

Crossing MGLS with the Middle Grades Research Agenda: A Guide for Researchers

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Abstract

For the past several years, leaders in middle grades education research have strengthened their call for more methodologically robust quantitative research to address important questions in the field. Recently, two important routes towards addressing this call have emerged: the Middle Grades Longitudinal Study from the National Center for Education Statistics, and a new research agenda from the Middle Level Education Research Special Interest Group of the American Educational Research Association. In this paper, we conduct a content analysis of the items in the forthcoming longitudinal study in light of the extant research agenda. Results indicate that research questions in eight sections of the agenda are moderately to well-addressed by the data, and that the longitudinal study will provide rich contextual data related to many others. The concurrent emergence of the research agenda and this data offers an opportunity for the research community to engage in high-level quantitative research with a middle grades lens to inform future policy. The item-by-item crosswalk available for download provides guidance for researchers using the Middle Grades Longitudinal Study data to address questions from the research agenda.

INTRODUCTION

For decades, middle grades education researchers have noted the relative lack of methodologically robust quantitative research in the field. Hough (2003) identified a strong trend for “middle school researchers to utilize qualitative approaches at a significantly greater rate than quantitative and/or mixed design” (p. x) in his examination of almost 4000 studies carried out in the 1990s. Subsequently, Caskey and colleagues (2010) called for more large-scale, longitudinal studies in their report of research supporting middle grade practices. Most recently, Mertens, Caskey, and Flowers (2016) observed that the need for “more large-scale, longitudinal empirical research studies focused on middle grades education has not abated” (p. 2). They issued a clarion call for such research in order to illuminate unknown facets of middle level education and to inform policymakers and other stakeholders whose positions allow them to enact major change in middle grades educational systems.

Recently, two key supports for increasing robust quantitative research within middle grades research have emerged. The Middle Level Education Research Special Interest Group (MLER SIG) of the American Educational Research Association (AERA) compiled and published the *MLER SIG Research Agenda* (Mertens et al., 2016). Developed by a team of

scholars with broad knowledge of the middle level research environment, this agenda proposed detailed research questions in several different categories related to schooling for young adolescents. Concomitantly, the National Center for Education Statistics (NCES) developed the Middle Grades Longitudinal Study (MGLS), the first of its kind to collect middle-grades-specific data. The assessments and surveys in this study were developed in conjunction with numerous leaders in the field of middle grades research, including some members of the MLER SIG, along with skilled study designers and methodologists.

Upon first consideration, the alignment between the *MLER SIG Research Agenda* and the MGLS would seem promising. They emerged in the same approximate time period and shared key stakeholders in the consultation phase. Yet their development was parallel. The MGLS was not constructed specifically to generate data to answer questions contained in the *MLER SIG Research Agenda*, nor was the *MLER SIG Research Agenda* written specifically to utilize data from the MGLS. To what extent, then, do these two initiatives complement and benefit one another? To what degree might they serve to fill the problematic gap in research methodology noted by scholars over the decades?

The purpose of this paper is to identify useful intersections between the MGLS data and the

MLER SIG Research Agenda questions. Two research questions guided this analysis:

1. To what extent do the data that will be generated by the MGLS address questions in the *MLER SIG Research Agenda*?
2. Specifically, what questions or data points from the MGLS can be used to answer which questions in the *MLER SIG Research Agenda*?

In this paper, we first provide a summary of the development and contents of the *MLER SIG Research Agenda* and the MGLS. We then describe our process for analyzing and interpreting the two entities. We follow this with a report of our findings related to the two research questions, accompanied by the crosswalk between the *MLER SIG Research Agenda* and the forthcoming MGLS data set. Finally, we consider the implications for future research. In so doing, we hope to help researchers interested in meeting the challenge issued by Mertens and colleagues (2016) by using the data that will emerge from the MGLS to answer questions raised by the research community in the *MLER SIG Research Agenda*, with the goal of informing a diverse array of stakeholders, including those in positions to enact systematic changes.

Background

MLER SIG

The MLER SIG was established in 1992 as a strategy to “encourage research about early adolescents and their schools, both in terms of new possibilities and present knowledge and practice” and “encourage dialogue and joint projects involving researchers and policy makers inside and outside the middle school movement” (Williamson, n.d., p. 4). These purposes are reflected broadly in the MLER SIG’s current mission “to improve, promote, and disseminate educational research reflecting early adolescence and middle-level education” (MLER SIG, n.d.). The MLER SIG is broadly acknowledged as the largest group of international researchers focused on middle grades education, with a membership that typically ranges from 140-180 scholars (MLER SIG, n.d.). The MLER SIG coordinates with major groups in the middle grades as it works to influence schooling for early adolescents, including the Association for Middle Level Education and the National Forum

to Accelerate Middle Grades Reform. The MLER SIG also works with policymakers and other stakeholders who can enact educational change. Over the years, the MLER SIG has demonstrated considerable influence in the field: it has coordinated a national research program focused on the study of common planning time; launched and maintained a research handbook series; and managed hundreds of peer-reviewed research presentations (Mertens, Anfara, Caskey, & Flowers, 2013; MLER, n.d.).

Given its mission and historic successes, the MLER SIG is well positioned to continue to inform research directions in the field through its latest initiative, the *MLER SIG Research Agenda*. This project stemmed from the decision to revisit a similar, yet dated, document issued by the National Middle School Association (1997), entitled *A 21st Century Research Agenda*. Recognizing a need to update this document, members of the MLER SIG began in 2015 to identify a set of questions that would direct future research and contribute new knowledge to the field of middle grades education. Over the ensuing year, the MLER SIG rolled out an inclusive process that began with identifying eight areas of study within the field: 1. Educator development; 2. Organizational structures; 3. Cultural responsiveness; 4. Special populations; 5. Developmental aspects of young adolescents; 6. Social-emotional learning; 7. Digital technologies; and 8. Pedagogy. MLER SIG leaders invited the membership to join workgroups associated with these areas and oversaw these groups’ reviews of existing research in order to identify knowledge gaps and pose recommended research questions for future study.

The resulting document, the *MLER SIG Research Agenda*, reorganizes the original eight areas into three distinct parts. The first part focuses generally on the young adolescent, and offers research questions relating to development, cultural responsiveness, and special populations. Part two encompasses the broad areas of teaching and learning, including research questions related to educator development, curriculum integration, social and emotional learning, and digital technologies. Part three addresses middle schools and structures. As such, it offers research questions related to status and vision, interdisciplinary teaming, magnet and charter schools, and scheduling formats.

