A Nascent Look at Theoretical Frameworks in Middle Level Education Research

Cynthia Reyes
University of Vermont, cynthia.reyes@uvm.edu

Steven Netcoh
University of Vermont, snetcoh@uvm.edu

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Abstract

This paper describes a qualitative content analysis of research articles published on middle level education in the last decade. This analysis was conducted on manuscripts appearing in two premier middle level education journals: *Middle Grades Research Journal* (MGRJ) and *Research in Middle Level Education Online* (RMLE) to explore the following questions: 1) What theoretical frameworks are being used in middle level education research?; and 2) How are the theoretical frameworks specific to the field of middle level education, and/or how are they borrowed from other disciplines? The findings depict how authors of research articles have applied theories from other broader disciplines. Echoing the recommendation of Bickmore and colleagues (2003) to address both theory and practice in single research articles, the authors suggest a more nuanced and in-depth look at how knowledge is constructed in the middle grades field.

Introduction

Over the last two decades, growth in the field of middle grades education has been reflected in various publications, such as peer-reviewed journals, policy papers, handbooks, practitioner journals, and association newsletters. These publications provide an internal chronicling of the middle grades landscape relative to the topics that have emerged throughout the years, the policies that have helped to shape the movement, and the research that has guided it. They also reveal the use of theory in middle grades education, including how the field borrows from, expands on, or reconstructs new theoretical frameworks that inform middle grades topics.

The *Handbook of Research in Middle Level Education* (Anfara, 2001) included some of the more relevant research of its time, expanding on topics such as the middle school concept, effective middle school teachers, flexible or block scheduling, advisory, and teacher preparation in the middle grades. In 2003, *Middle School Journal* published “Changes in Middle School Journal Content over 30 Years,” (Bickmore et al., 2003), which questioned, among other things, the kinds of theoretical frameworks that were being generated in the middle grade research field. The authors made recommendations for future research articles, including one that authors should “address both theory and practice within single articles” (p. 28). A decade later, Andrews (2013) edited the *Research to Guide Practice in Middle Grades Education*, which spanned middle grades topics from academic excellence in the middle grades, social equity, and literacy to developmental responsiveness and professional practice.

Each of these texts serves as a guide to the type of research needed in these areas. Following the recommendation of Bickmore and colleagues (2003), the purpose of this paper is to examine the theoretical frameworks used in the field of middle level education over a 13-year period. To address this purpose, we conducted a content analysis of the research literature in two premiere journals for middle grade research, *Middle Grades Research Journal* (MGRJ) and *Research in Middle Level Education Online* (RMLE).
in the Middle Level Education Online (RMLE). The findings from this paper are part of a larger study that examined middle grades research and practice from 2000-2013 (Yoon, Malu, Schaefer, Reyes, & Brinegar, in press). To focus our research, we used the following research questions:

1. What theoretical frameworks are being used in middle level education research?
2. How are the theoretical frameworks specific to the field of middle level education, and/or how are they borrowed from other disciplines?

Defining Theory and Theoretical Framework

The terms “theory” and “theoretical framework” have been conceptualized and used in various ways within and across academic disciplines. Exploring the multiple uses and understandings of these terms is beyond the scope of this paper, but it is critical to ground our analysis of theory and theoretical framework use in middle grades research within specific definitions of the terms “theory” and “theoretical framework.” For our analysis, we adopted Kerlinger’s (1986) definition of theory as “a set of interrelated constructs, definitions, and propositions that presents a systematic view of a phenomena by specifying relations among variables, with the purpose of explaining and predicting phenomenon” (p. 9). Parsing out Kerlinger’s definition, constructs are understood as “clusters” of concepts that “form a higher-order unit of thought” (Anfara & Mertz, 2015, p. 3). Anfara and Mertz use the example of IQ as a construct that is a combination of the concepts of age and intelligence (p. 3). They go on to define propositions as “expressions of relationships among several constructs” such as a hypothesized association between IQ, socio-economic status, and academic achievement (p. 3). These propositions form the basis of theories, which ultimately attempt to predict and explain social and natural phenomena.

