

BEST PRACTICES FOR IMPROVING MIDDLE SCHOOLS

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In the following report, Hanover Research reviews best practices and effective instructional models for middle schools.

TABLE OF CONTENTS

- Executive Summary.....3**
- INTRODUCTION3
- KEY FINDINGS.....3
- Section I: Best Practices for Leadership and Organization.....5**
- LEADERSHIP5
- Shared Vision5
- Shared Decision Making7
- Continuous Improvement.....9
- K-12 Spotlight: Partners in School Innovation.....10
- CLASSROOM ORGANIZATION12
- Team Teaching.....12
- Section II: Best Practices for Curriculum And Instruction 15**
- MIDDLE SCHOOL CURRICULUM15
- Elective and Enrichment Courses16
- K-12 Spotlight: Madison Meadows Middle School.....17
- MIDDLE SCHOOL SCHEDULING19
- Collaboration20
- Extended Learning Time21

EXECUTIVE SUMMARY

INTRODUCTION

In this report, Hanover Research reviews best practices for middle schools, with a focus on strategies to improve middle-grades education in urban school districts. This report draws heavily on research and best practice recommendations from the Association for Middle-Level Education (AMLE), the leading national research and advocacy organization for middle grades education. This report also draws on the available academic research on middle grades education, as well as examples of best practices from urban middle schools across the United States. This report includes the following sections:

- **Section I** reviews structural best practices for middle schools, including leadership, classroom organization, and scheduling.
- **Section II** reviews best practices in curriculum and instruction, including practices for core instruction and elective courses, and instructional strategies recommended for the middle grades.

KEY FINDINGS

- **The effectiveness of any middle school improvement strategy depends on strong, shared leadership.** Middle school leaders should work with stakeholders to develop a shared vision of school success and distribute leadership and decision-making responsibilities across the school. School leaders should also facilitate the development of continuous improvement practices that reflect data-informed decision-making.
- **Middle schools should ensure that classroom organization and staffing patterns support the needs of young adolescents.** According to the AMLE, students in the middle grades need strong connections with peers and adults for academic and personal success. Many schools attempt to meet this need through some form of team teaching, particularly interdisciplinary teams. Research supports the use of interdisciplinary team teaching to improve academic and social-emotional outcomes for middle school students.
- **Middle schools should develop challenging and relevant curricula with a strong emphasis on core subjects.** Surveys conducted by the AMLE find that middle schools identified as high achieving devote more average time to the core subjects of mathematics, English language arts, science, and social studies than randomly sampled middle schools. Middle schools should also provide access to enrichment and elective courses to support student engagement, and schedule advisory periods to support student connectedness.
- **The AMLE recommends that schools adopt flexible scheduling strategies such as block scheduling to support the academic and developmental needs of young**

adolescents. Middle school schedules should include common planning time for teachers to plan instruction collaboratively. Some schools, such as Clarence Edwards Middle School in Boston, extend overall instructional time to create additional time for teacher collaboration, instruction in core subjects, and enrichment and elective activities.

SECTION I: BEST PRACTICES FOR LEADERSHIP AND ORGANIZATION

In this section, Hanover Research reviews best practices for leadership and organizational structure at the middle school level. This section begins with a review of best practices in organizational leadership for middle schools, before reviewing strategies for classroom organization and collaboration among teachers suggested in the secondary literature.

LEADERSHIP

Middle school improvement requires strong leadership.¹ A 2016 report on middle school improvement published jointly by the nonprofit organization Edvestors and the Rennie Center for Education Research and Policy identifies leadership as essential to both initiating and sustaining school improvement strategies, as shown in Figure 1.1.² In this subsection, Hanover Research discusses aspects of organizational leadership identified as important to the success of middle schools in the secondary literature, including a shared vision for student learning, shared decision making, and a focus on continuous improvement.

Figure 1.1: Role of Leadership in the School Improvement Process

Initiating Improvement	Sustaining Improvement
<ul style="list-style-type: none">• Develop a student-centric vision among the members of the school community• Identifying a cadre of teachers for leadership roles in the school	<ul style="list-style-type: none">• Establishing collective responsibility for a vision for student learning• Engaging leaders in school improvement and building their leadership capacity• Facilitating participation for all educators in the building through teacher leaders• Teachers and all staff actively participating in decision-making

Source: Edvestors and the Rennie Center for Education Research and Policy³

SHARED VISION

The Edvestors report emphasizes the development of a shared “vision for student learning” as a key leadership strategy to initiate and sustain improvement efforts.⁴ According to the AMLE, a shared vision developed by all stakeholders is a key element of effective middle

¹ Nash, R.C. et al. “Five Critical Practices for Middle Grades Leadership: A Framework for School Improvement.” *Alabama Journal of Educational Leadership*, 1, September 2014. p. 13. <https://eric.ed.gov/?id=EJ1097539>

² Poulos, J. et al. “Staying the Course: Sustaining Improvement in Urban Schools.” Edvestors and the Rennie Center for Education Research and Policy, 2016. p. 12. <https://www.edvestors.org/wp-content/uploads/2016/05/Staying-the-Course-Full-Report-Web-Version.pdf>

³ Chart contents taken directly from: Ibid.

⁴ Ibid.

schools. The AMLE's philosophical framework for middle grades education: *This We Believe: The 16 Characteristics of Successful Schools*, states that at successful middle schools:⁵

A shared vision developed by all stakeholders guides every decision. When a shared vision and mission statement become operational, middle-level educators pursue appropriate practices in developing a challenging academic program; they develop criteria to guide decisions and a process to make needed changes.