Completed in 2016, the *MLER SIG Research Agenda* is offered by the MLER SIG to middle grades scholars as “a guide for middle grades educational research for the next five years; providing guidance for large- and small-scale research projects, doctoral dissertations, master’s theses, and undergraduate honor theses” (Mertens et al., 2016, p. iv). The general accessibility of the document further illustrates the potential influence of this research agenda on future middle grades education research; it is publically available via the MLER SIG website, and has served as the basis for a forthcoming edition in *The Handbook of Middle Level Education Research Series*.

The Middle Grade Longitudinal Study

The NCES conceived of the Middle Grade Longitudinal Study as a means to fill the gap between the Early Childhood Longitudinal Study (ECLS) programs and the High School Longitudinal Study (HSLS), thereby complementing its existing portfolio of longitudinal studies. For decades, iterations of these studies have provided rich information for researchers in education, sociology, psychology, and economics. The newly developed MGLS will provide the same type of rich information for students in the middle grades. Collection of the MGLS has been timed so that it will commence as students in the most recent ECLS cohort are aging into the middle grades. Although the same children do not make up the sample, NCES has posited that, taken together, the ECLS and MGSL will offer, “within a 10-year span, a full range of data on students’ school experiences as the students enter and then transition from elementary school into high school” (National Center for Education Statistics, 2017a, p. 2).

The sample of the MGLS will be representative of middle grades students and middle grades schools (typified by schools that educate students in the sampled grade) in the United States. More specifically, the school sample is designed to be balanced across four geographic regions (Northeast, Midwest, South, and West), school types (Public, Catholic, and other private) and prevalence of students with disabilities (high and low). This will result in an initial school sample of 1236 schools, with a goal of 900 participating schools (National Center for Education Statistics, 2017b). The student sample is structured in order to allow for the independent analysis of racial/ethnic groups (Asian, Hispanic, Black, and White) and

students with Independent Education Plans stemming from three designations (Autism Spectrum Disorder, Emotional Disturbance, and Specific Learning Disability). The total sixth grade sample is proposed to be 26100 students, with an expected participating sample of 20322 students (National Center for Education Statistics, 2017b).

The content and structure of the MGLS was built in the context of current understandings of academic assessment, young adolescent development, and middle school organizational structures. The MGLS conceptual framework “emphasizes the complex interrelationships that help shape students’ development and learning” (National Center for Education Statistics, 2017a, p. 3). With data collection starting in 2018, the MGLS is designed to provide high quality data to allow researchers to engage with questions relating to students’ cognitive development, academic achievement and executive function; school and home environment and supports; identity development; and school transitions. According to the background documentation provided by NCES (2017a, 2017b, 2017c), students will complete assessments in mathematics, reading, and executive functioning. They will also complete a survey providing information about their outcomes, characteristics, and experiences at school; their home and family life; the teachers, teaching practices and classrooms they experience; and the services and supports available at their schools.

The structure and content of the MGLS was built in the context of current understandings of academic assessment, young adolescent development, and middle school organizational structures. Beyond the individual young adolescent students, the study collects information from parents, math educators, special educators, and school administrators. According to the background documentation provided by the National Center for Education Statistics (2017a, 2017b, 2017c), these respondents will answer questions from a number of different categories. These categories of questions are presented in Table 1. Additionally, survey professionals will complete a checklist about the presence and conditions of facilities at the school.

Table 1

MGLS Content Areas, by respondent

Content Areas	Respondents				
	<u>Student</u>	<u>Parent</u>	<u>Math Teacher</u>	<u>Special Educator</u>	<u>School Administrator</u>
Student outcomes, characteristics, and experiences	x	x	x		
Family and home life	x	x			
Teachers, teaching, and classrooms	x		x	x	x
Schools, services, and supports	x		x		x
Student disability and IEP information				x	
Curriculum and communication				x	
School structure and climate					x
Characteristics of school teachers					x
Support for students with disabilities					x
School characteristics					x
Community perspectives					x
Math Assessment	x				
Reading Assessment	x				
Executive Functioning Assessment	x				

Note: Adapted from National Center for Education Statistics, 2017c.

The data set that will result from the MGLS is positioned to be highly influential in the field of middle grades research for several reasons. First, the design process was collaborative, including over 30 outside scholars who consulted on the content of the student assessments, faculty and administrator questionnaires, and the overall structure of the study (National Center for Education Statistics, 2017a, 2017c). In addition, experts in the field of middle grades education provided guidance on the content and structure, some of whom were also instrumental in the development of the *MLER Research Agenda*. Second, the nature of the data will allow researchers to pose questions that cannot be addressed with administrative data alone. State-wide and nation-wide administrative datasets are increasingly available, and computational techniques are improving so that these “big

data” are able to be used in new and innovative ways (Figlio, Karbownik, & Salvanes, 2017). These types of techniques are currently being used to answer questions of importance at the middle grades level (e.g., Ladd & Sorensen, 2017). However, although numerous direct and indirect measures of educational inputs and outcomes are present in such datasets, the MGLS was built through a middle grades lens and offers additional information about the processes of middle grades education (National Center for Education Statistics, 2017a). Third, the availability of the data positions the MGLS to be influential. The raw MGLS data will be publically accessible without additional licensing fees or special agreements. This contrasts with many administrative data sets and other nationally representative studies, which frequently require researchers to enter into

contracts or identify additional sources of funding to be able to utilize the data. The MGLS data, elements of which will be available in 2019 and which will be fully available in 2021, will be free for use by the public.

For these reasons, one might expect that the rich content of the MGLS would inform the *MLER SIG Research Agenda*, which was crafted to pose the most pressing questions in the field of middle grades research. Yet, neither was directly designed to inform the other. Although the generation of the MGLS study and the writing of the *MLER SIG Research Agenda* were nearly concurrent, they did not explicitly influence each other's shape or content. Therefore, the purpose of this study is to identify the intersections between the MGLS data and the *MLER SIG Research Agenda* questions. To do so will illuminate the overlap between these two forces that will shape the field of middle grades research in the coming years.

Methods

In qualitative research, the researcher can be considered to be the research instrument (Glesne, 2011). In order to hone and use this instrument we built an understanding of the context and data, and then conducted the analyses. To address the research questions, we first sought to better comprehend the context. We began by conducting close reads of the *MLER SIG Research Agenda*, along with the suggested readings contained therein. This reading generated an understanding of the different research agenda topics. These understandings were captured in a series of research memos. Similarly, we read the documentation associated with the MGLS and attended multiple presentations at professional conferences about the forthcoming data sets, with notes similarly collected into memos. Finally, we conducted initial analyses of the MGLS items and the *MLER SIG Research Agenda*, wherein we experimented with emergent coding (Saldaña, 2013) and domain analysis (Savin-Baden & Major, 2012). The experiences and documentation helped to ground the analysis in the context of the research agenda and the longitudinal study.