Theories provide the foundation for “theoretical frameworks” in applied academic research. For the purposes of the present study, we adopt Anfara and Mertz’s (2015) definition of theoretical frameworks as “any empirical or quasi-empirical theory of social and/or psychological processes, at a variety of levels (e.g., grand, midrange, explanatory), that can be applied to the understanding of phenomena” (p. 15). As Anfara and Mertz point out, this definition of “theoretical framework” excludes paradigms such as postpositivism and constructivism that are linked to particular ontological, epistemological, and methodological assumptions. Anfara and Mertz’s definition refers more to using theory or a collection of theories as a “lens” or a way to “see” and understand certain aspects of the phenomenon being studied while concealing other aspects (p. 15). Some examples of theoretical frameworks that researchers can adopt and apply to examinations of middle grades research and practice are Vygotskian learning theory, class production theory, social capital theory, cultural capital theory, and transformational learning theory.

There is relative consensus about how theoretical frameworks should be used in quantitative research. As a deductive approach to research, quantitative studies use theory as “a framework for the entire study, [as] an organizing model for the research questions or hypotheses and for the data collection procedure” (Creswell, 2014, p. 59). A priori theory should inform each step of the quantitative research process, so quantitative studies should make their theoretical frameworks explicit.

With qualitative research, on the other hand, there is a lack of consensus regarding the role of theory and theoretical frameworks. In some qualitative studies, theory is an end goal of an inductive process as researchers collect data, investigate themes and patterns in the data, and generate theory on the phenomenon of interest.
based on their findings (Creswell, 2014, p. 65). Some scholars would argue that researchers should enter these studies without explicit theoretical frameworks. Others assert, however, that researchers always bring “strong orienting framework[s]” to their research and that these frameworks should thus be made explicit (Creswell, 1998, p. 86). A final camp of scholars believes “theory affects every aspect of the study, from determining how to frame the purpose and problem, to deciding what to look at and for, to resolving how to make sense of the data collected” (Anfara & Mertz, 2015, p. 11). The goal of this paper is not to resolve the debate over how theoretical frameworks should be used but to present the various ways theoretical frameworks have been conceptualized in relation to middle grades education research, either qualitative or quantitative.

Methods

Context and Purpose

Qualitative content analysis is a beneficial method for understanding the “why” questions as opposed to the “what” questions, and is useful for analyzing longitudinal data to demonstrate change over time (Julien, 2008). Qualitative content analysis also has been described as “any qualitative reduction and sense-making effort [that] takes a volume of qualitative material and attempts to identify core consistencies and meanings” (Patton, 2002, p. 453). According to Onwuguzie, Leech, and Collins (2012), several benefits to conducting a qualitative review of literature include “…identifying relationships between theory/concepts and practice…identifying strengths and weaknesses of the various research approaches that have been utilized” (p. 1).

This study examined the theoretical frameworks used in middle level education research since the year 2000. Based on our research questions, we set out to analyze the content of the articles in the two journals: Middle Grades Research Journal (MGRJ) and Research in the Middle Grades Online (RMLE). We chose 2000 as the starting point for our content analysis because it marked a trajectory of considerable growth for national middle school reform, as characterized by the following developments. First, it was the year that Turning Points 2000 (Jackson & Davis, 2000) was published, a significant document refining ideas contained in the Carnegie Corporation’s 1989 report, “Turning Points: Preparing American Youth for the 21st Century,” and one that has been widely cited since. Second, No Child Left Behind (2002) which consolidated the subsequent accountability reforms of high states testing. Third, the two journals in our study began at or after this point. RMLE’s starting publication date was 2000, and MGRJ followed in 2006. In these ways, analyzing middle grades articles appearing over the last two decades takes into consideration the upsurge of growth in the field. Third, the consistent practice of compiling research articles related to middle level education, such as the first of the Middle Grades Handbook series (Anfara, 2001), began in 2001. This paper takes a preliminary look at how theoretical frameworks have been used in this relatively new but robust middle grades field.

