had used appropriate mixed methods terminology. In order to qualify as having done so, the authors had to meet three criteria: (a) they had to identify the study as mixed methods; (b) they had to identify the timing and/or the design of the study; and, since the goal of using mixed methods terminology is to make the articles more readable (c) this had to be done within the abstract and/or method section of the article.

The qualitative portion of the instrument involved an open-ended question to assess the rationale provided by the authors for collecting both data types. Each article was analyzed to identify any statements addressing the need for both types of data. Statements addressing the need for or specific use of each of the data types were considered a rationale statement. These excerpts were collected and coded for emerging themes.

In the final part of the analysis, quantitative results and qualitative results were merged to gain a more holistic sense of the findings.

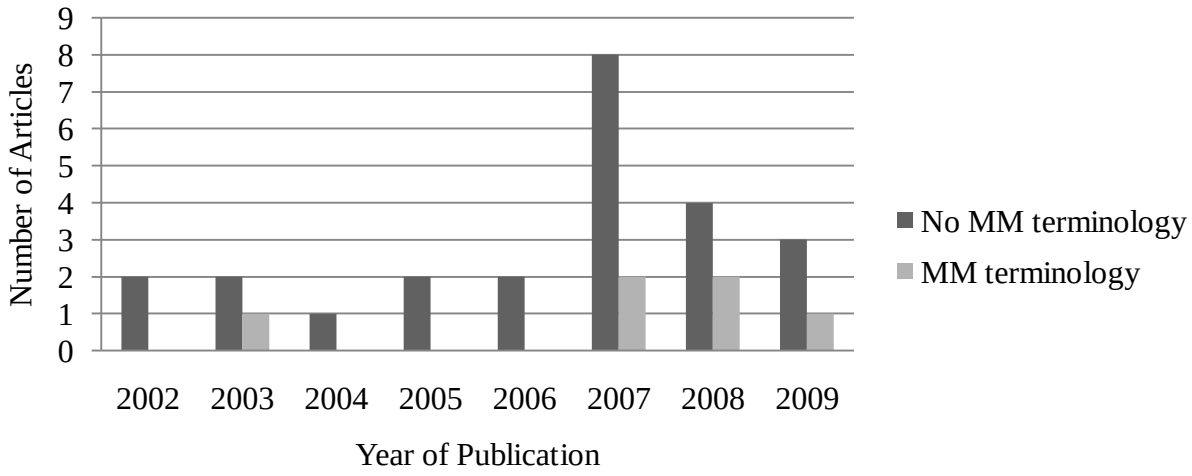
Results

This section of the paper will briefly present the findings for the quantitative analysis, qualitative analysis, and mixed analysis. An overview of the articles in this content analysis is provided in Table 1.

Quantitative Results

Of the 30 articles analyzed in the sample, six articles used mixed methods terminology. This means that only twenty percent of the articles identified as mixed methods, identified the timing or design used within the study, and did this within the abstract or method section. Figure 2 illustrates the trend of mixed methods terminology use from 2002 to 2009 for the three journals. Interestingly, 2007 saw a spike in the number of mixed methods articles published. However, only two of the eight articles published that year used mixed methods terminology.

Figure 2.
Use of Mixed Methods Terminology by Year



Qualitative Findings

After articles were explored for rationale statements and all statements were coded, four themes emerged. Of the sample, 11 of the articles offered no rationale statement for collecting both kinds of data. This means that more than one third of the sample did not address why it was necessary to use both qualitative and quantitative techniques.

Of the remaining 19 articles, four themes emerged upon exploring the rationale statements:

1. The research questions necessitated the collection of both data types;
2. To illuminate understanding of the phenomenon;
3. To use one data type to supplement or explain the other; and
4. To compare both data types to strengthen the findings.

The results of the qualitative exploration are illustrated in Figure 3.

The majority of the rationales, about 37%, were included in theme 2: *To illuminate understanding of the phenomenon*. All other themes had an equal number of rationales included; four each.

Mixing Findings

When the quantitative and qualitative results were merged, several interesting results emerged. First, for the third rationale theme: *To use one data set to supplement or explain the other*, each article within this theme used mixed methods terminology. For the 11 articles providing no rationale, only one used mixed methods terminology. For theme 1 and theme 4, none of the articles used mixed methods terminology. Mixing findings are illustrated in Figure 4.