Our main analysis began with organizing the individual questions from the *MLER SIG Research Agenda* onto a table. We then conducted a content analysis (Savin-Baden & Major, 2012) of the individual items from the

MGLS survey, crossing the content of each individual item with each individual research question. We adopted a conservative stance, noting only when the MGLS item directly addressed the content of the *MLER SIG Research Agenda* research question. This process generated a sprawling crosswalk where the intersection of each MGLS item and each research question is noted (see supplemental material for full table). The resulting table contains the number of MGLS items and the associated respondents for each research question. Additionally, we characterized the utility of the MGLS data. If the MGLS items directly addressed the research questions we noted the utility as "primary;" alternately if the MGLS items contained potentially useful background information for understanding the context of the research agenda question but did not directly address the question, we noted this item as "contextual." Such background information can assist with describing the prevalence of individual groups or the presence of structures or approaches in middle schools.

Our next step was to characterize categories of *MLER SIG Research Agenda* questions as being addressed at a rich, moderate, or poor level based on the proportion of questions coded as intersecting with that question category. First, we identified the percentage of MGLS items that addressed each individual research question. Then, we calculated the cut points necessary to divide these percentages into four equal groups, or quartiles, and assigned them a ranking from 1 to 4. We gathered the *MLER SIG Research Agenda* questions by the top level questions from each section of the agenda and found the median of the quartile rankings of the sub questions. If the median value was among the highest quartile, we considered the section to be richly addressed. If the median was in the second quartile we characterized this section as moderately addressed, and if the median was in the third quartile of codes, we considered it poorly addressed. When the median was in the lowest quartile or zero these sections were considered to be not addressed. We set these levels to provide an ordinal interpretation of the extent to which research agenda sections were addressed by the data. The characterization of the sections as "background" was not divided using ordinal classifications, due to the general nature of this background information.

We also characterized sections of the research agenda as being richly, moderately, or poorly

addressed based on the number of respondents. Following the scheme for content codes, we found the median value for each top level question from each section based on the individual sub questions. Sections were considered to be “richly addressed” if data from three different respondents provided information that could be used to address the question. We selected this cutoff to align with the practice of triangulation in qualitative research, where data from multiple sources are incorporated to provide necessary reliability (Savin-Baden & Major, 2012). We characterized a section as moderately addressed if the median number of respondents was two, and if it was one, we considered it poorly addressed.

In order to increase the robustness of this process, we repeated the quartile analysis using group averages instead of the median value, and twice more using a median and average calculation that excluded *MLER SIG Research Agenda* questions that were not addressed by any MGLS items. The final characterization was informed by all of these results. Additionally, during the systematic characterization, we noted that some research agenda questions were intrinsically only able to be addressed by certain

respondents. This was a product of the unit of analysis implied by the research agenda question, rather than the content of the MGLS. As a result, in three cases, we adjusted the resulting crosswalk upwards to being characterized as richly addressed and noted them in the crosswalk. This upwards adjustment provided a more adaptable characterization than that which emerged from the analysis that relied solely on the quantification of qualitative results.

Results

This section presents the results from the crosswalk mapping the content from the MGLS onto the research questions from the agenda. The results are presented in Table 2. In order to assist in interpretability, the top level questions within the different categories of the research agenda are used as the smallest level of results presented. The research questions and topic areas are presented sequentially. (See Appendix A for alternate specifications of intersections between *MLER SIG Research Agenda* and MGLS content).

Table 2

Description of intersections between MLER SIG Research Agenda and MGLS Content

MLER Research Agenda Section	Sub question	MGLS Informants	Utility of Data	Question Coverage	Informant Coverage
<i>Developmental Aspects</i>	Areas of Development	Student, Parent, Math Teacher	Primary	Rich	Rich*
	Educator Practices	Student, Parent, Math Teacher, Special Educator, School Administrator	Primary	Rich	Rich*
<i>Cultural Responsiveness</i>	Student Experiences and Identity Development	NA	Contextual	Poor	Poor
	How Teachers Enact Culturally Responsive Teaching Practices	NA	Contextual	Poor	Poor
	How Schools Support Student Identity Development and Culturally Responsive Teaching Practices	NA	Contextual	Poor	Poor
	Gifted and Talented	NA	Contextual	Poor	Poor

<i>Special Populations</i>	Inclusion	Math Teacher, Special Educator, School Administrator	Primary	Rich	Rich
	Response to Intervention (RTI)	NA	Contextual	Poor	Moderate
	Technology	Student, Parent, Math Teacher, Special Educator	Primary	Rich	Rich
	Universal Design for Learning (UDL)	NA	Contextual	Poor	Poor
<i>Educator Development</i>	Practices	Student, Math Teacher, Special Educator, School Administrator	Primary	Moderate	Poor
	Policy	NA	Contextual	Rich	Poor
	Middle Grades Philosophy	NA	Contextual	Poor	Poor
	Partnerships	NA	Contextual	NA	NA
	Recruitment & Retention	NA	Contextual	Moderate	Moderate
<i>Curriculum Integration</i>	Curriculum Integration	NA	Contextual	Poor	Poor
	Literacy Integration	NA	Contextual	NA	NA
	Personalized Learning	Student, Math Teacher, Special Educator	Primary	Moderate	Poor
	Project-Based and Problem-Based Learning (PBL)	NA	Contextual	Poor	Poor
<i>Social and Emotional Learning</i>	Structure of SEL Programs	NA	Contextual	Poor	Poor
	Pedagogy Associated with SEL	NA	Contextual	Poor	Poor
	Teacher Candidate Preparation for SEL	NA	Contextual	NA	NA
	Teacher Professional Development	NA	Contextual	NA	NA
<i>Digital Technologies</i>	Middle Grades Teachers	Student, Parent, Math Teacher, Special Educator	Primary	Moderate	Poor
	Middle Grades Students	Student, Math Teacher, Special Educator	Primary	Moderate	Moderate
<i>Status and Vision</i>	Status	Student, Parent, Math Teacher, Special Educator, School Administrator	Primary	Rich	Rich
	Vision	NA	Contextual	NA	NA

<i>Interdisciplinary Teaming</i>	Understanding and Implementation of Interdisciplinary Teaming	Special Educator, School Administrator	Primary	Moderate	Moderate
	Teacher Candidate Preparation and Teacher Professional Development	NA	Contextual	Poor	Poor
	Benefits of Interdisciplinary Teaming	NA	Contextual	Poor	Poor
	Disadvantages of Interdisciplinary Teaming	NA	Contextual	Poor	Poor
	Alternative Structures to Interdisciplinary Teaming	NA	Contextual	NA	NA
<i>Magnet and Charter Schools</i>	Status of Magnet and Charter Schools	NA	Primary [†]	Rich [†]	Rich [†]
	Professional Preparation and Professional Development	NA	Contextual	NA	NA
	Benefits of Magnet and Charter Schools	NA	Primary [†]	Rich [†]	Rich [†]
	Disadvantages of Magnet and Charter Schools	NA	Primary [†]	Rich [†]	Rich [†]
<i>Scheduling Formats</i>	Understanding and Implementation of Scheduling Formats	School Administrator	Primary	Moderate	Rich [*]
	Teacher Candidate Preparation and Teacher Professional Development	NA	Contextual	Poor	Poor
	Benefits and Outcomes of Scheduling Formats	NA	Contextual	NA	NA
	Perceived Barriers of Scheduling Formats	NA	Contextual	NA	NA