Purposeful Random Sampling

Applying Patton's (2002) definition for selecting a purposeful sample within a much larger one, we employed purposeful random sampling for this preliminary content analysis. The total of 58 articles from MGRJ (24) and RMLE (34) represented over one-fourth of the total possible pool (208). We sampled from every volume and year of both publications’ history, analyzing between one and four articles per volume. Sampling was partially dependent upon article availability as well as on the total number of issues per volume, given that there were fewer issues per volume at the beginning stages of a new publication. We describe these issues further in our limitations section.

Content Analysis Technique

We began our content analysis by coding all in-text citations in these middle grades research articles. Hoping to expand on what Anfara and Mertz (2015) described as “theory as more” (p.
11), we examined how citations within text were used within groupings that were then used to inform, represent, or expand on theoretical ideas or broad theoretical frameworks in the study. We first identified all sections within a manuscript that contained citations, and copied and pasted these sections onto a Word document or Google Doc. We then coded these citations manually. During the coding process, we used two of Krippendorf’s (1980) six questions for conducting content analysis: 1) How are the data defined?; and 2) What is the context relative to which the data are analyzed? These questions served as a meta-analytic lens to examine the use of citations within the text. Similar to constructing a literature review, we unpacked the use of citations by examining how they were grouped within the text.

Grouping or bracketing (Merriam, 2009) the citations allowed for our analysis of the categories to emerge organically. For example, we carefully read each section of the article that pertained to theory use. As we began to identify patterns, we progressed to using analytical coding (Corbin & Strauss, 2007) or sorting identifiable patterns into groups. Knowing that “coding is dynamic” (Benaquisto, 2008, p. 86), we began to attach labels to these categories by using a color-coded system, thus making the coding visually accessible as we began to move from open coding to a more focused coding system. We identified specific sections in which citations were included, such as the Introduction, Literature Review, Theoretical Framework, Implication, and Conclusion sections. As appropriate to our research questions, we then focused specifically on the sections that pertained to theoretical frameworks.

**Trustworthiness.** One challenge of conducting a qualitative content analysis is the validity and reliability, or trustworthiness, of data analysis because meaning is context dependent and open to interpretation. In order to optimize the validity of our findings, we attended carefully to inter-rater reliability. Both authors were each responsible for reviewing half of the data set. We met three times for between two and three hours each to set a different purpose: the first was to organize our data set by ensuring online accessibility through our institution’s library; the second time to review initial findings and to begin constructing categories that emerged after coding our data; and finally to negotiate our interpretive accounts and to ensure internal validity.

During the process of analysis, we examined the frequency with which patterns arose, thus negotiating our interpretations and triangulating our findings. We also triangulated our data by following up every citation and reading the associated article to verify our interpretation of its content. More than three-quarters of the way through coding the 58 articles, we began to reach consensus on a final coding schema. By our third meeting we had constructed the categories from our data set. The following section summarizes our findings that focus on the theoretical frameworks identified within the articles in MGRJ and RMLE Online.

**Findings**

**Theory Use within Middle Grades Journals**

From the total sample of 58 research articles, we identified 19 that featured a section labeled explicitly as **Theoretical Framework**. Across both journals, we coded a total of 573 citations that were used to construct the theoretical frameworks (see Table 1).
Table 1
Middle grades journals by use of methods and citations

<table>
<thead>
<tr>
<th>Journal</th>
<th># Articles in Sample</th>
<th># Articles with Explicit Framework</th>
<th># Citations in Framework</th>
<th>Method of Study: Qualitative</th>
<th>Method of Study: Quantitative</th>
<th>Method: Mixed</th>
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</thead>
<tbody>
<tr>
<td>Middle Grades Research Journal (MGRJ)</td>
<td>24</td>
<td>8</td>
<td>270</td>
<td>8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Research in Middle Level Education Online (RMLE)</td>
<td>34</td>
<td>11</td>
<td>303</td>
<td>6</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>58</td>
<td>19</td>
<td>573</td>
<td>14</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

Through analysis of citations used in the theoretical frameworks, we associated the use of theories to specific bodies of knowledge, disciplines, or phenomena in the social sciences, which we explore more in-depth in the following section.