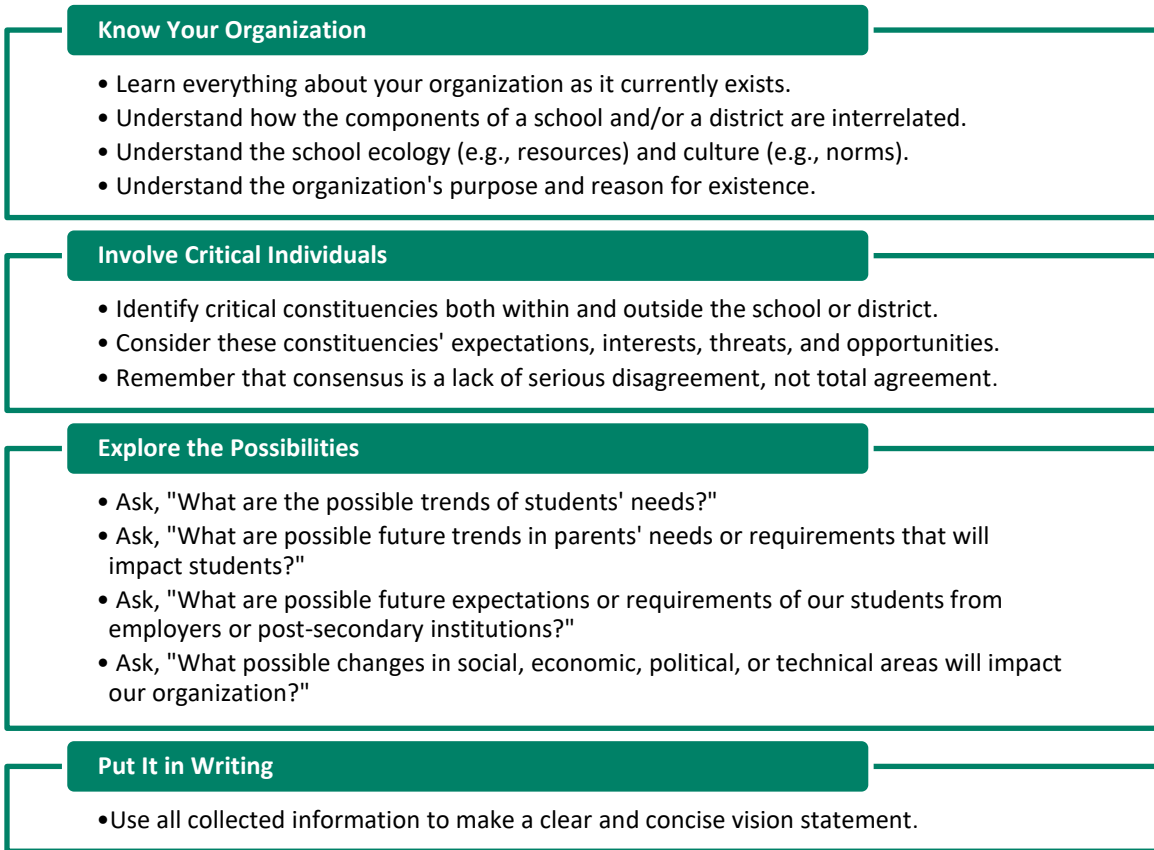
Moreover, the results of two national middle school surveys conducted by the AMLE indicate that highly successful middle schools are more likely to report having a shared vision than are randomly selected middle schools. The AMLE received responses from 127 middle schools identified as high achieving and 827 randomly selected middle schools in spring 2009.⁶ Of these two groups, the high performing schools reported a substantially higher level of implementation of the quality, "A Shared Vision of Mission and Goals." Specifically, 61 percent of highly successful middle schools reported that a shared vision was highly implemented, compared to 42 percent of randomly selected schools.⁷ To develop a strong, shared vision, SEDL recommends that educators follow the four steps shown in Figure 1.2 on the following page.

⁵ "This We Believe: The 16 Characteristics of Successful Schools." Association for Middle Level Education, 2010.
<http://www.amle.org/AboutAMLE/ThisWeBelieve/tabid/121/Default.aspx#122516-the-16-characteristics>

⁶ McEwin, C. and M. Greene. "The Status of Programs and Practices in America's Middle Schools: Results from Two National Studies." Association for Middle Level Education, 2011. p. 31.
http://www.amle.org/portals/0/pdf/articles/status_programs_practices_amle.pdf

⁷ *Ibid.*, p. 51.

Figure 1.2: Process for Developing a Shared Vision



Source: SEDL⁸

SHARED DECISION MAKING

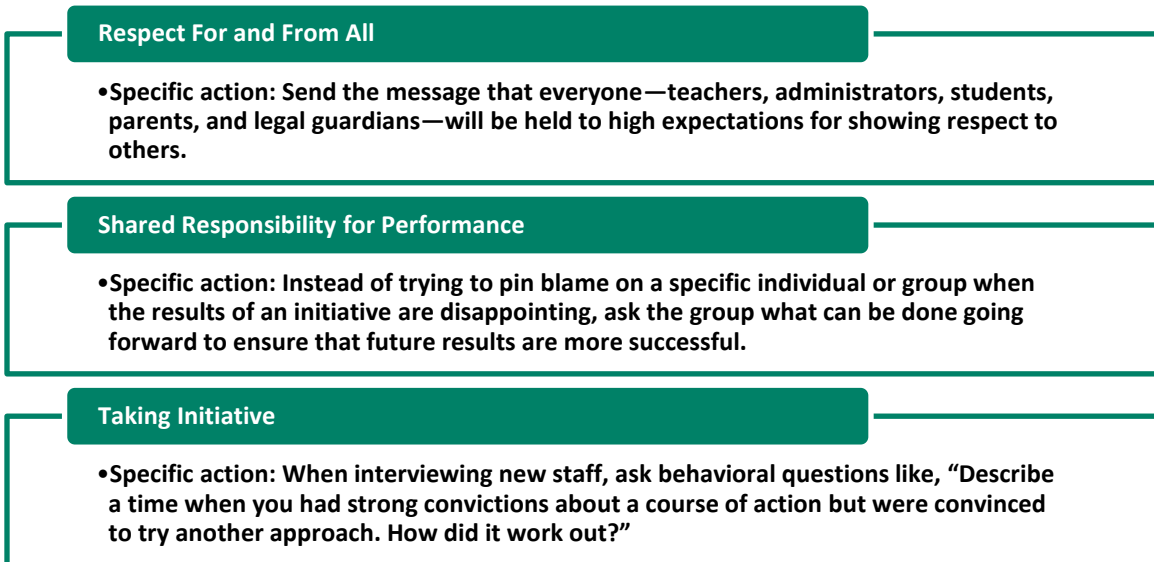
In addition to promoting a shared vision of success, the AMLE recommends that middle school leaders share responsibility for decision-making. According to *This We Believe*, "Leaders understand that successful schools committed to the long-term implementation of the middle school concept must be collaborative enterprises."⁹ To build a culture of collaborative, shared leadership, administrators should use the strategies shown in Figure 1.3, including universal respect, shared responsibility, and initiative. A 2006 study analyzing in-depth interviews with middle school staff finds that these three actions can collectively help create a successful professional environment. Interview respondents at higher performing middle schools were more likely to identify "trusting and respectful relationships" as the central reason for their schools' success, whereas staff at average performing middle schools rarely spoke of trust and often mentioned feeling "left alone."¹⁰