Discussion

This section of the paper will discuss how the findings from each data set relate back to the original research questions.

Research Question One

The first research question asked: Within the sample, what percentage of the studies makes use of mixed methods terminology?

It was surprising to find that the vast majority of the studies (24 of 30) did not use mixed methods terminology. Many of the articles met one or two of the necessary criteria, such as identifying as a mixed methods design and stating this in the abstract or method section, but then fail to meet other criteria, such as identifying the timing or design of the study. While identifying as mixed methods was useful, this did not provide any information on how the researchers collected their data or in what order. A study had to meet all of the criteria in order for there to be any clarity regarding what the researchers had actually done.

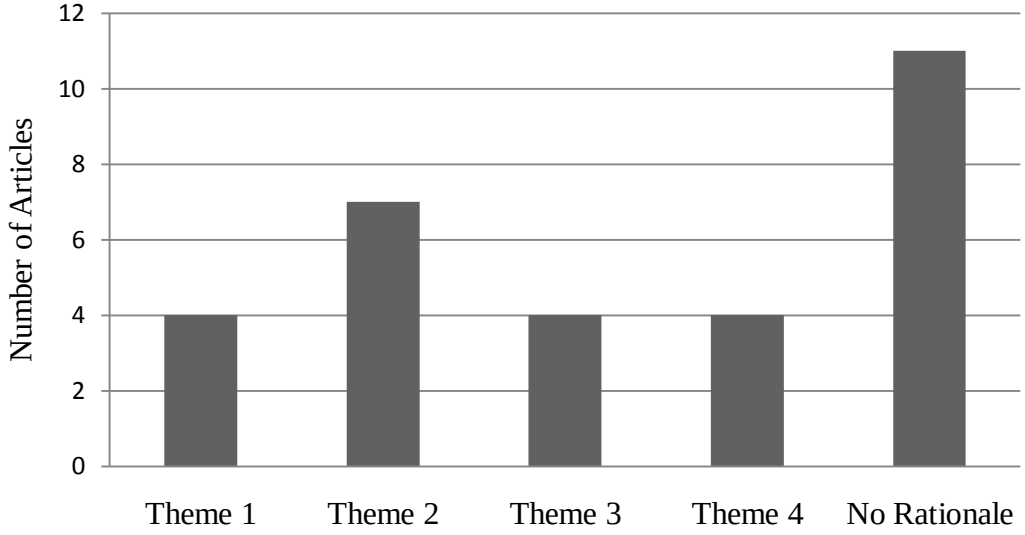
Research Question Two

Research question two asked: Within the sample, what rationales or reasons emerge for collecting both kinds of data?

Four themes emerged when the sample was explored for rationale statements. These themes were:

1. The research questions necessitated the collection of both data types
2. To illuminate understanding of the phenomenon
3. To use one data type to supplement or explain the other
4. To compare both data types to strengthen the findings

Figure 3.
Rationales Provided by Researchers in the Sample



Note. Theme 1 = the research questions necessitated the collection of both data types; Theme 2 = to illuminate understanding of the phenomenon; Theme 3 = to use one data type to supplement or explain the other; Theme 4 = to compare both data types to strengthen the findings.

The research questions necessitated the collection of both data types.

Rationales consistent with this theme were very pragmatist in nature. These explanations were generally very brief and did not discuss any paradigmatic stance for the study. Researchers stated what the different data types were used to address. Hoffman, et al (2008) offered this rationale:

> The study measured student achievement, differences in instructional practice, self-reported teacher efficacy, and student teacher opinions. We used a mixed-methods evaluation methodology. (p 17)

This excerpt offers an example of the brevity of these rationale statements. Hoffman, et al (2008) simply explained what they meant to accomplish and that they used mixed methods to do so. Avoidance of any discussion of the paradigms guiding the research is interesting as it supports Greene and Caracelli's (2003) assertion that, despite the paradigm wars, researchers' paradigms rarely effect research decisions. In fact, Greene and Caracelli found that practice was characterized "by the absence of explicit or clear relationships between philosophical beliefs and practice decisions, or by the absence of philosophy altogether," (2003, p 105).