A study of theoretical frameworks. Anfara (2008) described “theories that can be applied as ‘lenses’ to study broader phenomena” (p. 871). In addressing the first research question, “What theoretical frameworks are being used in middle level education research?” we examined both how authors presented the frameworks and the disciplines from which the theories stemmed. Authors highlighted their intention of constructing a theoretical-based lens by including a section that was titled “Theoretical Framework” or stating how they situated their study within one or two bodies of existent literature. By highlighting this purpose, authors described how these perspectives oriented the study, as well as guided the research questions (Anfara, 2008; Creswell, 2009).

The authors also used certain words or phrases to indicate the importance of these citations, such as “the theoretical foundation of this study drew from two traditions,” (Vagle, 2006, p. 2), or this “theoretical foundation is grounded in the following areas” (Angelle, 2010, p. 2), while others described groundbreaking work, or the following is a set of literature that examines a particular phenomenon, or a comparison of recent research to earlier research. One author described the intersection of theories in her framework when “using sociocultural theory...beyond a body of knowledge and skills...and adding the newcomer to the context increases this complexity...” (Strickland, 2012, p. 80). Some authors made explicit statements about how they were hoping to “add to this body of emerging research” (Smith, 2012, p. 2), or how they “worked from their conceptual framework” (Strahan & Hedt, 2009, p. 2), or how they conceptualized a particular phenomenon. Others described how they generally situated their study within the theoretical framework or a particular seminal work is at the “center of this theoretical foundation” (Vagle, p. 2).

Tables 2 and 3 (Appendices A and B) identify 1) the research articles in the sample from both journals that included explicit theoretical frameworks; 2) the citations from each of these articles; and 3) other disciplines from which some theories stemmed. Where possible, we also note specific theories that were applied. Fields and disciplines included epistemology, philosophy, literary theory, mathematics, science, democratic philosophy, child psychology and development, sociology, political analysis, psychology, multiculturalism, reading, and multiliteracies. Some studies associated seminal theories with specific scholars, such as Vygotskian learning theory and Deweyan experiential theory. Authors borrowed from a variety of disciplines to contextualize their middle grades studies. From
the set of 19 research articles that included theoretical frameworks, some used citations from STEM (Science, Technology, Engineering, and Mathematics) as a discipline. A few drew upon discrete theories of math or science (Battista, Wheatley, & Talsma, 1982; Scantlebury, 1994; Sundberg, 1994) to explore spatial use for young adolescents. One other study focused on policy (Blasé & Blasé, 1999; Smylie, Mayrowetz, Murphy, & Seashore, 2007; Spillane, Halverson, & Diamond, 2001). In two articles, authors included citations from the field of multiliteracies (Coiro & Dobler, 2007; Coiro, Knobel, Lankshear, & Leu, 2008; Kress, 2003; New London Group, 1996) and the field of reading (Conley & Hinchman, 2004; Draper, Smith, Hall, & Siebert, 2005; Irvin, 1998; Irvin & Conners, 1989; Langer, 2001; Roe, 2004). The field of diversity was included in one article related to cultural models (Gallimore & Goldenberg, 2001). In four of the research articles, authors used citations related to the field of psychology (Arnold, 1993; Nunner-Winkler & Sodian, 1988; Piaget and Inhelder, 1956; Power & Khmelkov, 1997; Power, Khmelkov, & Power, 1995; Power, Power, & LaVoi, 2005). Furthermore, authors across both journals used citations from the field of psychology, particularly stage-fit environment theory (Eccles & Midgley, 1989; Eccles & Roeser, 2011; Eccles, Midgley, Wigfield, Buchanan, Reuman, Flanagan, & Maclver, 1993).

**Expanding the Field of Middle Level Education**

To address the second research question, “How are the theoretical frameworks specific to the middle level field?” we examined how authors joined theory from broader disciplines with studies from middle grades education. In *RMLE*, for example, one author examined ethics in middle level pedagogy by joining different bodies of theories within the broader disciplines of philosophy, literary theory, epistemology (Bakhtin, 1986; Schön, 1983, 1987; Van Manen, 1991) with middle level curriculum and policy (Beane, 1997; Jackson & Davis, 2000; NMSA, 2003). Another author joined studies conceptualizing theories of psychology (Eccles et al., 1993) with literature on middle grades team configuration (Bishop & Stevenson, 2000; Erb & Stevenson, 1999; Flowers & Mertens, 2003; Flowers et al., 2000). Similarly, in another study, theories from psychology (Colby & Kohlberg, 1987; Power & Khmelkov, 1997; Power et al., 1995) were joined with seminal middle grades documents (NMSA, 1989, 2000; Jackson & Davis, 2000; NMSA, 2003). And in yet another article, the author joined studies describing theoretical conceptualizations of policy (Copland, 2003; Smylie et al., 2007; Spillane et al., 2001) with middle grades policy documents (Jackson & Davis; NMSA, 2003, 2010).