⁸ Content adapted from "Vision, Leadership, and Change." SEDL. <http://www.sedl.org/change/issues/issues23.html>

⁹ "This We Believe: The 16 Characteristics of Successful Schools," Op. cit.

¹⁰ Wilcox, K. and J. Angelis. "From 'Muddle School' to Middle School: Building Capacity to Collaborate for Higher-Performing Middle Schools." *Middle School Journal*, March 2012. p. 43. <http://web.b.ebscohost.com/ehost/pdfviewer/pdfviewer?sid=554f1134-2062-43c0-b0b8-3e557028930c%40sessionmgr113&vid=1&hid=124>

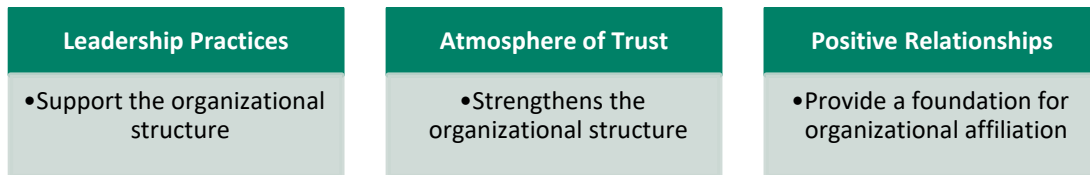
Figure 1.3: Collaborative Leadership Strategies



Source: *Middle School Journal*¹¹

A 2010 case study of distributed leadership at an anonymous middle school reaches similar conclusions. After examining student demographic and test score data, conducting observations, and hosting interviews with administrator and teacher volunteers, the author identifies the three conditions shown in Figure 1.4 as the basis for successful distributed leadership.¹²

Figure 1.4: Conditions Supporting Distributed Leadership



Source: *Research in Middle-Level Education*¹³

The Turning Points model for middle school improvement developed by the Center for Collaborative Education recommends that middle school leaders formalize structures for shared leadership. Middle schools should provide common planning time for teachers to collaborate around issues of instruction and embed professional development activities into the daily work of teachers. Schools should also form teams of teachers with specific goals and develop the faculty’s capacity to analyze and reflect on their work.¹⁴

¹¹ Chart contents adapted from: *Ibid.*, pp. 43–44.

¹² Angelle, P. “An Organizational Perspective of Distributed Leadership: A Portrait of a Middle School.” *Research in Middle Level Education*, 33:5, 2010.

<http://search.ebscohost.com/login.aspx?direct=true&db=eue&AN=52250346&site=ehost-live>

¹³ *Ibid.*

¹⁴ “Turning Points Transforming Middle Schools: School Structures That Support Learning and Collaboration.” Center for Collaborative Education, 2007. p. 18. <http://www.ccebos.org/pdf/Structures.pdf>

CONTINUOUS IMPROVEMENT

Middle school leaders should promote a culture of continuous improvement. The AMLE’s national surveys of high-achieving and randomly selected middle schools, for example, find that high performing schools are substantially more likely to implement evidence-based decision making and support assessment and evaluation programs that promote quality learning.¹⁵ Figure 1.5 presents the specific percentages of schools reporting that these components were highly implemented (HI), implemented (I), lowly implemented (LI), and not implemented (NI).

Figure 1.5: Implementation of Continuous Improvement Strategies at High-Achieving and Randomly Selected Schools

COMPONENT	LEVEL OF IMPLEMENTATION IN HIGH-ACHIEVING SCHOOLS				LEVEL OF IMPLEMENTATION IN RANDOMLY SELECTED SCHOOLS			
	HI	I	LI	NI	HI	I	LI	NI
Evidence-based decision making	52%	41%	6%	1%	32%	57%	11%	0%
Assessment and Evaluation Programs that Promote Quality Learning	50%	45%	5%	0%	35%	52%	13%	0%

Note: Highly implemented (HI), implemented (I), lowly implemented (LI), and not implemented (NI)

Source: AMLE¹⁶

Middle schools often support continuous improvement by forming data teams to analyze and act on student data.¹⁷ Figure 1.6 shows roles commonly played by data teams in the school improvement process.

Figure 1.6: Data Team Roles

FUNCTION AREA	DESCRIPTION
Vision and Policy Management	Articulate the vision for data use in the context of their unique school setting, model district-wide expectations for data use, and formulate school-based policies that are consistent with those of the district.
Data Management	Manage the collection of school-based data and work with the district data team to ensure that relevant data are available to support the inquiry process at the building level.
Inquiry, Analysis, and Action	Develop focusing questions and analyze data to make school-based decisions about curriculum, instruction, and assessment.
Professional Development	Build the capacity of all school staff to collaboratively use data and the inquiry process to improve teaching and learning at the school, grade, and classroom levels.

