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America's Middle Schools: Examining Context, Organizational Structures, and Instructional Practices

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Abstract

The education of the young adolescent has consistently posed a challenge to the educational community. While the general belief is this age group (10 to 15 year-old children) would benefit from a specialized educational approach. Historically, both the junior high school model of the early 1900s and the more current middle school concept have struggled to be fully implemented and embraced by the educational community. With almost a decade passing since the last national survey focused on middle grades schools (McEwin & Greene, 2010, 2011), researchers seek to reassess the context, organizational structures, and instructional practices of middle schools in the United States. Over 1,600 responses from principals and teachers to the national survey indicate the status of middle schools is largely unchanged since the McEwin and Greene study. Specific recommendations for moving forward are shared.

INTRODUCTION

For more than a century, there have been differing views on the best approach to educate young adolescents (10 to 15 year-olds). As early as 1895, the National Education Association's (NEA) report of the Committee of Fifteen on Elementary Education provided glimpses into the struggle to adequately address the educational needs of adolescents. Though our understanding of adolescence has matured, it is notable the Committee of Fifteen realized students in this age range were unique and would benefit from a different educational approach to meet their needs.

As educators grappled with questions of school organization in the early 20th century, the Commission on the Reorganization of Secondary Education (1918) published its *Cardinal Principles of Secondary Education* in which recommendations were outlined that continue to influence the education of young adolescents today. The Commission recommended junior and senior periods, differentiated curriculum, student choice, elective courses, guidance services, and attention to the development of students, among other things (Commission, 1918). Shortly after the Commission issued its report, Briggs (1920), followed later by Gruhn and Douglass (1947), offered recommendations for junior high schools. These recommendations and the birth of the junior high school significantly changed the educational landscape in the US.

Although the junior high school was founded with good intentions, some felt it did not live up to its expectations. William Alexander, in a speech at Cornell University, described the need to change the approach employed in the junior high school and to adopt a new approach that placed more emphasis on the learning needs of young adolescents (Alexander, 1963). Eichhorn (1966), a contemporary of Alexander, built upon Alexander's ideas and proposed the first middle school model, a model grounded in the physical, mental, and cultural needs of students (Eichhorn, 1966). Alexander (1963, 1968) and Eichhorn expanded upon these ideals, and proposed organizational structures and curriculum specifically designed to meet the developmental needs of young adolescents, thus ushering in the middle school era of school organization. Others followed, lending their support for the middle school with a specialized educational approach focused on the developmental needs of the young adolescent (Gatewood & Dilg, 1975; Lounsbury, 1978; Toepfer, 1973; Vars, 1969). Eventually, after its formation in 1973, the National Middle School Association (NMSA)—now known as the Association for Middle Level Education (AMLE)—published its position statement *This We Believe* (NMSA, 1982) to clearly articulate the essential elements of middle level education.

Since its original statement on the essential elements of middle level education, NMSA/AMLE has published five revisions to its position statement (Bishop & Harrison, 2021; NMSA, 1992, 1995, 2003, 2010). Other organizations and authors have also provided their own recommendations for essential middle school practices (Carnegie Council on Adolescent Development [CCAD], 1989; Howell et al., 2013; National Association of Secondary School Principals, 2006). Though some of the structural components of middle schools may have changed over time, one element has remained consistent. In each set of recommendations, the developmental needs of the young adolescent were foundational to the recommended practices.

The Middle School Concept: A Developmental Approach

At the core of the middle school concept are the unique developmental needs of students, specifically their cognitive, physical, emotional, social, moral, and cultural needs (Caskey & Anfara, 2014; National Middle School Association, 2010; Scales, 2010). Young adolescents typically encounter significant developmental changes during this stage of life, and it is essential middle grades educators understand these changes and respond to these needs in the classroom. The onset of puberty brings about various changes, such as growth spurts and the development of primary sex characteristics (Caissy, 2002; Kellough & Kellough, 2008), a preference for active over passive learning and an increased desire to interact with peers (Caskey & Anfara; Kellough & Kellough), a renewed motivation to learn about topics they find interesting and relevant (Brighton, 2007), an increased self-awareness and exploration of self-identity (Scales, 2010), an increase in social friendships and navigation of peer relationships (Brighton, 2007), and the development of values and beliefs that leads to one's moral foundation in life (Brighton; Scales). While not all young adolescents experience these developmental changes in the same manner and with the same intensity, specific organizational structures (e.g., interdisciplinary teams, common planning time, etc.) were developed to provide a developmentally responsive education. In essence, all decisions and programs used in middle grades schools should be in response to the developmental needs of young adolescents.

In an effort to address students' developmental needs and support teachers in the process, multiple organizational structures should be implemented, specifically interdisciplinary teams, common planning time, advisory, and flexible block scheduling. Interdisciplinary teams are two or more teachers working together to teach the core academic subjects (language arts, mathematics, science, and social studies) to the same group of students. Schools that consistently implement interdisciplinary teams report more meaningful learning environments (Arhar, 1997; Boyer & Bishop, 2004) and increased student achievement scores (Mertens et al., 1998). Common planning time is a planned period during the school day when teachers have the same planning time to collaborate with one another. Schools that regularly use common planning time see fewer behavior problems (Mertens et al.; Pattee, 2013), increased collegiality with teammates (Duffield, 2013; Faulkner & Cook, 2013; Warren & Payne, 1997), and higher levels of interdisciplinary instruction (Felner et al., 1997). Advisory programs allow an adult advocate to work with small groups of students to address students' academic and developmental needs (Bennett & Martin, 2018; Bishop & Harrison, 2021). Benefits to students include a more positive school climate (Clark & Clark, 1994) and a greater sense of belonging in school (Shulkind, & Foote, 2009; Ziegler & Mulhall, 1994). Flexible block scheduling provides core teachers a block of time to instruct their students. The group of core teachers can adjust the daily schedule to accommodate different activities and student needs. The use of flexible block scheduling has been connected to reduced discipline problems with students (Smith et al., 1998) and greater collaboration among teachers (McLeod, 2005).

The developmental needs of students warrant a specialized approach to teaching and learning. The AMLE outlines key pedagogical characteristics instrumental in supporting and addressing students' academic needs: (1) students engaged in active, purposeful, and democratic learning, (2) embracing a curriculum that is challenging, exploratory, integrative, and diverse; (3) the use of a variety of teaching and learning strategies to accommodate diverse student needs, (4) authentic assessment to inform student growth and development, and (5) passionate and knowledgeable educators that advocate for young adolescents (Bishop & Harrison, 2021; NMSA, 2010). In addition, Jackson and Davis (2000) advocate for a relevant and challenging curriculum grounded in public academic standards, the use of instructional methods that foster lifelong learning, and ensuring middle grade schools are staffed with teachers who are experts at teaching young adolescents.