To illuminate understanding of the phenomenon

The majority of the articles providing rationales had a statement aligned with this theme (7 of nineteen). Rationales consistent with this theme were usually much longer and more detailed

than those of the previous theme, and incorporated the idea of trying to paint a complete picture. The paradigmatic stance utilized for the study was often addressed in these rationales. Sammons et al. (2007) expressed the idea that integration of the two paradigms (quantitative and qualitative) would allow for better understanding of the phenomenon:

> VITAE brought together research in two areas: mainly quantitative research on teacher (and school) effectiveness on the one hand, and mainly qualitative research on teachers' work and lives on the other. Each of these has, in the majority of cases, been associated with 'paradigm specific' methods of data collection and analysis. VITAE sought to integrate these different perspectives in order to better address the central research questions.
>
> Using these qualitative and quantitative data, detailed, holistic profiles of teachers' work and lives over time were constructed to see if patterns emerged over a three-year period in terms of perceived and relative effectiveness and, if so, the reasons for these. (p 684)

Sammons et al.'s (2007) purpose statement is also a great example of the rationale statements that should be provided in all mixed methods research articles because it clearly explains how the research questions guiding the decision to collect both forms of data and how each data type would be used.

Gilrane et al. (2008) addressed the complex nature of topic of the study, and how the use of two different data types enabled them to reach a more complete understanding of the phenomenon:

> In ill-structured domains such as teaching and learning, discerning quality is a complicated endeavor and requires attention to data collected from multiple perspectives for evaluating multiple facets of an issue. Our choice of the naturalistic case study enables us to use a variety of data sources (e.g., qualitative data such as interviews and observations, quantitative data available in artifacts such as student achievement scores and teacher surveys and questionnaires) to illuminate our understanding of the phenomenon of teacher development in the 2-year period of the project.

Gilrane et al.'s (2008) purpose statement is another good example of a rationale statement. It explicitly states that the complexity of the research question drove the methodological decisions in the study. This purpose statement relates to Tashakkori & Teddlie's (2003) statement that "mixed methods research can answer questions that other methodologies cannot," (p 14).

To use one data type to supplement or explain the other

Four of the nineteen articles provided a rationale that indicated that one data type was intended to elaborate on the other. These rationale statements expressed the need for a second data type in order to fully understand the results of the first. Alviar-Martin, Usher, Randall, and Engelhard's (2008) rationale statement is a good illustration of this intention:

> For that reason, we used an explanatory mixed model that permitted us to investigate teacher confidence while taking into account national context. Sometimes called an

> explanatory sequential design, ours was a two-phase model in which we used qualitative data to supplement quantitative findings. Researchers use this model when qualitative data are needed to explain significant or surprising results or to explain relationships between findings. (p. 179)

These rationales focused on gaining a full and complete understanding of the initial data set, as opposed to the previous theme which focused on a complete understanding of the entire phenomenon. Researchers stating these rationales used qualitative data to explain quantitative data.

To compare both data types to strengthen the findings

Four of the articles provided rationales within this theme. These rationale statements used words such as "triangulation" (Weiss, Mayer, Kreider, Vaughan, Dearing, Hencke, & Pinto, 2003, p. 886) and "complementary" (Blatchford, Russell, Bassett, Brown, & Martin, 2007, p. 9). The intent behind these rationale statements focused on reducing weaknesses of each of the data types to add more weight to the conclusions drawn by the researchers. Weiss et al.'s (2003) rationale demonstrates this point:

> For this study we employed a mixed-method approach, using both quantitative and qualitative analyses. The added value of mixed-method analysis has been well-documented in the literature, allowing, for example, better triangulation and expansion of findings. (p. 886)