¹⁵ McEwin and Greene, Op. cit., p. 51.

¹⁶ Ibid.

¹⁷ Crone, D.A. et al. "Data-Based Decision-Making Teams in Middle School: Observations and Implications from the Middle School Intervention Project." *Assessment for Effective Intervention*, 41:2, March 1, 2016. p. 80. <https://doi.org/10.1177/1534508415610322>

FUNCTION AREA	DESCRIPTION
Monitoring and Communication	Work with the district data team on monitoring the results of the school improvement plan and other school-based interventions and on district-level focusing questions.

Source: Washington Office of the Superintendent of Public Instruction¹⁸

K-12 SPOTLIGHT: PARTNERS IN SCHOOL INNOVATION

A 2013 case study presented to the 2013 annual meeting of the American Educational Research Association (AERA) provides an example of the role of school leadership in driving improvements at urban middle schools. This study examines three urban middle schools in the San Francisco Bay Area that implemented school improvement programs with support from the nonprofit organization Partners in School Innovation (PSI) between 2010 and 2013.¹⁹ Figure 1.7 presents background information for each school in the case study.

Figure 1.7: Background Information for Case Study Schools

SCHOOL	TOTAL ENROLLMENT	STUDENTS ELIGIBLE FOR FRPL	STUDENTS SCORING PROFICIENT IN ELA TESTS
School A	278	75%	17.6%
School B	626	82%	28.1%
School C	595	95%	32.9%

Source: AERA²⁰

As part of the school improvement initiative, PSI provided the principal of each school with instructional coaching to support continuous improvement. This coaching emphasized an improvement model based on the Results-Oriented Cycle of Inquiry (ROCI) model shown in Figure 1.8.²¹

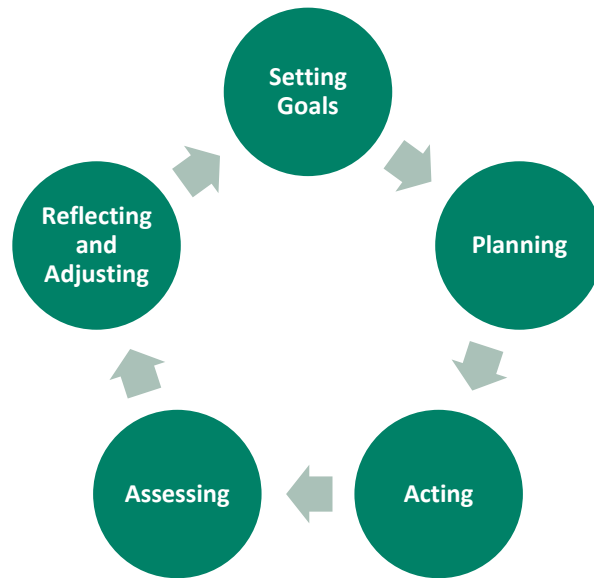
¹⁸ Figure content quoted verbatim from: "District and School Data Team Toolkit." Washington School Information Processing Cooperative; Washington Office of Superintendent of Public Instruction, 2012. p. 14. <http://www.k12.wa.us/cedars/data/pubdocs/fulltoolkit.pdf>

¹⁹ Barela, E. and D. McCurdy. "Lessons Learned from Three Urban Middle Schools Engaged in the Turnaround Process." *Annual Meeting of the American Educational Research Association*, 2013. p. 2. <http://www.partnersinschools.org/wp-content/uploads/2013/06/Urban-Middle-School-Turnaround-Barela-and-McCurdy-AERA-2013-FINAL.pdf>

²⁰ Chart taken directly from: Ibid., p. 9.

²¹ Ibid., p. 14.

Figure 1.8: ROCI Model



Source: AERA²²

PSI’s leadership coaching also addressed principals’ capacities to develop a shared vision of success and distribute leadership. Each school created an instructional leadership team (ILT), including administrators and teacher leaders from each academic department, to formalize distributed leadership. In School B, ILT members assumed ownership of the improvement initiative and led professional development activities.²³

The case study finds that leadership coaching improved each school’s capacity to implement the ROCI model, although each leader continued to face challenges implementing one or more stages in the model after coaching. Implementation of the ROCI model was stronger in Schools A and B than School C by the end of the study period.²⁴ The case study finds that teachers in School B were able to change instruction in response to formative assessment data more effectively than teachers in School C. Interview respondents also noted that School C’s principal continued to face challenges communicating a shared vision and delivering effective feedback to teachers.²⁵ Researchers observed the highest level of teacher collaboration in School A. In school B, teachers reported substantial time for collaboration but faced challenges using collaboration time to drive instructional improvement, while teachers in School C had limited time for collaboration.²⁶

The case study finds that student achievement gains varied with the level of implementation of PSI’s leadership strategies. Figure 1.9 shows the change in proficiency rates for Grade 8 ELA and Algebra I assessments for each school participating in the initiative.

²² Chart contents taken directly from: Ibid.

²³ Ibid., p. 16.