Surveying Middle School Practices

Since its inception, researchers have sought to determine the level of implementation of various components of the middle school concept as espoused by its founders and articulated in seminal documents like *This We Believe* (NMSA, 1982) and *Turning Points* (CCAD, 1989). Some researchers have focused on the implementation of individual components of the concept, usually structural components, like interdisciplinary teams, common planning time, or advisory periods; but others looked more holistically. One of the earliest studies by Felner and colleagues (1997) examined the impact of the *Turning Points* (CCAD) recommendations on academic achievement, socio-emotional development, and behavioral adjustment. In their study of 31 Illinois middle schools, Felner and colleagues found schools that implemented more *Turning Points* practices and did so with fidelity experienced greater levels of student achievement and a decline in behavior problems. Similar positive results were found in Massachusetts (DePascale, 1997) and Michigan (Mertens et al., 1998), thus lending support for the middle school concept, particularly when schools fully implemented the recommendations.

Over the years since the middle school concept was proposed, some schools have made progress on the more visible, structural components often associated with the middle school concept (e.g., interdisciplinary teams, flexible scheduling), but found it more difficult to reform classroom practices (e.g., curriculum, instruction, assessment) (Alverson et al., 2019; Jackson & Davis, 2000). As concluded by Felner et al. (1997), schools implementing the middle school principles holistically, as recommended in *Turning Points* (CCAD, 1989), experienced the greatest impact. For this reason, it is important to assess the status of middle school practices regularly. If our goal is to ensure a high-quality middle school experience for all students, it is important to determine if effective practices are being consistently implemented.

Since the establishment of the middle school, there have been several surveys to assess the status of various aspects of middle schools in the US (e.g., Brooks & Edwards, 1978; Compton, 1976; Epstein & Mac Iver, 1990; George & Oldaker, 1985; George & Shewey, 1994) including several large-scale, national studies of principals. The National Association of Secondary School Principals (NASSP) published its extensive reports of the status of middle level principals and schools in the US in a series of three, comprehensive national studies (Valentine et al., 2002; Valentine et al., 1993; Valentine et al., 1981).

Additionally, McEwin and Greene and colleagues conducted a series of surveys of middle school principals on the status of middle grades in the US. The five reports were conducted in 1968 (Alexander, 1968), 1988 (Alexander & McEwin, 1989), 1993 and 2001 (McEwin et al., 1996, 2003), and most recently in 2009 (McEwin & Greene, 2010, 2011). In their findings, McEwin and Greene reported on various demographic elements, organizational structures, and instructional practices in the responding schools (McEwin & Greene).

It has now been a decade since McEwin and Greene released the findings of their most recent national survey. It is time to reassess the status of middle grades schools in the US to inform practitioners, teacher preparation institutions, researchers, and policy makers on the progress that has been made and the areas where improvement is needed. Thus, the researchers sought to address the following research questions:

- RQ1: What is the current school context of middle grades schools in the United States?
- RQ2: What is the status of middle grades organizational structures in the United States?
- RQ3: What is the status of middle grades instructional practices in the United States?
- RQ4: What gap, if any, exists between perceptions and implementation of middle school components and teaching strategies in the United States?

Method

Researchers distributed a survey of middle school practices and beliefs to a random sample of principals and teachers across the US. Our survey was adapted from the national survey conducted by McEwin and Greene in 2009.

Participants

Prior to recruiting participants for this study, the research protocols were reviewed by the Institutional Review Boards (IRB) at the universities of the participating researchers. Due to the anonymous nature of the responses to the survey, the IRBs granted exempt approval for the research study. Participants were recruited for this study using a stratified random sample of middle schools in all 50 states. Researchers used this method to provide proportional representation from every state. Researchers also wanted to stratify our sample by regions, as defined by The United States Census Bureau (2018) (see Appendix A). To achieve the final sample of participants, researchers created a listing of all middle schools from publicly accessible websites (e.g., state departments of education). Lists were filtered to include all possible middle school grade configurations. Next, a random sample of 25% from the total number of middle schools in each state was generated. For each school in the sample, a survey invitation was sent to a random sample of administrators and teachers. To increase the likelihood of receiving a response from at least one principal and one teacher, invitations were sent to up to three administrators and five randomly selected teachers. We selected up to three administrators to receive invitations since many schools have a principal and two assistant principals. By selecting five teachers to receive invitations, it not only increased the likelihood of receiving a response from a teacher from each school, but also allowed opportunities for greater variety in grade level and teaching content representation in the sample. A total of 22,966 emails were sent. Follow up reminders were sent to all contacts to encourage participation. The number of survey respondents included 1,650 middle school educators for a response rate of 7.2%. Table 1 indicates the number of participants for each of the four regions. Researchers used all 1,650 responses for data analysis, although 10 participants did not indicate the state in which they worked. Approximately 72% of participants were teachers and approximately 28% of participants were administrators. Several respondents did not indicate if they were a teacher or an administrator, which accounts for the minor response differences in Table 1. Participants took, on average, 16 minutes to complete the survey, and with the hectic schedule of teachers, led to the response rate falling slightly below the generally acceptable response rate of 10% (Dillman, 2011). Considering the length of the survey, the fact it was a random “cold calling” survey, and the 1,650 overall responses representing each state in the country, researchers felt the data provided a reasonably representative sample.

Table 1

Number of Teacher and Principal Responses by Region

Region	Responses by Region	Teacher Responses	Principal Responses
South	646	465	181
Northeast	170	110	59
Midwest	436	309	125
West	388	285	102
Total	1,640	1,169	467

Half (50.63%) of participants reported school enrollment of 600 or fewer students. Enrollments of 401-600 were the most commonly reported (21.91%), followed by 601-800 (20.93%). Twelve percent reported 1,000 or more students with 10.59% reporting fewer than 200 students enrolled in their schools. Regarding community types, 38.29% of respondents identified their school communities as rural, 39.82% as suburban, and 21.62% as urban. More than half (54.67%) of participants reported their schools had 50% or more of their student population eligible to receive free or reduced lunch. Approximately 14.37% of participants reported 90% or more of their student population were eligible to receive free or reduced lunch.

Note: We received 1,650 responses. Ten participants did not indicate their state. Four participants did not indicate if they were a teacher or principal.

Table 2*Principal Initial Certification Level*

Certification Level	Percentage of Respondents
Elementary	28.26%
Middle School	35.11%
High School	36.61%

Regarding certification, 40.88% of teachers reported specialized certification in middle grades education, while 25.35% and 33.76% reported elementary and secondary certifications respectively. Over half (63.03%) of the administrators were certified P-12 with 35.95% of administrators reporting certifications that specifically included middle grades with some type of combination with elementary or secondary certification. Over a third (35%) of principals had an initial certification in middle level education.

Data Source and Analysis

Unlike previous large-scale survey studies, this study chose to include the perspectives of both principals and teachers. In Section 1, participants provided descriptive details about themselves and their schools, such as teacher certification, school size, location, grade configuration, state in which their school was located, and curricular offerings. Researchers included an item to identify those participants who worked at a school with the Schools to Watch designation (National Forum, 2021), as well as two items that asked participants to indicate their initial level of teacher certification and administrative certification if they had it. The survey had other items, including type of community, grade levels, enrollment levels, free and reduced lunch percentages, and percentages of students scoring at or above grade level on standardized reading and math tests.