Notes: * indicates an upward adjustment of the characterization. † indicates the characterization independent of sampling issues

Developmental Aspects

The MGLS, as written, offers a number of different data points provided by a wide variety of stakeholders that are aligned with the questions in the *MLER SIG Research Agenda* and that are likely to be of use by researchers investigating such questions. The MGLS contains a full battery of executive function items alongside the traditional measures of math and reading achievement. Additionally, the questions in this category that have to do with physiology will be addressed through direct measures of height and weight, along with health reports collected from the student and a

parent. The numerous items on mindset, social relationships, and emotional health have the potential to allow researchers to observe rates of different responses and make group comparisons. For example, changes in executive functioning over the three years of this study for students with an IEP related to emotional disturbance could be observed and compared to students without IEPs. Such comparisons could also be conducted along demographic lines. Table 3 highlights some of these direct intersections between questions taken from the most specific level of the research agenda and the actual survey items from the MGLS.

Table 3

Examples of MLER Developmental Aspects Question and MGLS content

MGLS Respondent		
<u>Student</u>	<u>Parent</u>	<u>Math Teacher</u>
How often does the following happen at school?	During this school year, how often have other children teased, made fun of, or called [student] names?	During this school year, how often have other students teased, made fun of, or called this student names?
<ul style="list-style-type: none"> • I feel like a real part of my school • People notice when I'm good at something • Other students take my opinions seriously • People are friendly to me • I'm included in lots of activities • I feel safe at this school 	Has [student] gotten involved with the wrong kinds of people around [student] 's age?	How well do these statements describe [student]?
During this school year, how often have other students...	How often does [student] tell you about [student]'s friends without you asking?	<ul style="list-style-type: none"> • Resolves peer problems on [his/her] own • Is helpful to others • Can give suggestions and opinions without being bossy
<ul style="list-style-type: none"> • Teased you, made fun of you, or called you names? • Told lies or untrue stories about you? • Pushed, shoved, slapped, hit, or kicked you? 	How often does [student] keep secrets from you about what [student] does during [student]'s free time?	<ul style="list-style-type: none"> • Acts friendly toward others • Understands others
My classmates...		
<ul style="list-style-type: none"> • think it is important to be my friend • like me the way I am • care about my feelings • like me as much as they like other classmates • really care about me 		

Although in general the specific items in the educator practices category are addressed in the MGLS surveys of mathematics teachers, special educators, and school administrators, the questions in the research agenda dealing with the discouragement of stereotypes are not well-covered. The MGLS asks about rates of and practices related to bullying and sexual harassment, but there are not clear connections made to the discouragement of stereotypes. While the MGLS can potentially provide background information about school-wide rates of these wider, related categories of violence, researchers engaging with these specific questions are likely to require additional approaches and techniques to illuminate answers.

Cultural Responsiveness

In the category of cultural responsiveness, the MGLS does not offer a high amount of direct insight. The specific questions posed in the *MLER SIG Research Agenda* lend themselves to investigations of “how?” rather than “to what extent?” These questions are unlikely to be tackled through the analysis of big data. For example, the question of, “How are young adolescents choosing to identify vs. how are they being forced to identify?” is difficult to directly address using data from the MGLS. However, the MGLS will collect rich demographic information that will allow for researchers to describe middle school populations in a number of ways. This is the case for students, teachers, and administrators. As shown in Table 2, these descriptive demographics provide rich

background information that will allow researchers to contextualize their particular studies within the larger picture of middle schools around the country. For example, the proportion of students who identify in multiple race or ethnicity categories versus those who select only one race or ethnicity category in the MGLS could provide valuable framing or background information into a more focused study on student identity choice.

The exception to the approach of using the MGLS for background descriptions with questions from the cultural responsiveness section of the research agenda is regarding those questions that seek to describe the different experiences of students and teachers in marginalized groups. Demographics collected in the MGLS, along with the nationally representative nature of the study, will allow researchers to compare groups. ANOVA testing should be possible across these groups, which will allow researchers to illuminate how the experiences of students or teachers vary across groups. Questions such as, “What are the experiences of marginalized youth in today’s middle grades?” and “What are the experiences of middle grades teachers from marginalized backgrounds?” could be addressed with such

approaches using this data.

Special Populations

The MGLS contains a high amount of information related to special education populations, inclusion, and technology for special populations. Not only is data provided by special educators, but the math teacher survey and school administrator survey also ask about practices such as teacher collaboration and professional development related to practices for inclusion. In-depth information about where and how students who have different special education classifications spend their time will be collected, which can be tied to the academic and executive functioning student outcomes. Special educators also report on their use of adaptive technology and the inclusion of digital elements into their pedagogical approaches. Table 4 highlights some of these questions from the research agenda, along with the related content from the MGLS. Additionally, although it is not directly addressed throughout the special populations segment of the research agenda, a high amount of information regarding parental involvement with processes related to individual education plans (IEPs) is collected in the survey.

Table 4

Examples of Special Populations Questions and MGLS content

MLER Question: <i>What are the roles of general education and special education teachers who participate in inclusion models in the middle grades?</i>	
MGLS Respondent	
School Administrator	Special Educator
What percentage of students with IEPs at your school are served by each of the following placement options?	Do you coteach with another teacher or professional educator?
<ul style="list-style-type: none"> General education with services or supports Classes cotaught by general and special education teachers Part-time resource room for special education students Self-contained special education classrooms 	Which of the following models best describes your current coteaching arrangement?
Are the following available to general education teachers in this school when students with IEPs are included in their classes?	<ul style="list-style-type: none"> One teach, one drift (one teacher leads the class and the other moves throughout the classroom to make sure everyone is on track). Station teaching (class divided into two or more stations; each teacher spends at least half of the period with one group, and then teachers switch). Alternative teaching (one teacher teaches the large group and the other teacher works with a smaller group of
<ul style="list-style-type: none"> Consultation with or technical assistance from special education or other staff with general special education training, not specific to child's disability 	

- Special equipment or materials
 - Professional Development
 - Teacher aides, instructional assistants, paraprofessionals, or aides for individual students
 - Smaller student load or class size
 - Coteaching with a special education teacher or related services provider
 - Team teaching with a special education teacher or related services provider
 - Team Planning
-
- students to re-teach any necessary information).
 - Parallel teaching (both teachers are teaching at the same time, and both lead discussion; class may be divided into groups).
 - Team teaching (both coteachers balance the responsibilities of the class in such a way that both teach the same amount in front of the classroom).