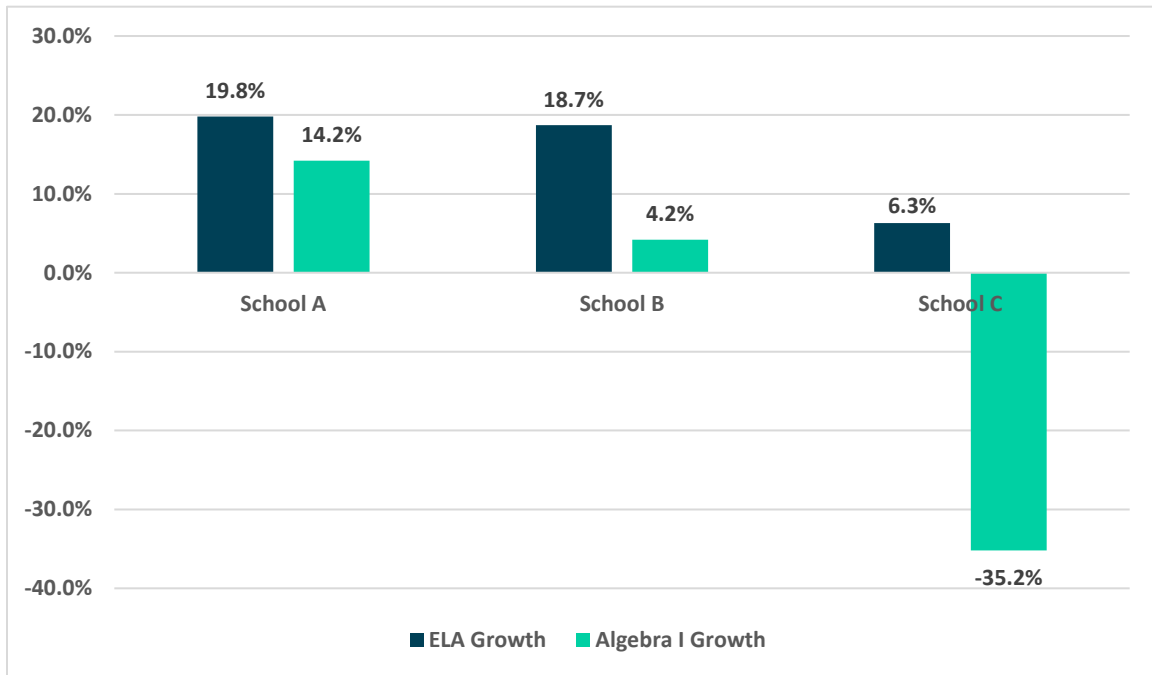
²⁴ Ibid., pp. 14–15.

²⁵ Ibid., p. 21.

²⁶ Ibid., p. 18.

School A, which had the highest level of implementation, also obtained the strongest and most consistent growth in proficiency, while school C, which had the lowest level of implementation, experienced a severe decline in Algebra I proficiency rates.²⁷

Figure 1.9: Percentage Point Change in Proficiency Rates for Grade 8 ELA and Algebra I Assessments



Source: American Educational Research Association²⁸

CLASSROOM ORGANIZATION

Experts recommend that organizational patterns for middle-level education reflect the developmental needs of young adolescent learners. Current theories of child development assert that young adolescents’ self-perception and beliefs about their ability depend on a sense of connection to the adults in their lives. A study conducted by the Centers for Disease Control and Prevention asserts that “children and adolescents who feel supported by important adults in their lives are likely to be more engaged in school and learning.”²⁹

TEAM TEACHING

Research supports the use of team teaching strategies to meet the needs of middle grades students..³⁰ In particular, research reviewed for a 2007 article in the journal *Research in*

²⁷ Ibid., p. 25.

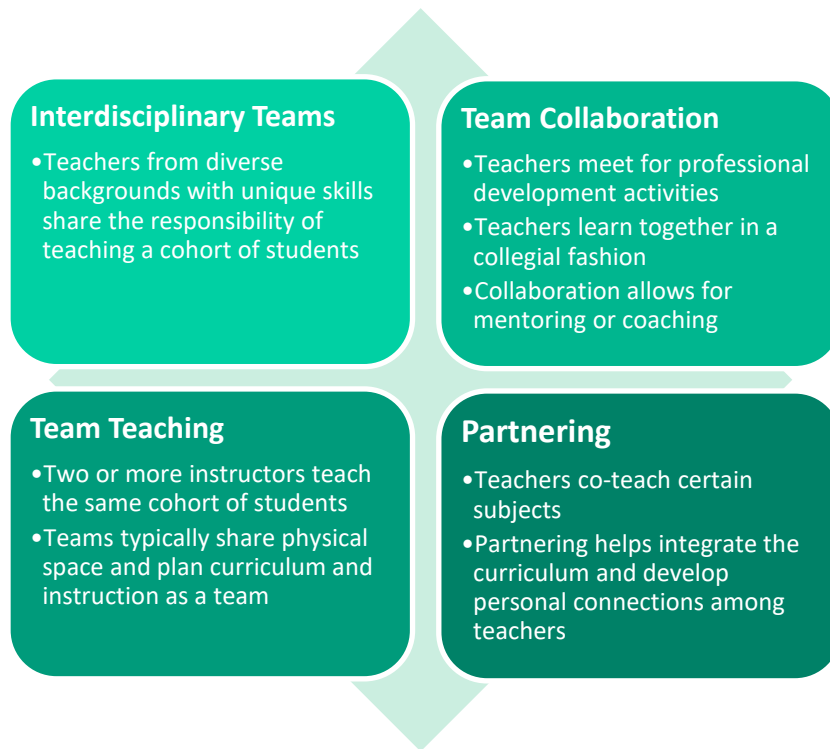
²⁸ Chart contents obtained from: Ibid.

²⁹ “School Connectedness: Strategies for Increasing Protective Factors Among Youth.” Centers for Disease Control and Prevention, 2009. p. 6. <https://www.cdc.gov/healthyyouth/protective/pdf/connectedness.pdf>

³⁰ Wallace, J.J. “Effects of Interdisciplinary Teaching Team Configuration upon the Social Bonding of Middle School Students.” *Research in Middle Level Education Online*, 30:5, 2007. p. 2. http://www.amle.org/portals/0/pdf/rmle/rmle_vol30_no5.pdf

Middle-Level Education Online suggests team teaching improves academic, behavioral, and social-emotional outcomes “as a result of improved self-concept and sense of school membership.”³¹ Teaming of teachers can take many forms, ranging from collaboration to team teaching, as Figure 1.10 shows.