Sections 2 and 3 measured the perceived importance and implementation of middle school organizational structures and instructional strategies, as well as their beliefs about key challenges in middle school. The sections on organizational structures and instructional strategies consisted of ordinal, 3-point Likert-type items. Respondents' answers ranged from 1-3 for perceptions of importance (not important, somewhat important, very important) and levels of implementation (rarely or never implemented, occasionally implemented, regularly implemented). Researchers included items in this section to allow participants to indicate the biggest challenges facing middle schools with respect to the implementation of these practices. Participants were also able to indicate different reasons for why certain components were challenging. Examples of reasons were student behavior, insufficient time, class sizes, and testing requirements. Section 4 was an open-ended item to allow space for respondents to offer additional comments and advice about middle schools.

To analyze the data, researchers first conducted a descriptive analysis and examined percentage frequency distributions. To examine educators' perspectives regarding the importance and implementation levels of key middle school teaching strategies and components, researchers compared the median response values of the respective items. For median comparison analysis, the researchers calculated the median values for ratings of each of the items in teaching strategies and middle school components.

Researchers considered median comparison, rather than means, to be most appropriate since participant ratings of levels of importance and implementation are ordinal data, meaning the rating scale could be ordered, but did not have equal distance between the individual response levels. Although the levels of ratings were assigned numbers for median comparisons (e.g., not important=1, somewhat important=2, very important=3), the numbers did not specify equal intervals between the different levels.

Additionally, treating ordinal data as if they were metric in nature can lead to errors (Liddell & Kruschke, 2018). Gaps among the perceived levels of importance and implementation were determined to exist when medians were different for the respective items. With respect to Section 4 of the survey, the open-ended item was not included in the analysis for this study.

Results

In the results section, researchers report the findings regarding school context, perceptions of teaching strategies, middle school components, and challenges. Researchers report median differences of perceptions of importance and implementation of strategies and components, and examine highest and lowest rates of perceived importance and implementation among the different strategies and components.

School Context

Participants were asked to provide information regarding the context of their schools. The following sections outline the results concerning the school context.

Interdisciplinary Teaming, Common Planning Time, and Advisory

Sixty percent of respondents noted their schools utilized interdisciplinary teams with 37.03% reporting common planning time happening five days a week. However, 26.87% of respondents reported having no common planning time. Over 20% reported common planning time happening only once a week. Nearly three quarters (74.56%) of respondents reported the use of professional learning communities in their schools.

A majority of participants (69.83%) reported their schools utilized advisory programs. Of those schools, advisory happens most often daily (46.03%) and lasts for 26-30 minutes (25.07%). Nearly one third of participants reported not having an advisory program in their schools. Advisory time was used as homeroom (26.19%), for social and emotional learning (SEL) (18.97%) and Response to Intervention (RTI) (17.61%). Some participants (14.09%) chose “other” for how their advisory time was used. When choosing this option participants were prompted to provide an explanation. Responses were varied, but 40% of remarks noted advisory program content varied throughout the year, covering a variety of topics including academics, SEL, and character building.

Scheduling, Grouping Practices, and Remedial Arrangements

Regarding the schedule, 76.51% of participants reported daily periods of uniform length, and 11.20% reported daily periods of varying length. Flexible block scheduling was reported by only 8.85% of respondents.

Over three quarters (77.37%) of schools were using ability grouping. “Ability grouping in all grades but only in select subjects” (37.39%) and “ability grouping some grades in some subjects” (22.04%) were the most common instructional grouping methods. Twenty-two percent of schools utilized random grouping. Ability grouping happened most frequently in math classes (84.20%) followed by language arts (54.00%) and reading (42.60%).

Participants were asked to identify remedial arrangements used in their schools. “Before and after school classes and tutoring” (68.18%), “pull out for English language arts” (55.12%) and “extra time pulled from exploratory classes” (53.89%) were the most popular remedial arrangements in this sample.

Electives and Sports

Administrators were given a list of possible electives offered by their schools. Band (96.85%), art (90.35%), chorus (79.72%), physical education (78.93%), and foreign language (59.64%) were offered the most, according to survey participants. Life skills (20.07%), journalism (18.50%), creative writing (12.99%), sex education (12.59%), and speech (12.20%) were offered the least. Participants noted their schools largely offered dual credit courses for high school credit (57.79%). Most educators (55.10%) reported their schools offered only interscholastic sports. Intramural sports were offered in 9.00% of schools, and 35.89% of educators reported their schools offered both interscholastic and intramural sports.

Beliefs About Importance and Implementation of Middle School Components

Participants were asked to rate their beliefs regarding the importance and implementation of middle school components and teaching strategies. The following sections look at these beliefs as reported by survey participants and are organized as organizational, curricular, relational, and instructional components.

Organizational Components

Regarding key organizational components (see Table 3), “interdisciplinary team organization,” “evidence-based decision making,” and “rules are clearly and consistently applied” had significant differences, with survey participants assigning these components higher ratings of importance than implementation.

Table 3

Perceptions of Importance and Implementation of Middle School Components (Organizational)

Component	Ratings of Importance (Percentage of Participants Responding to Each Rating)			Ratings of Implementation (Percentage of Participants Responding to Each Rating)		
	Not	Somewhat	Very	Rarely or Never	Occasionally	Regularly
Advisory Programs	9.17	44.50	46.33	26.28	27.27	46.45
Interdisciplinary Team Organization	7.79	38.39	53.81	27.62	29.93	42.46
Flexible Scheduling and Grouping	11.80	44.34	43.85	33.91	41.26	24.84
School-wide efforts and policies that foster health, wellness, and safety	1.22	20.31	78.47	7.50	40.42	52.08
Teachers who hold middle school/level teacher certification/ Licensure	6.40	29.34	64.26	5.45	28.07	66.48
Evidence-based decision making	1.05	23.18	75.77	6.75	44.88	48.37
A shared vision of mission and goals	1.22	17.49	81.29	7.99	39.64	52.37
Rules are clearly and consistently applied	1.78	10.37	87.84	13.62	40.29	46.08

These components received median ratings of three for level of importance, meaning most participants thought that these components were “very important.” However, all components had median ratings of two for implementation levels, meaning the components were only “occasionally implemented.”

Curricular Components

Regarding key curricular components (see Table 4), “curriculum that is relevant, challenging, integrative, and exploratory” received the highest ratings of importance. Having a “strong focus on basic subjects (language arts, social studies, mathematics, science)” received the highest ratings of implementation, and most participants believed this item was very important.

Table 4

Perceptions of Importance and Implementation of Middle School Components (Curricular)

Component	Ratings of Importance (Percentage of Participants Responding to Each Rating)			Ratings of Implementation (Percentage of Participants Responding to Each Rating)		
	Not	Somewhat	Very	Rarely or Never	Occasionally	Regularly
Strong focus on basic subjects (language arts, social studies, mathematics, science)	1.13	21.78	77.09	2.20	17.18	80.62
Curriculum that is relevant, challenging, integrative, and exploratory	0.81	8.02	91.17	4.07	41.21	54.72

When examining median differences of these two components, there were no large differences between ratings of importance and implementation. However, when looking at participants’ perceptions of importance and implementation, “having a relevant curriculum that is challenging, integrative, and exploratory,” was seen as being much more important than it was being implemented.