Articles in MGRJ demonstrated similar tendencies to connect theories from other disciplines with the middle grades field, with a particular emphasis on psychology. In one article, the authors combined theories within the field of psychology (Csikszentmihalyi, 1991; Eccles et al., 1993) with a middle grades document (Jackson & Davis, 2000) to inform middle grades curriculum integration. Other researchers paired similar theories rooted in psychology, such as *stage-environment fit* (Eccles & Midgley, 1989; Eccles & Roeser, 2011; Eccles et al., 1993; Finn & Rock, 1997), with middle grades studies related to teaming (NMSA, 2010; Boyer & Bishop, 2004; Ellerbrock & Kiefer, 2010; NMSA, 2003; Jackson & Davis; Mertens & Flowers, 2004; Powell, 1993). In a study that focused on teacher education, the author joined theories from psychology (Eccles & Midgley, 1989; Eccles, Midgley, & Lord, 1991) and teacher education (Goodlad, 1984) with a combination of middle grades practice and policy documents (NMSA, 2010; Arth, Lounsbury, McEwin, & Swaim, 1995; Epstein & Mac Iver, 1990). In another, the author joined theories from the field of multiliteracies (Lankshear & Knoebel, 2003; New London Group, 1996; Pressley, 2004) with middle grades education (NMSA, 2003). Lastly, one author drew upon Dewey’s theory of experiential learning as cited in Rocheleau’s (2004) work to describe service learning (Coffey, 2010; Jenkins & Sheehy, 2009) within the context of a middle grades school (George & Alexander, 2003; Jackson & Davis, 2000).
While it is clear from this data set that authors used theories from larger disciplines as lenses for situating their studies, they also used citations specific to the middle level field. The persistent use of middle level text, position papers or policy documents (NMSA, 2003; 2010; Carnegie Council on Adolescent Development, 1989; Jackson & Davis, 2000) in these theoretical frameworks was critical to anchoring the studies to the tenets of middle level education.

Lastly, we characterized two studies as outliers to the others in our data set. One study (Howell, Cook, & Faulkner, 2013) used the heading of Conceptual Framework rather than Theoretical Framework. This study was focused specifically on “the theoretical underpinnings of the middle school concept” (p. 3) and the authors cited position papers and seminal middle grades work (Carnegie Council on Adolescent Development, 1989; Jackson & Davis, 2000; NMSA, 2010), as well as research studies specific to middle level pedagogy (Anfara & Schmid, 2007). These authors conceptualized their framework specific to the middle level field rather than theorizing from other fields. We also identified another study (Harrison, 2013) that did not have an explicit heading for using a theoretical framework; instead, the author conceptualized the field of service learning, connecting the concept to middle level research and texts (George & Alexander, 2003; Jackson & Davis) and drawing upon a citation that gives an historical and theoretical treatment to the concept of service-learning (Rocheleau, 2004).

Limitations

While our data set enabled us to present tentative findings about how theories were used in a portion of the literature from these two middle grades journals, the study features some limitations. For example, we closely examined 58 articles over a 13 year span from two academic journals, which is just over one-fourth of the total possible pool. This means a large percentage of articles in the “population” remain unaccounted for in our sample. Our findings cannot be generalized to all articles that have been published in RMLE and MGRJ during that time period.

This study is also limited to our own particular lenses, with one of us who is relatively new to the field of middle level education and perhaps not as familiar with the important policies, documents, and handbooks of research that founding authors wrote with regard to theory and middle grades research. Certainly within the scope of our data set we strived to identify the most familiar and prominent citations that have emerged in the field in the last two decades. While we may have a grasp of the more important tenets of the middle level field, this study may not have utilized the full scope, experience, and authority of a relatively new and vibrant field.