Figure 1.10: Examples of Teaming Structures



Source: Louisiana Educational Research Association³²

Among these team-based structures, interdisciplinary teams are the most common. The AMLE’s 2009 survey finds that 72 percent of middle schools report using an interdisciplinary team organization model.³³ In the interdisciplinary team model, 50 to 100 students are assigned to a group of two to six teachers, creating an academic team within the school or grade level. These teachers are expected to work together to create a nurturing and cohesive learning environment for their cohort of students. The interdisciplinary team of teachers uses common planning time to monitor student progress and strategize on interventions.³⁴ A 2015 toolkit published by the New Jersey Department of Education identifies the strategies to support team teaching shown in Figure 1.11, which includes both foundational strategies that

³¹ Ibid., p. 3.

³² Chart contents adapted from: Bagwell, T.T. “Teaming up for Success in Today’s Middle Schools.” *Paper Presented to the Annual Meeting of the Louisiana Educational Research Association*, 2009. pp. 15–18.
http://ullresearch.pbworks.com/f/Bagwell_TeamingUp_for_StudentSuccess.pdf

³³ McEwin, C. and M. Greene, Op. cit., p. 11.

³⁴ “Turning Points Transforming Middle Schools: School Structures That Support Learning and Collaboration,” Op. cit., pp. 14–15.

are essential for any team teaching initiative and advanced strategies that can increase the impact of team teaching.³⁵

Figure 1.11: Strategies to Support Team Teaching

Foundational Strategies

- Time for Collaboration
- Adequate Materials and Resources
- Clearly Articulated Roles and Responsibilities
- Building Consensus Around Vision and Goals

Advanced Strategies

- Mechanisms in Place for Making Effective Data-Driven Decisions
- Instructional Expertise to Guide Improvement
- Engaging in Practices for Continuous Improvement
- Alignment with Key Instructional Deadlines and Activities

Source: New Jersey Department of Education³⁶

Research suggests that interdisciplinary teaming can contribute to successful outcomes in middle schools. The 2009 AMLE survey finds that the highly effective schools were more likely to use some form of interdisciplinary teaming (90 percent versus 72 percent), and were more likely to provide common planning periods for interdisciplinary teacher teams (94 percent versus 77 percent), compared to the random sample of middle schools.³⁷ The authors of this survey recommend that all schools serving young adolescents implement interdisciplinary teaming.³⁸ Likewise, *This We Believe* highlights interdisciplinary teams as a key organizational structure that contributes to improved achievement, purposeful learning, and meaningful relationships in middle schools.³⁹

Research also suggests that the size of interdisciplinary teams may play a role in their effectiveness.⁴⁰ For example, a comparison study of 10 Grade 6 teaching teams examined five teams with four teachers and 100 students, and five teams with two teachers and 50 students. The study finds a statistically significant correlation between smaller team size and higher levels of student social bonding.⁴¹

³⁵ “Collaborative Teams Toolkit.” New Jersey Department of Education Office of Evaluation, Fall 2015. pp. 4–5. <https://www.state.nj.us/education/AchieveNJ/teams/Toolkit.pdf>

³⁶ Chart contents taken directly from: *Ibid.*, pp. 6–9.

³⁷ Schools were designation as highly effective by either the National Forum to Accelerate Middle-Grades Reform or the National Association of Secondary School Principals. McEwin, C.K. and M.W. Greene. “The Status of Programs and Practices in America’s Middle Schools: Results from Two National Studies.” Association for Middle Level Education, 2011. pp. 32–33. http://www.amle.org/portals/0/pdf/articles/status_programs_practices_amle.pdf

³⁸ *Ibid.*, p. 53.

³⁹ “This We Believe: The 16 Characteristics of Successful Schools,” *Op. cit.*

⁴⁰ Wallace, *Op. cit.*, p. 5.

⁴¹ *Ibid.*, p. 10.

SECTION II: BEST PRACTICES FOR CURRICULUM AND INSTRUCTION

This section reviews the literature on best practices in middle school curriculum and instruction. This section begins with a discussion of middle school curricula before discussing scheduling strategies middle schools can use to ensure that students have access to both a strong core curriculum and elective and enrichment courses. This section concludes with a brief discussion of effective instructional strategies across curriculum areas.

MIDDLE SCHOOL CURRICULUM

The AMLE advocates for challenging, relevant curricula with a strong basis in core subjects.⁴² Likewise, the Turning Points model of middle school improvement embraces a “curriculum grounded in rigorous, public academic standards.”⁴³ The 2009 AMLE survey finds that on average, high-achieving schools allot more time for language arts, mathematics, science, and social studies than randomly selected schools. Based on these findings, the authors recommend that middle schools dedicate “significant portions of each instructional day” to instruction in core content areas.⁴⁴

Creating and maintaining strong curricula requires effort from teachers and school leaders. The Center for Collaborative Education outlines several specific actions and goals schools can pursue to establish rigorous, purposeful, and relevant curricula, listed in Figure 2.1 on the following page. These involve setting clear standards and developing appropriate curricula, using a wide range of effective instructional strategies, and using reliable assessments to collaboratively analyze student progress.

⁴² “This We Believe: The 16 Characteristics of Successful Schools,” Op. cit.

⁴³ “Turning Points Transforming Middle Schools: School Structures That Support Learning and Collaboration,” Op. cit., p. ix.

⁴⁴ [1] “This We Believe,” Op. cit. [2] McEwin and Greene, Op. cit., p. 54.

Figure 2.1: Practices to Improve Curriculum



Source: Center for Collaborative Education⁴⁵

ELECTIVE AND ENRICHMENT COURSES

The AMLE recommends that middle schools supplement the core curriculum with strong elective and enrichment offerings.⁴⁶ Electives help students identify and pursue interests outside of core academic subjects,⁴⁷ as well as allow students to begin to develop a sense of career interests.⁴⁸ These courses reveal student strengths and provide outlets for different peer interactions than students may experience in their academic classes.⁴⁹

Middle schools should also schedule time for advisory periods to promote connectedness among students and between students and teachers.⁵⁰ Notably, a higher percentage of high achieving schools in the AMLE’s national middle school surveys reported weekly advisory

⁴⁵ Content taken with minor edits from “Turning Points Transforming Middle Schools: Benchmarks to Becoming a Turning Points School.” Center for Collaborative Education. pp. 9–10.