Relational Components

Regarding key relational components (see Table 5), “educators who value working with young adolescents,” “inviting, supportive, and safe environments,” and “trusting and respectful relationships among administrators, teachers, students, and parents,” received the highest ratings of importance by participants. Concerning median differences, most participants rated “school initiated family and community partnerships” and “all students are well known” as being very important; however, the median value for implementation was two, meaning the most common response indicated these components were only implemented occasionally.

Table 5*Perceptions of Importance and Implementation of Middle School Components (Relational)*

Component	Ratings of Importance (Percentage of Participants Responding to Each Rating)			Ratings of Implementation (Percentage of Participants Responding to Each Rating)		
	Not	Somewhat	Very	Rarely or Never	Occasionally	Regularly
Educators who value working with young adolescents	0.16	4.37	95.47	1.87	27.20	70.93
Inviting, supportive, and safe environments	0.24	4.05	95.71	1.87	24.69	73.43
School initiated family and community partnerships	2.91	35.63	61.46	15.81	53.30	30.89
Trusting and respectful relationships among administrators, teachers, students, and parents	0.65	5.91	93.44	6.58	36.64	56.78
Student voice in decision making	5.92	45.14	48.95	28.58	51.47	19.95
All students are well known	2.36	18.63	79.01	8.01	44.85	47.14

Instructional Components

Regarding key instructional components (see Table 6) “students and teachers engaged in active learning” received the highest ratings of importance. The largest gap among perceptions of importance and implementation belonged to “assessment and evaluation programs that promote quality learning.” Most participants thought this was a “very important” component; however, most participants thought it was “occasionally implemented” rather than being implemented “most of the time.”

Table 6*Perceptions of Importance and Implementation of Middle School Components (Instructional)*

Component	Ratings of Importance (Percentage of Participants Responding to Each Rating)			Ratings of Implementation (Percentage of Participants Responding to Each Rating)		
	Not	Somewhat	Very	Rarely or Never	Occasionally	Regularly
Students and teachers engaged in active learning	0.41	5.11	94.48	2.20	37.32	60.49
Multiple learning and teaching approaches	1.06	10.00	88.94	5.14	39.56	55.30
Assessment and evaluation programs that promote quality learning	2.44	22.00	75.57	8.31	44.34	47.35

Teaching Strategies

“Cooperative learning” received the most ratings of being “very important” (74.16% of participants), followed by “inquiry teaching” (64.59% of participants). “Direct instruction” (78.09%) and “cooperative learning” (72.80%) received the most ratings of regular implementation by survey participants (see Table 7). Concerning median differences of teaching strategies, results indicate that “inquiry teaching,” “service learning and community service,” and “Socratic seminars” received the largest differences in ratings of importance and rating of implementation. “Inquiry teaching” had a median rating of three for importance and a median value of two for implementation, meaning that most participants responded that it was “very important,” but only occasionally implemented it. “Service learning” and “Socratic seminars” received median ratings of two for importance, meaning that participants thought it was “somewhat important.” However, these strategies received median ratings of one for level of implementation, meaning that most participants thought that these strategies were “rarely or never used.”

Table 7*Perceptions of Importance and Implementation of Teaching Strategies*

Teaching Strategy	Ratings of Importance (Percentage of Participants Responding to Each Rating)			Ratings of Implementation (Percentage of Participants Responding to Each Rating)		
	Not	Somewhat	Very	Rarely or Never	Occasionally	Regularly
Direct Instruction (teacher presentation, drill, practice)	4.68	38.46	56.86	2.31	19.60	78.09
Cooperative Learning (structured group work)	1.25	24.59	74.16	1.26	25.94	72.80
Inquiry Teaching (gathering information, deriving conclusions)	3.44	31.97	64.59	8.08	46.39	45.53
Independent Study (working individually on selected or assigned tasks)	6.95	49.07	43.97	8.95	44.00	47.05
On-line Instruction (using Internet-based assignments, Google Classroom, etc.)	12.67	50.96	36.37	12.02	42.60	45.38
Project-based Learning	12.55	47.36	40.09	22.54	53.26	24.20
Service Learning/Community Service	32.54	46.16	21.30	58.55	35.21	6.23
Cross-disciplinary Units of Instruction	21.34	47.85	30.82	34.20	49.93	15.87
Use of other learning spaces (outdoor classrooms, field trips, etc.)	30.95	47.25	21.80	44.44	46.39	9.17
Socratic Seminars	41.94	40.20	17.86	54.98	36.00	9.02
Class Discussions/Debates	7.35	43.91	48.74	9.71	47.62	42.67

Reported Challenges of Teaching in Middle Grades Schools

Respondents ranked challenges from a list provided on the survey. The most challenging components selected were “academic achievement in general” (72%), “remediation practices” (70%), and “curricular rigor and design” (68%) (see Table 8). For each component, respondents selected barriers contributing to that component.

Table 8*Challenges with Academic Achievement in General*

Component	Challenges		
	Testing requirements	Student behavior	Class size
Academic achievement in general	12.79%	25.2%	12.27%

With respect to “academic achievement in general,” “student behavior,” “testing,” and “class size” were the largest barriers. For remediation practices, “insufficient time,” “lack of staff,” and “lack of knowledge and support” were the top barriers (see Table 9).

Table 9*Challenges with Remediation Practices*

Component	Challenges		
	Lack of knowledge or support	Insufficient time	Lack of staff or other support
Remediation Practices	8.29%	20.55%	15.14%

Finally, “lack of staff or other support” (10.87%), “lack of knowledge and support” (9.89%), and “insufficient time” (9.10%) were the largest barriers for “curricular rigor and clarity” (see Table 10).

Table 10*Challenges with Curricular Rigor and Clarity*

Component	Challenges		
	Lack of knowledge or support	Insufficient time	Lack of staff or other support
Curricular Rigor and Clarity	9.89%	9.10%	10.87%

The least challenging components were “heterogeneous grouping” (58%), “university and school partnerships” (55%), “intramural sports” (53%), and “teacher planning time” (53%).

Discussion

In this section researchers aim to provide insights into the current picture of middle schools 10 years after the last national survey and offer recommendations based on the findings.

School Context

Middle grades scholars suggest the ideal size for middle schools should be 600 or fewer students (Jackson & Davis, 2000), and our results seem to suggest many schools are close to that range with over half of participants reporting enrollments of 401-800 students. However, 40% of participants reported their schools enrolled 800 or more students. Larger schools can result in a more disjointed, dysfunctional learning experience, as well as make it more difficult for educators and students to develop more supportive relationships (Jackson & Davis).

Our sample had a community type distribution of 21.62% urban, 39.82% suburban, and 38.29% rural. According to the Nation Center for Educational Statistics (NCES), as of 2017, student enrollment for

elementary and secondary schools (NCES does not collect data specifically on middle schools) had a community type distribution of 30% enrolled in urban settings, 40% in suburban settings, and 30% in rural settings (U.S. Department of Education, National Center for Education Statistics, 2020a). This suggests there may be an underrepresentation of urban populations in our study and possibly other national studies. We discuss our challenges with sampling in the limitations section. Future research must find ways to ensure samples are fully representational of national middle schools.