Some of the final modifications to the MGLS survey included changes to collect more information about teacher training on concepts and practices for Response to Intervention (RTI) and Universal Design for Learning (UDL). Although these new questions and response options introduced RTI and UDL into the survey, they did not address the RTI and UDL questions present in the research agenda. Consequentially, although background information can be ascertained from the MGLS data, the research agenda questions regarding implementation of these programs cannot be directly answered. Additionally, while the designation of gifted and talented is collected for the individual student along with the percentage by grade level at the school, the MGLS survey does not delve deeper into practices at the school or classroom level to differentially support these students.

Educator Development

The data that will be generated by the MGLS will likely be of use to researchers taking on questions in the educator development questions that deal with practices and policy. The MGLS collects in-depth information about the curriculum and pedagogical approaches of math teachers and special educators. In particular, math classroom content and curricular materials are richly described, allowing researchers to investigate patterns of use or implementation. Special educators also provide in-depth information about their practices and approaches to working with different types of students. Table 5 presents an example question from the *MLER SIG Research Agenda* that is particularly well-addressed, along with the specific MGLS content.

Table 5

Examples of Educator Development Questions and MGLS content

MLER Question: <i>What are the common curricular, instructional, and assessment practices of effective middle grades educators?</i>	
MGLS Respondent	
<u>Math Teacher</u>	<u>Special Educator</u>
<p>This section focuses on the content you cover in your math classes, as well as your teaching practices. The curriculum used for your math classes is...</p> <ul style="list-style-type: none"> • Locally or district-designed • State-designed • Nationally-designed <p>In addition to your primary math curriculum, which of the following do you use as a supplement for any of your math classes?</p> <ul style="list-style-type: none"> • Textbook (Print) • E-book • District or state educational content repository 	<p>In what capacity or capacities do you teach or provide services to [student]? Do you...</p> <ul style="list-style-type: none"> • Provide instruction directly to the student? • Provide related services directly to the student? • Provide consultation services directly to the student? • Provide indirect consultation services (e.g., consultation to the student's teacher)? • Provide case management?

- Open educational resources

How many full class periods have you or will you teach the following topics in this course during this school year? Indicate the number of class periods.

- Understand ratio concepts and use ratio reasoning to solve problems.
- Analyze proportional relationships and use them to solve real-world and mathematical problems.
- Apply and extend previous understandings of multiplication and division to divide fractions by fractions
- Compute fluently with multi-digit numbers and find common factors and multiples.
- Apply and extend previous understandings of numbers to the system of rational numbers.
- Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers
- Know that there are numbers that are not rational and approximate them by rational numbers.
- Define, evaluate and compare functions
- Use functions to model relationships between quantities.
- Apply and extend previous understandings of arithmetic to algebraic expressions.
- Reason about and solve one-variable equations and inequalities
- Represent and analyze quantitative relationships between dependent and independent variables.
- Use properties of operations to generate equivalent expressions.
- Solve real-life and mathematical problems using numerical and algebraic expressions and equations.
- Work with radicals and integer exponents.
- Understand the connections between proportional relationships, lines, and linear equations.
- Analyze and solve linear equations and pairs of simultaneous linear equations.

What teaching practices and methods have you and/or other special education service providers used with [student]?

- One-on-one instruction
- Small-group instruction
- Large-group instruction
- Cooperative learning
- Peer tutoring
- Computer-based instruction
- Direct instruction
- Cognitive strategies
- Self-management
- Behavior management
- Instruction received through a sign interpreter
- Video-based instruction
- Audio-recorded texts or lessons
- Use of visual organizers or visual models
- Use of 3-dimensional materials and/or models (e.g., base ten blocks, fraction bars)

Which of the following best describes the curriculum materials used with [student] in the general education classroom?

- General education curriculum materials were used without modification
- General education curriculum materials were used with some modifications
- General education curriculum materials were used with substantial modifications
- Specially-designed commercial materials were used
- Teacher-designed materials were used

Which of the following best describes the curriculum materials used with [student] in the special education classroom/program?

- General education curriculum materials were used without modification
- General education curriculum materials were used with some modifications
- General education curriculum materials were used with substantial modifications
- Specially-designed commercial materials were used
- Teacher-designed materials were used

Research tackling questions within the policy category could also be informed by the MGLS data, as the ways in which the mathematics and special educators gained certification is collected by the survey. Unlike the practices questions, the policy questions from the *MLER SIG Research Agenda* are less directly addressed; however,

this data could provide important contextual information about the routes middle grades educators travel on their way to the classroom. Similarly, the data that will result from the MGLS will be of less use to researchers engaging with questions related to recruitment and retention, partnerships, and middle grades

philosophy within the educator development section of the *MLER SIG Research Agenda*. These questions focus on the characteristics of higher education programs and other entities that help prepare and sustain teachers and administrators. Although background information about these professionals is available in the MGLS, the data will not provide particular insight on these questions.

Curriculum Integration

The *MLER SIG Research Agenda* section on curriculum integration has categories that address integration broadly – literacy integration, personalized learning, and project- or problem-based learning. Of these, the questions in the personalized learning section can be addressed to a moderate level using the data from the MGLS. Particularly in the mathematics classroom and for students with IEPs, information is collected about pedagogical practices and student choice. These teacher practices can be compared with outcomes on the academic and executive functioning student-level assessments. Such comparisons, along with information about student interests and mindsets, may provide a multi-dimensional perspective on the rapidly growing research field of personalized middle grades education.

One of the limitations of a multi-informant survey is that it takes teacher and administrator time to complete; thusly, decisions about the sample must be made. In the case of the MGLS, content-area teachers are represented by math teachers. The resulting information contains little information in the field of literacy integration across the curriculum. Although math teachers and special educators would potentially be able to speak to such efforts, the MGLS does not contain items to gather this information. Similarly, although conclusions about the more broadly drawn category of personalized learning can be made, there is less direct information collected about project- and problem-based learning. Although general information about middle school structures and organizations are likely to be of use when

providing the background on research into these types of pedagogical approaches, the MGLS data offers little in the way of direct information about these practices.

Social and Emotional Learning

As pointed out by the *MLER SIG Research Agenda*, young adolescents in middle schools engage in social and emotional development. Teachers, parents, and peers are important in these types of development. The MGLS data does pose a number of questions to the student around intrapersonal competencies such as self-worth, self-regulation, grit, and mindset. The survey also asks about interpersonal relationships with peers and adults. While these data points are likely to provide important background, the research agenda questions address programs in schools that are meant to foster and support social and emotional learning. The MGLS survey does not collect specific information about such programs or associated pedagogies, making the data useful only from a general background vantage point.