<http://files.eric.ed.gov/fulltext/ED509758.pdf>

⁴⁶ “This We Believe,” Op. cit., p. 20.

⁴⁷ “Taking Center Stage Act II: Middle Grades Success.” California Department of Education.

<https://www.cde.ca.gov/ci/gm/mg/tcsii-index.asp>

⁴⁸ Ibid.

⁴⁹ Rambo, E. “Why Electives Matter.” *Education Week*, April 13, 2011.

http://www.edweek.org/tm/articles/2011/04/13/tln_rambo_electives.html

⁵⁰ Brody Shulkind, S. and J. Foote. “Creating a Culture of Connectedness through Middle School Advisory Programs.” *Middle School Journal*, September 2009.

<https://www.amle.org/BrowsebyTopic/WhatsNew/WNDet/TabId/270/ArtMID/888/ArticleID/279/Culture-of-Connectedness-through-Advisory.aspx>

periods (65 percent), compared to the randomly selected schools (53 percent).⁵¹ Based on this finding, the authors of the report recommend that all middle schools schedule advisory periods at least twice each week.⁵²

K-12 SPOTLIGHT: MADISON MEADOWS MIDDLE SCHOOL

Madison Meadows Middle School in Phoenix, Arizona provides an example of an urban middle school with a strong core curriculum. The school, which serves Grades 5-8, was recognized as an Exemplary High Performing School by the U.S. Department of Education’s National Blue-Ribbon Schools program.⁵³

According to the school’s application to the National Blue Ribbon Schools program, Madison Meadows Middle School emphasizes a rigorous and well-rounded curriculum aligned to Arizona’s state learning standards.⁵⁴ Madison Meadows Middle School also aligns its curriculum with the International Baccalaureate (IB) Middle Years Program (MYP) and is accredited by the IB organization.⁵⁵ The curriculum adoption process includes a 60-day review period during which faculty, students, parents, and other community members can comment on proposed instructional materials. These stakeholder groups also serve on adoption committees to review instructional materials for rigor and alignment with state learning standards.⁵⁶ Figure 2.2 outlines the curricular frameworks and materials adopted by Madison Meadows Middle School as of 2015. Notably, the school uses varied curricular frameworks to meet the needs of different grade levels.

Figure 2.2: Curricular Frameworks and Materials Used by Madison Meadows Middle School

SUBJECT	CURRICULUM FRAMEWORKS/MATERIALS
Reading	Grades 5-6: Macmillan/McGraw-Hill Treasures
	Grades 7-8: Macmillan/McGraw-Hill Bridges to Literature
Writing	6+1 Traits Writing
Math	Grade 5: McGraw-Hill Math, Harcourt Mathematics, and TERC Investigation in Number, Data, and Space
	Grades 6-8: Glencoe Mathematics: Applications and Concepts
Science	Full Option Science System (FOSS)
Social Studies	Grade 5: Pearson Scott Foresman
	Grades 6-8: McDougal Littell

Source: U.S. Department of Education⁵⁷

⁵¹ McEwin and Greene, Op. cit., p. 54., p. 54.

⁵² Ibid.

⁵³ “National Blue-Ribbon Schools Program: Madison Meadows Middle School.” U.S. Department of Education, 2015. p. 1. https://nationalblueribbonsschools.ed.gov/awardwinners/winning/asset/2015/school_application/15az305pu_madison_meadows_middle_school_finalapplication.pdf

⁵⁴ Ibid., p. 9.

⁵⁵ “Programs.” Madison School District. <https://madisonaz.org/meadows-middle-school/programs/>

⁵⁶ “National Blue-Ribbon Schools Program: Madison Meadows Middle School,” Op. cit., pp. 9–10.

⁵⁷ Chart contents obtained from: Ibid., p. 9.

Madison Meadows Middle School supplements the core curriculum with a strong elective and enrichment program. All students take two exploratory classes each day on an A/B schedule, which allows students to enroll in a total of four exploratory classes each year. Students enrolled in the IB program must complete exploratory classes in physical education, fine arts, technology/design, and Spanish.⁵⁸

Madison Meadows Middle School also reports strong elective programs in music and the arts. According to the school’s National Blue-Ribbon Schools application, elective classes extend the core curriculum. For example, Spanish classes teach grammar skills that are transferable to English grammar, while physical education and music classes incorporate reading and writing activities.⁵⁹

INSTRUCTIONAL STRATEGIES

Teachers in Madison Meadows Middle School collaboratively plan instruction using a professional learning communities (PLC) model. PLCs use a standard lesson planning template that incorporates the following essential elements:

- A lesson objective which is a measurable competency based on state standards;
- Sub-objectives with aligned activities necessary to meet the objective;
- A teacher model (if necessary);
- Differentiation; and
- Assessment.⁶⁰

Madison Meadows Middle School monitors student progress using formative Measures of Academic Progress (MAP) assessments administered three times each year. Teachers provide academic support using the response to intervention (RTI) model outlined in Figure 2.3.

Figure 2.3: Madison Meadows Middle School RTI Model

TIER	DESCRIPTION
Tier 1	Students receive first, best instruction based on state standards.
Tier 2	Students attend a 40-minute Guided Study period daily which addresses student need for remediation and/or enrichment based on teacher assessment and/or common formative assessment. Guided Study is a fluid placement of 4-6 weeks with pre and post assessment to ensure student readiness to move on to another placement.
Tier 3	Those students whose needs are not being met in the regular classroom or Guided Study receive Tier 3 intervention which may include: tutoring, administrator/social worker support, referral to Student Study Team, etc.