From 2010 to 2018, there has been a four-percentage point increase in students eligible for free and reduced lunch nationally (U.S. Department of Education, National Center for Education Statistics, 2020b). Our sample seems to suggest a large population of students eligible for free and reduced lunch. Participants reported 54% of their student population were eligible for free and reduced lunch and 14% of participants reported 91% or more of their students were eligible. These increases suggest the need to ensure schools have the necessary funding, programs, and staffing needed to support this growing population.

Organizational Structures

Teaming is a core organizational structure for middle schools as it helps foster an environment where students can feel cared for, have an adult advocate, feel safe, and are encouraged to take intellectual risks (Bishop & Harrison, 2021). Teaming has been shown to help foster a positive learning environment (Arhar, 1997; Dickinson & Erb, 1997) and increase student outcomes (Felner et al., 1997; Mertens et al., 1998). However, only 60% of participants said they used interdisciplinary teaming in their schools. McEwin and Greene found a decline in teaming from 77% in 2001 to 72% in their 2009 study of middle school principals. Our results seem to suggest a continued decline in the use of interdisciplinary teaming. Further research is needed to examine if this is in fact a trend and to explore the reasons why.

Nearly 70% of participants in our sample reported implementing advisory programs. Respondents were asked to describe the curriculum in their advisory programs, and they indicated advisory periods are used for a variety of purposes including academics, character building, and RTI. Academics and remediation were prevalent responses to the content of the curriculum, suggesting advisory periods may have a heavy focus on academics. These findings raise questions about the implementation of advisory programs. Advisory programs are meant to function as time for students to spend with an adult advocate addressing a number of developmental concerns. As noted in *Turning Points 2000*, “Strong advisory programs help students gain emotional strength, self-knowledge, and social skills through peer interaction and the acceptance and personal affirmation of trusted adults” (Jackson & Davis, 2000, p. 144). While academics is an important part of advisory programs, it is not intended to be the primary focus. Future research should examine in-depth how advisory programs are being used in the nation’s middle schools.

Scheduling, Grouping Practices, and Remedial Arrangements

More than three quarters of participants noted their schools used daily, uniform periods, and only 8% of participants noted using flexible block scheduling. Flexible scheduling allows for extended periods of instruction where students can be engaged in developmentally appropriate instruction such as project-based and inquiry-based projects (Daniel, 2007). The high rate of daily uniform courses and low rate of flexible block scheduling seem to suggest many middle schools are using a junior high approach to scheduling which goes against the recommendations of the middle school concept (Bishop & Harrison, 2021; Jackson & Davis, 2000).

Researchers found over three quarters of participants reported their schools track students in some way. Over one third (37.45%) of participants reported their schools track students in all grade levels, but only in certain subjects (e.g., language arts, math). Middle grades researchers support the use of random grouping as it provides a more equitable environment for young adolescents. Tracking often leads to an overrepresentation of economically disadvantaged and minority students (Gamoran & Weinstein, 1998; Mallery & Mallery, 1999; Oakes, 1985; Vang, 2005) and can reinforce beliefs that intelligence is fixed, and some students are just more talented than others in school (Tucker & Coddling, 1998).

Electives and Sports

Band, chorus, and art are the top three elective offerings according to respondents. Life skills, creative writing, and sex education were offered the least according to respondents. Regarding sports offerings, over half of schools are offering only interscholastic sports (55%). Interscholastic sports can focus on win-loss records rather than on developing physical skills and experiences, and limit opportunities for playing through the cutting of players. On the other hand, intramural sports focus on developing skills and experiences and provide opportunities for all students to play (McEwin & Swaim, 2009). Schools with interscholastic only sports may not provide opportunities for all students to participate in sports to develop new skills, build confidence in physical abilities, and develop relationships with peers (McEwin & Swaim).

Certification

Forty percent of teachers reported having specialized certification in middle grades education. Only 36% of principals had certification that specifically mention middle grades education (i.e., elementary/middle certification or middle/secondary certification), while the largest percentage of administrators (54.88%) had P-12 administrative certification. However, more than a third of principals reported having a middle grades initial teaching certification (see Table 2). Our findings are particularly disconcerting given the importance of having expert teachers and administrators trained to teach young adolescents (Jackson & Davis, 2000) and less than half of teachers and even fewer principals report having specialized certification.

Teaching Strategies

With respect to teaching strategies, results indicated “inquiry teaching,” “service learning and community service,” and “Socratic seminars” received the largest differences in ratings of importance and rating of implementation, with survey participants rating the importance of these strategies higher than the implementation levels. Direct instruction methods received the highest ratings of regular use in schools. McEwin and Greene (2010) reported the “percentage of schools using direct instruction on a regular basis decreased from 90% in 1993 to 81% in 2009, while the use of cooperative learning, inquiry, and independent study increased” (p. 55). Our study seems to suggest a further decrease in direct instruction, at 78.09%. Cooperative learning is being regularly used in 72.80% of participants’ schools, and inquiry teaching is being used 45.53% in participants’ schools. This is also encouraging because it shows cooperative learning and inquiry teaching are effective, developmentally responsive pedagogies for young adolescents (CCAD, 1989). Online instruction was used at a rate of 45.48%. This survey was sent before the 2020 COVID pandemic. The use of online instruction will be interesting to examine in future surveys as it is a real possibility that the reliance on online instructional methods will continue to rise to greater rates in the near future. The implications of this form of instruction on young adolescents will need to be researched further.

Middle School Components

Educators who value “working with young adolescents,” “inviting, supportive, and safe environments,” “students and teachers engaged in active learning,” and “trusting and respectful relationships among administrators, teachers, students, and parents,” received the highest ratings of importance by survey participants. This indicates teachers and principals value the relational aspects of middle schools, even though they are not being implemented at similar rates. Inviting, supportive, and safe environments are important in today’s middle schools with 95.71% of teachers and principals viewing these types of environments and relationships as “very important,” and 73.43% indicating that their schools have these types of environments.

With respect to curricular aspects of middle schools, having a “curriculum that is relevant, challenging, integrative, and exploratory” is “very important” (91.17%), but is implemented at a lesser rate (54.72%), suggesting middle schools are valuing and implementing developmentally appropriate curriculum at different rates. Teachers and principals marked that a “strong focus on basic subjects” was implemented “very often” (80.62%), and was also seen as “very important” (77.09%). Concerning instructional aspects of middle schools, “students and teachers engaged in active learning” was marked as “very important” by 94.48% of teachers and principals. Educators also value “multiple

learning and teaching approaches” (88.94%). Results indicated these instructional aspects are not being implemented as regularly, even though educators value them. Our results raise questions about what barriers are in place keeping teachers and schools from providing the instruction they believe is effective and best for young adolescents.