Digital Technologies

The digital technologies section of the *MLER SIG Research Agenda* is divided into questions about middle grades teachers and middle grades students. The forthcoming data from the MGLS is likely to address a number of the questions in the teacher category. Particularly, math and special education teachers provide information about how they use technology to support their professional work. The survey also measures how these teachers ask their students to use technology, including for assessment purposes. Table 6 highlights some of the direct intersections between the research agenda questions on digital technologies and teachers, along with the content from the MGLS. Parallel to the teacher-level questions, the survey collects information about students' use of technology for school as well as for personal applications. This includes measures of screen time and the use of specific types of digital applications, including social media.

Table 6:

Examples of MLER Digital Technologies Questions and MGLS content

MLER Question: <i>How do middle grades teachers use technology to advance student learning within content areas?</i>	
MGLS Respondent	
<u>Math Teacher</u>	<u>Student</u>
<p>In your math classes, how often do you use technological resources to do each of the following?</p> <ul style="list-style-type: none"> • Practice or review mathematics topics. • Show work to the class in real time. • Research a mathematics topic. • Play games. • Create projects. • Collect and analyze data • Conduct or watch simulations. • Submit assignments online. • Share or post their work for others to view at any time. • Extend mathematics learning with enrichment activities. • Participate in online discussions. • Fill free time. • Encourage student participation in class. • Collect and analyze data for classroom examples and activities. • Collect and analyze assessment data for grading. • Other assessment activities such as formative assessments, documenting student work. • Send reminders or class information to students. • Provide homework help or learning support outside of class. • Develop videos of classroom instruction. • Compile links to external resources. • Distribute study tools and self-assessments. <p>How often do your students connect to the internet in your math classes?</p> <p>In your math classes, how often do you assign homework that requires your students to connect to the internet?</p>	<p>How often do you use the internet outside of school to do homework or school assignments?</p> <p>How often do you go somewhere other than home or school to access the internet when trying to do your homework or school assignments?</p> <p>How often do you have a problem with your internet at home when trying to do your homework or school assignments?</p> <p>On a typical weekday, how much time each day do you spend using electronic devices (including phone, tablet, computer, video game systems, television, iPod, etc.) for school-related activities?</p> <p>On a typical weekend day, how much time each day do you spend using electronic devices (including phone, tablet, computer, video game systems, television, iPod, etc.) for school-related activities?</p>

Although the MGLS will provide rich information about student use of technology, the *MLER SIG Research Agenda* poses a number of questions about specific uses of technology that are not covered by the MGLS. Due to this volume and the limited number of items on the MGLS, there are many research questions that are not addressed. While rich information about the types of applications used by students is collected, the MGLS does not drill down on the same research pathways as the *MLER SIG Research Agenda*. For example, the agenda

poses questions about flipped classrooms, makerspaces, augmented reality, and 3D printing. Such practices, while ever more common in middle schools around the county, are emerging and were not covered in the MGLS. This highlights a tension common in research on technology in education – developments frequently outpace the creation of suitable tools to measure and analyze the impact of the developments on the classroom. While the MGLS will provide a large amount of information about young adolescent technology

use, a majority of the student-level questions can be addressed only by providing useful background information.

Status and Vision

The data that will emerge from the MGLS program, particularly the teacher and administrator reports, will provide a rich portrait of the status of middle school organizational structures. Teachers and administrators will report on structures of people, places, and time. The facilities checklist, completed by a study professional, will provide additional information. Due to the nationally

representative nature of the sample, these structures will be able to be compared across different geographical regions. Additionally, some questions in the survey ask administrators to note when certain structures were put into place in the school, such as advisory programs. The status portion of the status and vision agenda section also poses questions about the relationship of middle school structures to learning and achievement; since achievement data is also collected on the sample students in these schools, such connections will be able to be made. Table 7 provides an illustrative example of the potential for MGLS content to address questions from the status portion of this section.

Table 7

Examples of MLER Status and Vision questions and MGLS content

MLER Question: <i>In what ways are contemporary schools with middle grades organized (e.g., structures of people, place, time)?</i>	
	MGLS Respondent
	<u>School Administrator</u>
Does your school have an advisory program in the sixth/seventh/eighth grade?	
When did your school begin using an advisory program in the sixth/seventh/eighth grade?	
Which of the following best describes the way your school schedules time for the advisory program in sixth/seventh/eighth grade?	
<ul style="list-style-type: none"> • We have a separate class period for advising. • Advising is part of our homeroom period. • We integrate advisory activities within our teams and/or classrooms. • Other 	
How many weeks per year are the Grade 6 math classes typically held?	
How many minutes is a typical Grade 6 math class?	

Unlike the status sub questions, the vision sub questions are unlikely to be directly addressed using MGLS data. A number of these questions ask what “should” be the case, of what is needed for these structures to come into being. While the MGLS data is likely to provide useful background information about what “is” the case, these vision questions are not directly addressed.

For example, the vision section of the *MLER SIG Research Agenda* poses the question, “What organizational structures should exist in 21st

century middle grades schools...?” While the MGLS data can provide information about what structures are currently prevalent in middle schools, additional methodological approaches are likely necessary to address questions of this type.

Interdisciplinary Teaming

Researchers investigating questions in the “Understanding and Implementation of Interdisciplinary Teaming” portion of the Interdisciplinary Teaming section of the *MLER*

SIG Research Agenda are likely to benefit from using the MGLS data. In particular, the survey is constructed to collect information about teaming between math teachers and the special educators who will be surveyed. Administrators will also provide information about teacher collaboration at the building level. The longitudinal nature of the data may lead to the ability of researchers to observe changes in teaming over time, in order to better understand implementation.

As shown in Table 2, the questions in the other portions of the Interdisciplinary Teaming section will likely be less directly addressed than those in the first section. While there is little overall information that can serve to assist researchers investigating teacher candidate preparation, the MGLS data could be useful to those researchers looking into the benefits and disadvantages of teaming by providing rich background information. It should be noted that in such cases, although the MGLS will provide middle school-specific information, it is not the only source for information on middle schools, and many national data sources that provide demographic information, grade level achievement, and teacher characteristics are already available elsewhere.

Magnet and Charter Schools

The questions in the magnet and charter schools section of the *MLER SIG Research Agenda* highlight a particular challenge to the nature of using large-scale data that were designed to address a number of questions. According to the documentation regarding the MGLS sample (National Center for Education Statistics, 2017b), while the sample will be nationally representative with regard to Public, Catholic, and other private schools, the sample will not be representative with regard to charter or magnet schools. Although school administrators do indicate if the school fits into one of these categories, the data from the magnet or charter schools sampled in the MGLS cannot be interpreted as describing magnet or charter schools nation-wide. The questions in this section of the research agenda generally draw comparisons between these special classifications of public schools and “standard” public schools. While the data that will arise from the MGLS will provide a large amount of information about the structures and practices within the magnet and charter schools that are in the sample, they will not allow for basic group comparisons due to the sampling techniques.