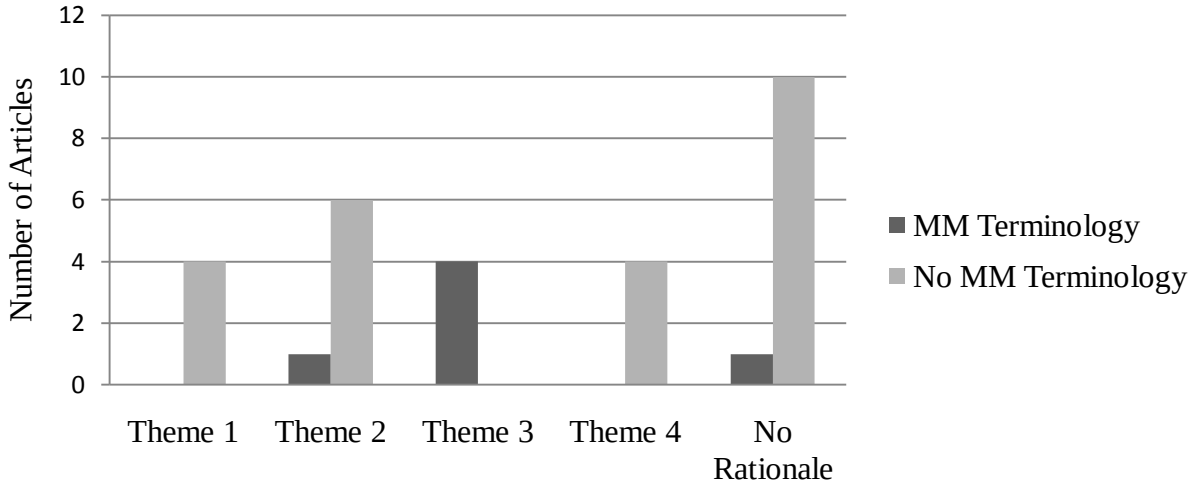
It is interesting to note that, while Weiss et al. (2003) cited triangulation as an intent of the research design, the researcher employed a sequential design. According to Creswell and Plano Clark (2007), Tashakkori and Teddlie (2003), and Greene (2008) triangulation or convergence of data is best achieved through concurrent designs.

A total of 11 articles, about 37% of the sample, did not present a rationale for using both quantitative and qualitative data. This large percentage is problematic in that it decreased the readability of the articles. Without addressing why the decision was made to collect and analyze both forms of data, the researchers are missing the opportunity to explain why the research questions made it necessary to do so and how the chosen design will accomplish the goals of the study.

Research Question Three

Research question three asked: How do the rationales of the studies associate to the use of mixed methods terminology? To answer this question, it was necessary to merge the quantitative and qualitative data sets.

Figure 4
Use of Mixed Methods Terminology by Rationale Provided



Note. Theme 1 = the research questions necessitated the collection of both data types; Theme 2 = to illuminate understanding of the phenomenon; Theme 3 = to use one data type to supplement or explain the other; Theme 4 = to compare both data types to strengthen the findings.

It is interesting to note that, for the studies with rationales that were included in theme one, none of these articles used mixed methods terminology. Rationales in theme one were very pragmatic; both types of data were collected simply because the research questions could not be addressed by one data type alone. Researchers using this rationale were most likely less focused on using mixed methods as an emerging methodology and more focused on doing what was necessary to accomplish the goals of the study. For this reason, mixed methods terminology was probably given little priority. Theme four rationales were similar; none of these articles used mixed methods terminology, either. Theme four rationales discussed triangulation, and using the two data types to strengthen the findings. It is unclear why these articles would not make use of mixed methods terminology, since expressing this rationale would require some familiarity with mixed methods as a methodology.

In contrast, the four studies that gave rationales consistent with theme three all used mixed methods terminology. These rationales addressed the fact that one data type was needed to fully understand the other, and lend themselves to sequential designs. Since sequential designs are slightly less common than concurrent and triangulation designs, and also slightly more complicated, it is possible that researchers expressing this rationale have more familiarity with mixed methods, and are therefore more likely to make use of the terminology.

Overall, it is important to note that the large majority of articles neither used mixed methods terminology nor provided a rationale for their design.

Conclusion

While mixed methods designs are currently being used with the field of educational research, researchers need to continue to work toward a common structure for the presentation of these

studies in order to make these articles more concise and understandable. Doing so would make this information more accessible to the readers and would also make these studies easier to publish. Making mixed methods designs easier for educational researchers to use is valuable in that many of the research questions within the field of education cannot be addressed through one data type alone. In order to fully understand many of the phenomena within education, both quantitative and qualitative data are necessary. Therefore, some recommendations are offered for the use of mixed methods in educational research:

1. In the future, researchers using mixed methods should label their work appropriately. This includes identifying the study as mixed methods, identifying the design used, and identifying the priority given. These factors should be discussed both within the abstract and the methods section of the article, so that this information is easily located by the reader.
2. Researchers using mixed methods studies should include a rationale in their presentation. This rationale should be clear in how the research questions drove the methodological decisions and it should make explicit the need for collecting both forms of data. Ideally, such rationales will also include the reason for mixing the two data sets.