Principals and teachers in our study realized the value and importance of “developmentally responsive programs and practices” (e.g., teaming, advisory programs, flexible scheduling). They indicated the middle school concept and philosophy remained as relevant today. Principals and teachers valued these organizational components, and rated these items as being “somewhat” or “very important,” with very few seeing them as being “not important.” It appeared schools were using flexible scheduling less than they were using teaming and advisory. It is encouraging that educators viewed relational aspects of schools (e.g., “educators who value working with young adolescents,” “inviting, supportive, and safe environments,” “students and teachers engaged in active learning,” “trusting and respectful relationships among administrators, teachers, students, and parents”) as “very important.” These variables serve as the foundation for the middle school model and may be a possible cause for alarm if these were not being regularly used or implemented in schools. For example, “trusting and respectful relationships among administrators, teachers, students, and parents” received a regular implementation rating of 56%, while 93% of respondents viewed it as being “very important.”

Challenges

The major challenges for middle school principals and teachers centered on academics and instruction. “Academic achievement in general” was the biggest challenge for participants due to “student behavior,” “testing,” and “class size.” Participants also struggled with how much instructional time was lost due to student behavior. Additionally, student behavior was listed as the biggest challenge facing the implementation and existence of other middle school components, including school climate. Student behavior and classroom management may be areas in which educators need to focus if they are to experience success in other areas of their teaching.

Remediation practices and curricular rigor and clarity were a challenge largely because of time. Curricula are so full that finding additional time for remediation may be difficult. Further, respondents felt they did not have the required content knowledge, time, or staff to adequately address remediation needs for students. This finding suggested teachers and administrators were struggling to provide the remediation needed for many students. The lack of staff, in particular, may be from funding cuts to schools.

Challenges picked the least by participants included “heterogeneous grouping,” “university and school partnerships,” and “intramural sports.” “Heterogeneous grouping” was the least selected challenging component, which suggested homogeneous grouping through tracking may be a deliberate intentional choice made by many middle schools. As mentioned previously, tracking, in particular, is not a practice endorsed by the middle school concept (Bishop & Harrison, 2021; Jackson & Davis, 2000). Fifty-two percent of participants felt there were no barriers to the listed components on the survey suggesting over half of participants were implementing the practices and structures they want to enact.

Delimitations, Limitations, and Assumptions

To study the perceptions of middle school educators concerning their beliefs of middle school instructional strategies, organizational structures, and components, we wanted to solicit responses from both principals and teachers. The previous national surveys administered by McEwin and Greene (2010, 2011) and Valentine et al. (1981, 1993, 2002) were only sent to principals. We believed having teachers’ as well as principals’ voices would provide a more complete picture of middle grades schools today. As such, we intentionally avoided a one survey per one school ratio used in previous national studies. We distributed the survey to three administrators and five teachers from each school to ensure greater chance of receiving responses from schools in our sample. Finally, we decided to make responses anonymous because we wanted survey participants to feel comfortable responding to the survey without concern that their responses would be tied to their respective schools. These decisions, inevitably, led to some limitations in our study.

A limitation of our current study is the possible oversampling of schools. Of the up to eight emails invitations to participate sent to each school in the sample, we are unable to know exactly how many responses we received from single middle schools. On the other hand, we believe that having potentially several responses within a single school is reasonable, considering that multiple data points bolster reliability of the inferences we can make regarding educator perceptions of the importance of, and implementation of instructional strategies and middle school components.

While we did not reach the survey response rate of 10% as suggested by Dillman (2011), our sample size included a significant number of middle school educators (n=1,650) from every state across the country. Researchers did not have established relationships with the survey participants, which likely contributed to the lower response rate. Moreover, researchers had difficulty finding publicly available email addresses on many of the school websites in urban areas, which could have led to the under sampling of urban schools. Future studies should attempt to gather data from a larger, more representative sample of middle schools across the US and attempt to further address the possible oversampling from individual schools and under sampling of urban schools presented in the current study.

Recommendations

Since the 1860s educators have pondered how best to educate young adolescents. From the time of the first junior high school in 1909 to its middle school successor, one theme remained consistent. Educators realized young adolescents were unique and their developmental needs were foundational to whatever approach was recommended to educate them. However, there has not been consensus on the best way to meet those unique developmental needs.

By administering our national survey nearly one decade after the most recent examination (McEwin & Greene, 2020, 2011), the authors hoped to see greater levels of implementation in recommended organizational and instructional practices in general across the nation's middle schools; however, the results of the survey highlight some areas of promise and other areas of concern. While there are some glimmers of improvement, unfortunately the results seem to highlight the stagnant progress in implementing middle grades practices. Based upon the findings of this study, the authors make several comments and recommendations.

One thing is clear. The needs of the young adolescent are recognized as important by participants. An overwhelming majority of teacher and principal participants from this survey care for, and appreciate working with, this age group and acknowledge the specific developmental needs of young adolescents. This is something worth celebrating—educators united with a common focus. However, at the same time, there is a disconnect between the specific instructional and organizational approaches used to support young adolescent development. It would seem teachers and principals value the relational components of the middle school concept to a much greater extent than the organizational, curricular, and instructional elements. There is great reliance on direct and teacher-focused instruction, while most of the elements of the middle school model (e.g., interdisciplinary teaming and units of instruction, problem-based learning, service learning, daily advisory programs, flexible block scheduling) are used by less than half of the participants. It is important to recognize the needs of young adolescents, but if programs and structures are not put in place and used to support the development of those needs, it is difficult to see the benefit to young adolescents.

More importantly, only about half of the participants believed these organizational and instructional elements were important to use. This is problematic because many of the strategies and structures not being used or deemed important are focused on providing an active, integrated, and challenging curricular experience grounded in higher-order thinking. This raises the question of whether these organizational structures and instructional elements are still relevant in the current school structure. Is it reasonable to think middle grades schools can successfully implement the structures of the middle school model when half of the participants do not value the concept? This study provides only a snapshot of current teacher and administrator perspectives, but this topic needs to be explored further. Are we expecting outcomes and progress in our middle grades schools that are just not realistic? Moreover, future research needs to examine the developmental needs of the adolescent within the context of race, gender, and socioeconomic status. It seems the intersection of the various components of the middle school model

with the diverse developmental needs of middle school adolescents are a prime area for research, contributing to the reimagining of the middle school model in the 21st century.

While it is important to recognize the overwhelming majority of participants value the young adolescent, the time has come to move beyond simply recognizing the need for a specialized educational experience for young adolescents to actually embracing and systemically implementing the specialized programs and curriculum designed to provide a developmentally responsive educational experience. Recognizing the needs is only the first step. Embracing and systemically implementing the programs are the next (and missing) steps. Unfortunately, the educational system has been trying to address the needs of the young adolescents since the late 1800s. The junior high school was established to provide a more student-focused approach than what was received in the high school. The middle school model was introduced because junior high schools were struggling to operate as anything other than high schools. It would seem while educators acknowledge the specialized needs of this age group, they have not fully implemented or embraced the unique programs, curricula, and organizational structures recommended to support and educate this age group. Ultimately, the middle school community never systemically changed its approach and has not been able to break from the traditional norm of how society thinks schools are supposed to operate.