Although this sampling issue limits the utility of the MGLS data for researchers engaging with questions that directly compare magnet and charter schools with traditional middle schools, the presence of an indicator as to the type of school will allow researchers to control for what type of public school is present in the sample. Projects that consider questions from elsewhere in the research agenda can build models that incorporate binary indicators of these types of school structures and control for them in regression models. Additionally, the magnet and charter school samples that are present in the data could be used in initial data explorations or in pilot studies to sharpen research questions or approaches.

Scheduling Formats

Just as the sections of the Scheduling Formats section of the *MLER SIG Research Agenda* mirrors the Interdisciplinary Training section, so too is the pattern of utility of the MGLS survey data mirrored. While the MGLS will provide information about the current state of scheduling formats at middle schools, there is little information about teacher preparation or professional development on schedule-related issues. Additionally, for the questions that address the benefits and barriers of scheduling formats, the MGLS is likely to provide useful background information by providing information on the nature of the schedules, but questions that ask “in what ways...” are unlikely to be able to be directly addressed.

Overall, we posit that of the 11 sections of the MLER SIG research agenda, questions from eight of the sections can be directly addressed using data that will arise from the MGLS. Questions in the Cultural Responsiveness section and the Social and Emotional Learning section, although not directly addressed, may benefit from the use of MGLS data to describe the overall context of middle schools in the US. Finally, although many questions from the Magnet and Charter Schools section are addressed, issues of sampling complicate straight-forward analyses. Numerous other questions from the other sections that are not directly addressed will also benefit from such background utilization of the MGLS data. Overall, the MGLS is constructed in such a way as to provide valuable resources for quantitative and mixed methods researchers in middle grades education

Discussion

The field of middle grades research has long been characterized as emphasizing qualitative approaches to formal research (Hough, 2003). Recently, leading voices in the field have called for a greater influx of quantitative approaches to addressing research questions (Mertens et al., 2016). The forthcoming MGLS will provide a large amount of information about a nationally representative sample of middle grades students, their lives, and their learning environments. The portrait of students, teachers, and schools that will be provided by the MGLS is far more extensive than that which could be generated from the use of existing administrative data alone. Additionally, quantitative data of this scale can be queried in ways that small-scale, locally collected data cannot. The emergence of the MGLS data will provide the raw material for middle grades researchers to conduct in-depth work to address questions important to the middle grades.

The purpose of this paper was to evaluate the extent to which the data from the MGLS will address the questions in the *MLER SIG Research Agenda*. With regard to the first research question, “To what extent do the data that will be generated by the MGLS address questions in the *MLER SIG Research Agenda*?” the results are mixed. For questions in the research agenda sections on Developmental Aspects, Special Populations, Digital Technologies, and Status and Vision, the MGLS offers direct and rich indicators for many of the specific questions. However, for the remaining sections of the research agenda, the utility of the MGLS data will primarily be in providing background information about the experiences of middle grades students, parents, and teachers on a wide range of related topics. With regard to the second research question, “Specifically, what questions or data points from the MGLS can be used to answer which specific questions in the *MLER SIG Research Agenda*?” our research has resulted in three starting points for researchers engaging with questions from the *MLER SIG Research Agenda*: 1) the crosswalk present in the main version of this paper; 2) the example *MLER SIG Research Agenda* questions with their MGLS items dispersed throughout the results; and 3) the content-analysis item-by-item crosswalk available in the supplemental materials.

As stated, data from the MGLS will not address all of the research questions contained within the *MLER SIG Research Agenda*. Although research professionals developed the research agenda and the MGLS content in approximately the same time frame, they were not developed specifically to complement each other. The areas where there is a lack of overlap generally stem from differences in content between the MGLS and the *MLER SIG Research Agenda*, and the sample for the MGLS. We interpret both of these factors as stemming from the presence of questions in the *MLER SIG Research Agenda* that do not align with the purpose of the MGLS. For example, there is little content in the MGLS that can be used to directly address questions of middle school teacher preparation for social and emotional learning instruction, interdisciplinary teaming, or scheduling. Such survey items would be outside of the stated MGLS focus on students and their experiences and development. With regard to the sample, the purpose of the MGLS was not to disaggregate student experiences by the type of public school they attend; consequently the sample was not designed to provide a national representation of magnet or charter schools. Although information about the type of school exists in the data, researchers hoping to conduct the type of direct comparisons inferred between and among these types of schools and other public or private schools should necessarily proceed with caution.

The *MLER SIG Research Agenda* presents middle grades education scholars with an ambitious frame for guiding inquiry over the next few years. At the same time, the MGLS will provide considerable amounts of data that are similarly broad in scope. The potential utility of the existing intersections, some of which we have outlined here, is considerable. Given the large scope of this work, collaboration across institutions, organizations, and researchers will be critical. The field of middle grades education research is well positioned for such collaboration for several reasons. First, researchers in the field already have demonstrated capacity for working together, not only in the development of the *MLER SIG Research Agenda* but also in previous national research projects such as the Common Planning Time Project (Mertens et al., 2013). Second, beyond the MLER SIG, several organizations exist that regularly bring middle grades education scholars and proponents together, including the National Association of Professors of Middle Level Education, the National Forum to Accelerate Middle Grades

Reform, and the Association for Middle Level Education's Research Advisory Committee. Finally, the publicly available nature of the MGLS data fosters ease of collaboration, as ready access will lower common barriers that often accompany more restricted data sets.

The route from research findings to influencing policymakers can be long and populated by numerous intermediaries (Lubienski, Scott, & DeBray, 2014). Policymakers who work at the local level are more likely to be influenced by national findings that have been contextualized or related to realities at the local level (Scott et al., 2017). High quality mixed methods research can be used to join large-scale and local or small-scale research and provide meaningful and impactful results, conclusions, and recommendations for policymakers (Sammons, 2010). The MGLS provides rich quantitative information that can be further explored or explained using mixed methods. Such approaches incorporate the rich qualitative tradition already present in the middle grades research community while leveraging the emerging wealth of quantitative data. Questions from the *MLER SIG Research Agenda* could be tackled in such a way, resulting in results that could inform middle grades policy.