Discussion

Despite these limitations, we believe there is much to build upon and examine with regard to how the middle level education field continues to generate theory. We recommend further research with a more ample set of articles to examine whether specific disciplines inform the middle level field more than others, and whether it is possible to conceptualize specific bodies of theory unique to the field, perhaps similar to those mentioned in the studies of Howell and colleagues (2013) and Harrison (2013). Future studies could determine how middle grades researchers situate their studies within theoretical frameworks to advance knowledge in the field.

We also call for further research and discourse in the middle grades field related to how middle grades researchers use theory to inform and guide quantitative and qualitative studies. In our sample, approximately one out of three articles published in RMLE and MGRJ included an explicit theoretical framework in the research report. Perhaps more importantly, only 4 out of 25 quantitative, 14 out of 32 qualitative studies, and one mixed method study employed explicit theoretical frameworks. The small percentage of quantitative studies explicitly outlining a theoretical framework was surprising given that
most methodologists agree theoretical frameworks should serve as “organizing model[s] for the research questions or hypotheses and for the data collection procedure” in quantitative research (Creswell, 2014, p. 59). Given this general consensus, scholars conducting quantitative studies within the field of middle grades research should explicitly state the theories that inform the design and implementation of their research. Our nascent findings suggest, however, that relatively few quantitative studies in the middle grades field explicitly outline the theoretical frameworks for their research.

Similarly, a relatively small percentage of qualitative studies in our sample provided theoretical frameworks in their research reports. In contrast to quantitative research, however, there is continued debate among methodologists about the role of theory in qualitative research and if it is even appropriate to use a theoretical framework to inform and guide a study (Anfara & Mertz, 2015, p. 7). Indeed, the inconsistent use of explicit theoretical frameworks among studies in our sample could be a product of scholars’ diverse perspectives on the role of theory in qualitative research. We hope that revealing this inconsistent use of theoretical frameworks may provide a helpful impetus for middle grades researchers to engage in discussion about the role of theory in qualitative studies. The end goal of this discourse need not be consensus. Rather, the discussion should aim to help middle grades scholars better understand how they situate their qualitative research within bodies of theory in their field and across disciplines.

Implications and Conclusion

Our study proposes two contributions to guiding future work and research in the middle level field. While the middle level continues to establish itself as a field, our findings suggest a need for more explicit treatment of how a study’s findings contribute to the middle level field, particularly if different bodies of theories from various disciplines inform the study. How might findings expand on the themes – Moral Ethics, Team Configuration, Student Engagement, Content Area Development, Organizational Leadership, Diversity, New Literacies, Curriculum Integration, Multicultural Education, Preservice Teacher Development, and Pedagogy – that we identified in our findings? What other theory building might illuminate additional themes germane to middle level education? Perhaps, if researchers in middle level education begin to approach “theories as more” (Anfara, 2008), where we view the theoretical framework as the “structure” or “scaffolding” of middle level education, then we may endeavor to continue making more fluid and viable associations between theory and middle level education.

At the same time, we wonder about the absence of other theoretical frameworks that have emerged as significant in the field of education as a whole, some of which are related to race and ethnicity (critical theory or racialized discourses), classroom inclusion (disability inquiry), and gender (feminist perspectives). These theoretical perspectives are often used by qualitative researchers (Creswell, 2009). As middle grades researchers become more immersed in the knowledge production of their field, they might consider more carefully which theoretical frameworks to employ as an orienting lens for middle grades research to better reflect the diversity in the field itself. A focus on broadening the scope of research in middle level that builds upon middle level theory may help further define what knowledge production looks like in the middle level.

The final implication from this study emerged from the practice of identifying theory use and the general analysis of the research article. The meta-analytic exercise that emerged from our content analysis raised the general importance of developing a sound literature review or theoretical framework in a research article. The process we used to code theory was similar to how one might deconstruct a research article. The heuristic we followed as a result of our data analysis would be useful for teaching the construction of a literature review or theoretical
framework in a research methods course, as well as a useful guide for journal reviewers.