Moving forward, the specific needs of the young adolescent must continue to be front and center in all discussions and decision-making as educators revisit the idea of effectively educating the young adolescent. Middle level educators must change the mindset to focusing on what is right and best for young adolescents and, more importantly, how these needs can be met regardless of the various contexts and challenges school districts encounter (e.g., school funding, large class sizes, professional licensure, food insecurity). If universal commitment to the middle school concept, as we know it, is not possible in the current context of schooling in the US, it is time for reform.

As such, the authors recommend a renewed commitment by middle level educators, policy makers, and teacher educators to engage in serious conversations and reform efforts focused on the schools and instruction middle school students need and deserve. It is time to launch conversations about what the education of young adolescents should look like now and into the future. One might ask, “Is it time for the middle grades to look different?” Dickinson (2001) argued, “There is nothing wrong with the middle school concept” (p. 1). That may be true, but why has it never been fully embraced and implemented by the middle school community and national policy leaders? Is it past time to decide whether the current model is still relevant for today’s schools, or is it time to envision a new model that everyone can fully embrace and implement?

As middle level educators, we have participated in discussions about the current state of middle schools and what middle schools “should be,” but these conversations seem to have limited results. Our desire is for this status report to be a call to action. Hopefully it will not just spark conversation, but a renewed focus to launch fundamental changes in policy, teacher preparation, school structures, and instruction, so young adolescents will have the schools they desperately deserve. Middle grades students have always been, and will continue to be, amazing, creative, curious learners who need schools that match their uniqueness. Young adolescents deserve more than the status quo.

References

- Alexander, W. M. (1963). *The junior high school: A changing view*. Presentation at the Tenth Annual Conference for School Administrators. Cornell University.
- Alexander, W. M. (1968). *A survey of organizational patterns of reorganized middle schools*. United States Department of Health, Education, and Welfare.
- Alexander, W. M., & McEwin, C. K. (1989). *Schools in the middle: Status and progress*. National Middle School Association.
- Alverson, R., DiCicco, M., Faulkner, S., & Cook, C. (2019). The status of middle schools in the Southeastern United States: Perceptions and implementation of the middle school model. *Middle Grades Review*, 5(2), Article 3. <https://scholarworks.uvm.edu/mgreview/vol5/iss2/3>
- Arhar, J. (1997). The effects of interdisciplinary teaming on teachers and students. In J. Irvin (Ed.), *What current research says to the middle level practitioner* (pp. 49-55). National Middle School Association.
- Bennett, C. A., & Martin, K. (2018). Reclaiming advisory: Advocacy in action. *Middle School Journal*, 49(1), 32-37.
- Bishop, P., & Harrison, L. (2021). *The successful middle school: This we believe*. Association for Middle Level Education.
- Boyer, S. J., & Bishop, P. A. (2004). Young adolescent voices: Students' perceptions of interdisciplinary teaming. *RMLE Online*, 28(1), 1-19.
- Briggs, T. H. (1920). *The junior high school*. Houghton Mifflin.
- Brighton, K. (2007). *Coming of age: The education and development of young adolescents*. National Middle School Association.
- Brooks, K., & Edwards, F. (1978). *The middle school in transition: A research report on the status of the middle school movement*. Center for Professional Development. University of Kentucky.
- Caissy, G. (2002). *Early adolescents. Understanding the 10 to 15-year-olds* (2nd ed.). Da Capo Press.
- Carnegie Council on Adolescent Development. (1989). *Turning points: Preparing American youth for the 21st century: The report of the task force on education of young adolescents*. Author.
- Caskey, M., & Anfara, V. (2014). *Research summary: Developmental characteristics of young adolescents*. Association for Middle Level Education. <http://www.amle.org/Publications/ResearchSummary/TabId/622/ArtMID/2112/ArticleID/455/Developmental-Characteristics-of-Young-Adolescents.aspx>
- Clark, S., & Clark, D. (1994). *Restructuring the middle level school: Implications for school leaders*. State University of New York Press.
- Commission on the Reorganization of Secondary Education. (1918). *Cardinal principles of secondary education*. Bulletin 1918, No. 35. U. S. Department of Interior, Bureau of Education.
- Compton, M. F. (1976). The middle school: A status report. *Middle School Journal*, 7(2), 3-5.
- Daniel, L. (2007). *Research summary: Flexible scheduling*. National Middle School Association. <http://www.nmsa.org/research/researchsummaries/flexiblescheduling/tabid/1140/default.aspx>
- DePascale, C. A. (1997, April). *Education reform restructuring network: Impact documentation report*. Data Analysis & Testing Associates, Inc. Prepared for Massachusetts Department of Education.

- Dickinson, T. S. (2001). Reinventing the middle school: A proposal to counter arrested development. In T. S. Dickinson (Ed.), *Reinventing the middle school* (pp. 1-20). RoutledgeFalmer.
- Dickinson, T., & Erb, T. (1997). *We gain more than we give: Teaming in middle schools*. National Middle School Association.
- Dillman, D. A. (2011). *Mail and Internet surveys: The tailored design method--2007 Update with new Internet, visual, and mixed-mode guide*. John Wiley & Sons.
- Duffield, S. (2013). Common planning time: Benefits and barriers. In S. B. Mertens, V. A. Anfara, Jr., M. M. Caskey, & N. Flowers (Eds.), *Common planning time in Middle Level Schools: Research Studies from the MLER SIG's national project* (pp. 27-48). Information Age Publishing.
- Eichhorn, D. H. (1966). *The middle school*. The Center for Applied Research in Education.
- Epstein, J. L., & Mac Iver, D. J. (1990). *Education in the middle grades: National practices and trends*. National Middle School Association.
- Faulkner, S., & Cook, C. (2013). Components of school culture that enhance the effective use of common planning time in two high-performing middle schools. In S. B. Mertens, V. A. Anfara, Jr., M. M. Caskey, & N. Flowers (Eds.), *Common planning time in middle level schools: Research Studies from the MLER SIG's national project* (pp. 69-87). Information Age Publishing.
- Felner, R. D., Jackson, A. W., Kasak, D., Mulhall, P., Brand, S., & Flowers, N. (1997). The impact of school reform for the middle years: Longitudinal study of a network engaged in Turning points-based comprehensive school transformation. *Phi Delta Kappan*, 78(7), 528-532, 541-550.
- Gamoran, A., & Weinstein, M. (1998). Differentiation and opportunity in restructured schools. *American Journal of Education*, 106(3), 385-431.
- Gatewood, T., & Dilg, C. (1975). *The middle school we need: A report from the ASCD working group on the emerging adolescent*. Association for Supervision and Curriculum Development.
- George, P. S., & Oldaker, L. L. (1985). *Evidence for the middle school*. National Middle School Association.
- George, P. S., & Shewey, K. (1994). *New evidence for the middle school*. National Middle School Association.
- Gruhn, W. T., & Douglass, H. R. (1947). *The modern junior high school*. The Ronald Press Company.
- Howell, P., Cook, C., & Faulkner, S. (2013). Effective middle level teaching: Perspectives on the preparedness of newly hired teachers. *Middle Grades Research Journal*, 8(3), 1-22.
- Jackson, A., & Davis, G. (2000). *Turning points 2000: Educating adolescents in the 21st century*. Teachers College Press.
- Kellough, R. D., & Kellough, N. G. (2008). *Teaching young adolescents: Methods and resources for middle grades teaching* (5th ed.). Pearson Merrill Prentice Hall.
- Liddell, T. M., & Kruschke, J. K. (2018). Analyzing ordinal data with metric models: What could possibly go wrong? *Journal of Experimental Social Psychology*, 79, 328-348.
- Lounsbury, J. (1978). *A curriculum for the middle school years*. Harper Collins.
- Mallery, J. & Mallery, J. (1999). The American legacy of ability grouping: Tracking reconsidered. *Multicultural Education*, 7(1), 13-15.