Limitations

There are a number of limitations to the findings from this descriptive study. First, while the topics in the *MLER Research Agenda* are characterized here in the context of the introductory paragraphs and the suggested readings, additional interpretations of these topic areas may be held by researchers in the field. Given the grounded nature of this study, links between the research agenda and the MGLS were based on the available data, and all interpretations cannot be predicted. Interpretations of the questions or topics in the research agenda that incorporate different theoretical lenses or perspectives not present in the agenda itself may not be well-informed by the portions of the MGLS linked to the particular sections of the *MLER SIG Research Agenda*. Researchers using novel lenses would be well-served to use these links as a starting point, rather than as fully prescriptive. Another potential limitation to the application of this study's findings is the lack of existing data associated with the MGLS. Whereas the questions were crafted with desired statistical properties in mind, we do not yet know if the

data will exhibit variability, meaningful splits, low rates of missing data, or multiple other characteristics that allow researchers to conduct different types of analyses with quantitative data. Researchers will benefit from evaluating the nature of the applicable data prior to analyses.

Concluding Remarks

“For too long, educational researchers, especially those in middle grades education research, have had little impact on the development and implementation of educational policy” (Mertens et al., 2016, p. 8). Vital in this statement is the group of middle grades educational researchers. Just as middle school is more than a building (Vermont Middle Grades Task Force, 2009), middle grades research is more than that which incorporates particular grades or occurs in particular contexts. The framework that has been described as “middle level philosophy” has a rich history stemming from the 1960s that encapsulates a system of values and orientations with regard to young adolescents and their education (Smith & McEwin, 2011). Researchers who understand these values and orientations, i.e., middle grades educational researchers, are well-positioned to ask questions that are framed with the middle grades as they exist in mind, and to answer them within the context of the philosophical framework. Currently, much research done by these researchers has been qualitative in nature (Mertens et al., 2016). Consequentially, the bulk of the quantitative research on middle grades students, teachers, and organizations – research that is likely to meet the needs of policymakers – has been conducted by researchers who may lack a deep understanding of the middle grades philosophy. The advent of the *MLER Research Agenda* and the initiation of the MGLS offers an opportunity for middle grade educational researchers to take the reins of the quantitative research being conducted regarding these students and the spaces in which they are invested. Indeed, unless such work is conducted by middle grades educational researchers, the large scale research narrative regarding the middle level that is accessed by policymakers and others will continue to be directed by researchers who may lack a middle grades lens through which to interpret the findings. The result would be more than a missed opportunity; it could potentially mean marginalization of the middle grades educational research community.

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Appendix A: Intersections between MLER SIG Research Agenda and MGLS Content: Alternate Specifications

	Question Coverage				Informant Coverage	
Intersections between MLER SIG Research Agenda and MGLS Content: Alternate Specifications	Median Spec	Median Spec Restricted	Average Spec	Average Spec Restricted	Median Spec	Average Spec
Developmental Aspects						
Areas of Development	Rich	Rich	Moderate	Moderate	Moderate	Moderate
Educator Practices	Rich	Moderate	Rich	Moderate	Moderate	Moderate
Cultural Responsiveness						
Student Experiences and Identity Development	Moderate	Poor	Moderate	Poor	Poor	Moderate
How Teachers Enact Culturally Responsive Teaching Practices	Poor	N/A	Poor	Poor	Poor	Poor
How Schools Support Student Identity Development and Culturally Responsive Teaching Practices	Moderate	Poor	Moderate	Poor	Poor	Poor
Special Populations						
Gifted and Talented	Poor	N/A	Poor	N/A	Poor	Poor
Inclusion	Rich	Rich	Rich	Moderate	Rich	Rich
Responses to Intervention (RTI)	Moderate	Poor	Moderate	Poor	Moderate	Moderate
Technology	Rich	Rich	Rich	Moderate	Rich	Moderate
Universal Design for Learning (UDL)	Poor	N/A	Poor	N/A	Poor	Poor
Educator Development						
Practices	Rich	Moderate	Moderate	Poor	Poor	Poor
Policy	Rich	Moderate	Moderate	Moderate	Poor	Poor
Middle Grades Philosophy	Moderate	Poor	Moderate	Poor	Poor	Poor

Partnerships	N/A	N/A	N/A	N/A	N/A	N/A
Recruitment & Retention	Moderate	Moderate	Moderate	Poor	Moderate	Moderate
Curriculum Integration						
Curriculum Integration	Poor	Poor	Poor	Poor	Poor	Poor
Literacy Integration	N/A	N/A	N/A	N/A	N/A	N/A
Personalized Learning	Moderate	Poor	Moderate	Poor	Poor	Poor
Project-Based and Problem-Based Learning (PBL)	Moderate	Poor	Poor	Poor	Poor	Poor
Social and Emotional Learning						
Structure of SEL Programs	Moderate	Poor	Poor	Poor	Poor	Poor
Pedagogy Associated with SEL	Moderate	N/A	Poor	N/A	Poor	Poor
Teacher Candidate Preparation for SEL	N/A	N/A	N/A	N/A	N/A	N/A
Teacher Professional Development	N/A	N/A	N/A	N/A	N/A	N/A
Digital Technologies						
Middle Grades Teachers	Moderate	Poor	Moderate	Poor	Poor	Poor
Middle Grades Students	Moderate	Moderate	Moderate	Poor	Moderate	Moderate
Middle Grades Schools and Structures						
Status and Vision						
Status	Rich	Moderate	Moderate	Moderate	Moderate	Rich
Vision	N/A	N/A	N/A	N/A	N/A	N/A
Interdisciplinary Teaming						
Understanding and Implementation of Interdisciplinary Teaming	Moderate	Moderate	Moderate	Poor	Moderate	Moderate

Teacher Candidate Preparation and Teacher Professional Development	Poor	N/A	Poor	N/A	Poor	Poor
Benefits of Interdisciplinary Teaming	Poor	N/A	Poor	N/A	Poor	Poor
Disadvantages of Interdisciplinary Teaming	Moderate	N/A	Poor	Poor	Poor	Poor
Alternative Structures to Interdisciplinary Teaming	N/A	N/A	N/A	N/A	N/A	N/A
Magnet and Charter Schools						
Status of Magnet and Charter Schools	N/A	N/A	N/A	N/A	N/A	N/A
Professional Preparation and Professional Development	N/A	N/A	N/A	N/A	N/A	N/A
Benefits of Magnet and Charter Schools	N/A	N/A	N/A	N/A	N/A	N/A
Disadvantages of Magnet and Charter Schools	N/A	N/A	N/A	N/A	N/A	N/A
Scheduling Formats						
Understanding and Implementation of Scheduling Formats	Moderate	Poor	Moderate	Poor	Poor	Poor
Teacher Candidate Preparation and Teacher Professional Development	Poor	N/A	Poor	N/A	Poor	Poor
Benefits and Outcomes of Scheduling Formats	N/A	N/A	N/A	N/A	N/A	N/A
Perceived Barriers of Scheduling Formats	N/A	N/A	N/A	N/A	N/A	N/A

Appendix B: MLER MGLS Crosswalk

Visit go.uvm.edu/crosswalk