In conclusion, we return to Bickmore et al.’s call to address both theory and practice within single articles. Based on this preliminary review of theory used in two premier middle level education journals, it appears that the middle level field has benefitted greatly from working theories that originated in other disciplines. As we continue to contribute to research in the middle level field, it behooves us to examine more closely how we conceptualize the use of theory building and how such theories expand the tenets of our field, as well as inform sound pedagogy.

References


National Middle School Association (2003). *This we believe: Keys to educating young adolescents*. Columbus, OH: Author.


### Table 2
**RMLE Citations and Themes Table**

<table>
<thead>
<tr>
<th>Research Articles</th>
<th>Method</th>
<th>Field</th>
<th>Middle Grades</th>
<th>Fields</th>
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</thead>
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<td>Student Engagement and the Middle Grades (Mo &amp; Singh, 2008)</td>
<td>Quantitative</td>
<td>Finn &amp; Rock, 1997; Connell, Beale-Spencer, &amp; Aber, 1994; Keith, Keith, Bickley, Trivette, &amp; Singh, 1993</td>
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<td>Psychology</td>
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<tr>
<td>Middle School Mathematics and Spatial Skills (Boakes, 2009)</td>
<td>Quantitative</td>
<td>Piaget &amp; Inhelder, 1956; Battista, Wheatley, &amp; Talsma, 1982; Sundberg, 1994</td>
<td>Jackson &amp; Davis, 2000; Mertens &amp; Flowers, 2004; Erb, 2001; Strahan, 2008; Strahan, Faircloth, Cope, &amp; Hundley, 2007</td>
<td>Psychology, Mathematics</td>
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<tr>
<td>Teaching and Teaming in the Middle Grades (Strahan &amp; Hedt, 2009)</td>
<td>Qualitative</td>
<td>Spillane, Reiser, &amp; Reimer, 2002; Coburn, 2001</td>
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<td>Policy</td>
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<td>Field Citations</td>
<td>Middle Grades Citations</td>
<td>Fields</td>
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<td>-------------------------------------------------------</td>
<td>----------------</td>
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<td>-----------------------------------</td>
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<tr>
<td>Literacy Coaching and the Middle Grades (Smith, 2012)</td>
<td>Qualitative</td>
<td>Wenger, 1998; Shulman, 1986; Roe, 2004; Conley &amp; Hinchman, 1989; Irvin and Conners, 1989; Langer, 2001; Irvin, 1998</td>
<td>NMSA, 2003</td>
<td>Psychology; New Literacies; Reading</td>
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<tr>
<td>Technology, Student Voice and the Middle Grades (Storz &amp; Hoffman, 2013)</td>
<td>Qualitative</td>
<td>Pennuel, 2006; Lee &amp; Spires, 2009; Ladson-Billings, 1994; Giroux, 1988; McLaren, 1994</td>
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<td>Technology; Multicultural Education; Critical studies</td>
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http://scholarworks.uvm.edu/mgreview/vol1/iss1/3
### Appendix B

**MGRJ Citations and Themes Table**

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<th>Method</th>
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<th>Middle Grades Citations</th>
<th>Field</th>
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<td>Qualitative</td>
<td>James, 1974; Csikszentmihalyi, 1990; Eccles et al., 1993</td>
<td>Jackson &amp; Davis, 2000; AMLE, 2010</td>
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<tr>
<td>Teaming and the Middle Grades (Keifer &amp; Ellerbrock, 2012)</td>
<td>Qualitative</td>
<td>Eccles &amp; Midgley, 1989; Eccles &amp; Roeser, 2011; Eccles et al., 1993; Noddings, 2005</td>
<td>Boyer &amp; Bishop, 2004; Ellerbrock &amp; Kiefer, 2010; Jackson &amp; Davis, 2000; Mertens &amp; Flowers, 2004; Powell, 1993; NMSA, 2010; George &amp; Alexander, 2003; Cushman &amp; Rogers, 2008</td>
<td>Psychology Philosophy</td>
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<tr>
<td>Service Learning and the Middle Grades (Harrison, 2013)</td>
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