Using these steps will help to develop mixed methods within the field of educational research, making this methodology more useful to those presenting and reading mixed methods findings. This is in the field's best interest, as the questions educational researchers are asked to tackle continue to grow more complex. Mixed methods designs are simply additional tools for researchers to use in order to investigate phenomena in a way that will ultimately be useful to practitioners.

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Table 1.
Overview of the Educational Research Multiple Method Studies (N=30)

Article	Journal	Affiliation	Topic of the study
Achinstein, Ogawa & Speiglman (2004)	*AERJ*	United States	New teacher socialization
Alviar-Martin, Usher, Randall & Engelhard (2008)	*JER*	United States	Teacher confidence
Astor, Benbenishty & Estrada (2009)	*AERJ*	Israel	School violence
Bauman, Edwards, Boland, Olejnik & Kame'enui (2003)	*AERJ*	United States	Effects of instruction in morphology and context
Billings & Fitzgerald (2002)	*AERJ*	United States	Dialogic discussion and Paideia seminar
Blatchford, Russell, Bassett, Brown & Martin (2007)	*BERJ*	United Kingdom	The roles of teaching assistants in primary schools
Brouwer & Korthagen (2005)	*AERJ*	Netherlands	Teacher education
Cady, Meier & Lubinski (2006)	*JER*	United States	The transition from preservice to experienced teacher
Demie (2005)	*BERJ*	United Kingdom	Achievement of Black Caribbean pupils in Lambeth
DePlanty, Coulter-Kern & Duchane (2007)	*JER*	United States	Parental involvement and academic achievement
Finnigan & Gross (2007)	*AERJ*	United States	Accountability policies and teacher motivation
Gilrane, Roberts & Russell (2008)	*JER*	United States	Literacy instruction
Hallam & Ireson (2007)	*BERJ*	United Kingdom	Ability grouping in public schools

(table continues)

Hoffman, Badgett & Parker (2008)	*JER*	United States	Single-sex instruction in high schools
Lewin & Stuart (2003)	*BERJ*	United Kingdom	Teacher education in low-income countries
Linek, Sampson, Gomez, Linder, Torti, Levingston & Palmer (2009)	*JER*	United States	Middle school alternatively certified teachers
Monte-Sano (2008)	*AERJ*	United States	Historical writing instruction
Morgan & Hansen (2007)	*JER*	Australia	Primary school physical education
Morgan, Nutbrown & Hannon (2009)	*BERJ*	United Kingdom	Fathers' involvement in children's literacy development
Onwuegbuzie, Witcher, Collins, Filer, Wiedmaier & Moore (2007)	*AERJ*	United States	Evaluation of college teachers
Pickens & Eick (2009)	*JER*	United States	Teachers' motivational strategies
Raffe, Howieson & Tinklin (2005)	*BERJ*	United Kingdom	Unified curriculums and qualifications systems
Reutzel, Fawson & Smith (2008)	*JER*	United States	Silent reading
Rodriguez & Berryman (2002)	*AERJ*	United States	Sociotransformative constructivism
Sammons, Day, Kington, Gu, Stobart & Smees (2007)	*BERJ*	United Kingdom	Teachers' work and lives
Sheriff (2007)	*BERJ*	United Kingdom	Peer group culture 's and social identity's influence on masculinity
Watkins, Mauthner, Hewitt, Epstein & Leonard (2007)	*BERJ*	United Kingdom	School violence and school differences

(table continues)

Weiss, Mayer, Kreider, Vaughn, Dearing, Hencke & Pinto (2003)	*AERJ*	United States	Low-income working mothers' involvement in children's schooling
Wighting (2006)	*JER*	United States	Computer use and high school students' sense of community
Wilson, Malcolm, Edward & Davidson (2008)	*BERJ*	United Kingdom	Truancy