- McEwin, C. K., Dickinson, T. S., & Jenkins, D. M. (1996). *America's middle schools: Practices and progress—A twenty-five year perspective*. National Middle School Association.
- McEwin, C. K., Dickinson, T. S., & Jenkins, D. M. (2003). *America's middle schools in the new century: Status and progress*. National Middle School Association.
- McEwin, C. K., & Greene, M. W. (2010). Results and recommendations from the 2009 national surveys of randomly selected and highly successful middle level schools. *Middle School Journal*, 42(1), 49-63.
- McEwin, C. K., & Greene, M. W. (2011). *The status of programs and practices in America's middle schools: Results from two national studies*. Association for Middle Level Education.
- McEwin, K., & Swaim, J. (2009). *Research summary: Middle level interscholastic sports programs*. National Middle School Association.
<http://www.amle.org/tabid/270/artmid/888/articleid/324/research-summary-middle-level-interscholastic-sports-programs-.aspx>
- McLeod, J. (2005). Kick-off, half-time, and over-time: Flexible scheduling scores points. *Middle Ground*, 8(4), 12-13.
- Mertens, S. B., Flowers, N., & Mulhall, P. (1998). *The Middle Start Initiative, phase I: A longitudinal analysis of Michigan middle-level schools*. Center for Prevention Research and Development, University of Illinois.
- National Association of Secondary School Principals. (2006). *Breaking ranks in the middle: Strategies for leading middle level reform*. Author.
- National Forum to Accelerate Middle Grades Reform. (2021). *About the Forum*.
<https://www.middlegradesforum.org/about-us>
- National Middle School Association. (1982). *This we believe*. Author.
- National Middle School Association. (1992). *This we believe*. Author.
- National Middle School Association. (1995). *This we believe: Developmentally responsive middle level schools*. Author.
- National Middle School Association. (2003). *This we believe: Successful schools for young adolescents*. Author.
- National Middle School Association. (2010). *This we believe: Keys to educating young adolescents*. Author.
- Oakes, J. (1985). *Keeping track: How schools structure inequality*. Yale University Press.
- Pattee, D. (2013). Social capital and common planning time. In S. B. Mertens, V. A. Anfara, Jr., M. M. Caskey, & N. Flowers (Eds.), *Common planning time in Middle Level Schools: Research studies from the MLER SIG's national project* (pp. 89-107). Information Age Publishing.
- Scales, P. (2010). Characteristics of young adolescents. In National Middle School Association, *This we believe: Keys to educating young adolescents* (pp. 53-62). National Middle School Association.
- Shulkind, S. B., & Foote, J. (2009). Creating a culture of connectedness through middle school advisory programs. *Middle School Journal*, 41(1), 20-27.

- Smith, D., Pitkin, N., & Rettig, M. (1998). Flexing the middle school block schedule by adding non-traditional core subjects and teachers to the interdisciplinary team. *Middle School Journal*, 29(5), 22-27.
- Toepfer, C. (1973). No greater potential: The emerging adolescent learner. *Middle School Journal*, 4(1), 3-6.
- Tucker, M., & Coddling, J. (1998). *Standards for our schools: How to set them, measure them and reach them*. Jossey-Bass.
- U.S. Census Bureau (2018, August 20). *2010 Census Regions and Divisions of the United States*. <https://www.census.gov/geographies/reference-maps/2010/geo/2010-census-regions-and-divisions-of-the-united-states.html>
- U.S. Department of Education, National Center for Education Statistics. (2020a). Table 203.72: Public elementary and secondary school enrollment, by locale and state: Fall 2017. In U.S. Department of Education, National Center for Education Statistics (Ed). *Digest of Education Statistics* (2019 ed.) https://nces.ed.gov/programs/digest/d19/tables/dt19_203.72.asp?current=yes
- U.S. Department of Education, National Center for Education Statistics (2020b). Table 204.10: Number and percentage of public-school students eligible for free or reduced lunch, by state: Selected years, 2000-01 through 2017-18. In U.S. Department of Education, National Center for Education Statistics (Ed). *Digest of Education Statistics* (Ed.). https://nces.ed.gov/programs/digest/d19/tables/dt19_204.10.asp?current=yes
- Valentine, J. W., Clark, D. C., Hackmann, D. G., & Petzko, V. N. (2002). *A national study of leadership in middle level schools: Volume I: A national study of middle level leaders and school programs*. National Association of Secondary School Principals.
- Valentine, J. W., Clark, D. C., Irvin, J. L., Keefe, J. W., & Melton G. (1993). *Leadership in middle level education: Vol. 1. A national survey of middle level leaders in schools*. National Association of Secondary School Principals.
- Valentine, J. W., Clark, D. C., Nickerson, N. C., & Keefe, J. W. (1981). *The middle level principalship: Vol. 1. A survey of middle level principals and programs*. National Association of Secondary School Principals.
- Vang, C. T. (2005). Minority students are far from academic success and still at-risk in public schools. *Multicultural Education*, 12(4), 9-15.
- Vars, G. (1969). *Common learnings: Core and interdisciplinary team approaches*. International Textbook.
- Warren, L., & Payne, B. (1997). Impact of middle grades' organization on teacher efficacy and environmental perceptions. *Journal of Educational Research*, 90, 301-308.
- Ziegler, S., & Mulhall, L. (1994). Establishing and evaluating a successful advisory program in a middle school. *Middle School Journal*, 25(4), 42-46.

Appendix A

States by Region

South	Northeast	Midwest	West
Alabama	Connecticut	Illinois	Alaska
Arkansas	Maine	Indiana	Arizona
Delaware	Massachusetts	Iowa	California
Florida	New Hampshire	Kansas	Colorado
Georgia	New Jersey	Michigan	Hawaii
Kentucky	New York	Minnesota	Idaho
Louisiana	Pennsylvania	Missouri	Montana
Maryland	Rhode Island	Nebraska	Nevada
Mississippi	Vermont	North Dakota	New Mexico
North Carolina		Ohio	Oregon
Oklahoma		South Dakota	Utah
South Carolina		Wisconsin	Washington
Tennessee			Wyoming
Texas			
Virginia			
West Virginia			

Note. U.S. Census Bureau (2018, August 20). 2010 Census Regions and Divisions of the United States. <https://www.census.gov/geographies/reference-maps/2010/geo/2010-census-regions-and-divisions-of-the-united-states.html>