Source: U.S. Department of Education⁶¹

⁵⁸ Bulleted text taken verbatim from: Ibid., p. 10.

⁵⁹ Ibid.

⁶⁰ Chart contents taken directly from: Ibid., p. 11.

⁶¹ Chart contents taken directly from: Ibid.

MIDDLE SCHOOL SCHEDULING

Providing students with access to both a strong core curriculum and enrichment and elective courses may require flexible scheduling strategies. According to the AMLE, “Flexible scheduling has been considered a key component for middle schools since the beginning of the middle school movement.”⁶² Flexible scheduling may include one of the options shown in Figure 2.4.

Figure 2.4: Flexible Scheduling Options

Block Scheduling	<ul style="list-style-type: none">• Most often used by interdisciplinary teams, blocks of time usually consist of two or more combined periods.
Alternate Day Classes	<ul style="list-style-type: none">• Sometimes referred to as an “A/B schedule,” this arrangement assigns classes on an every-other-day basis during the week.
Rotating Schedules	<ul style="list-style-type: none">• Following a master schedule of all classes in sequence, classes are held at different times each day, by rotating the classes one period later each day.
Dropped Schedule	<ul style="list-style-type: none">• Students are scheduled for more classes than class periods, with one class being dropped on any given day.

Source: National Middle School Association⁶³

Research supports the use of flexible scheduling options to support achievement in middle schools. AMLE’s 2009 survey finds that highly effective schools are more likely to use flexible scheduling options and less likely to use daily uniform periods than randomly selected middle schools (Figure 2.5).⁶⁴ Based on this finding, the authors recommend that all middle schools adopt some form of flexible scheduling.⁶⁵

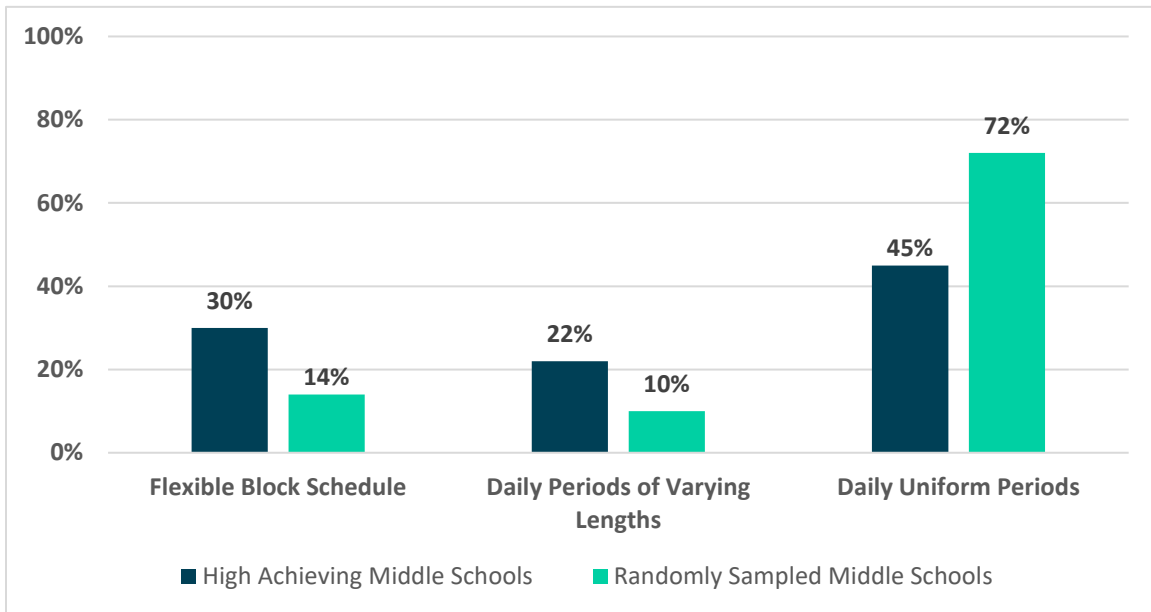
⁶² McEwin and Greene, Op. cit., p. 11.

⁶³ Chart contents taken directly from: Daniel, L.G. “Flexible Scheduling Research Summary.” National Middle School Association, 2007. pp. 1–2. http://www.amle.org/portals/0/pdf/research_summaries/Flexible_Scheduling.pdf

⁶⁴ McEwin and Greene, Op. cit., pp. 32–33.

⁶⁵ McEwin, C. and M. Greene, Op. cit., p. 53.

Figure 2.5: Scheduling Options Used by High Achieving and Randomly Selected Middle Schools, 2009



Source: AMLE⁶⁶

COLLABORATION

Flexible scheduling should include common planning time for teachers. The AMLE identifies common planning time as a key structural element that can contribute to improved achievement at middle schools. Specifically, “Common planning time for teachers on interdisciplinary teams enables [teachers] to plan curriculum and instruction and work together in other important ways to increase student learning.”⁶⁷

Research suggests that higher performing middle schools provide teachers with more shared time to plan instruction collaboratively. A 2012 study comparing middle schools with high and average levels of academic achievement finds that, at higher performing schools, “...the schedule included time for teams to meet, typically at least once a day.” In in-depth interviews, teachers at these schools further underlined the value of this shared meeting time by describing how they used the time to learn about standards for other content areas and determine how to integrate those standards across the curriculum.⁶⁸ Likewise, the AMLE’s 2009 survey finds that 40 percent of high performing schools provide core teachers with 10 common planning periods per week, compared to 28 percent of randomly selected schools.⁶⁹

⁶⁶ Chart contents obtained from: McEwin and Greene, Op. cit., p. 33.

⁶⁷ McEwin and Greene, Op. cit., p. 52.

⁶⁸ Wilcox and Angelis, Op. cit., p. 45.

⁶⁹ McEwin and Greene, Op. cit., p. 57.

EXTENDED LEARNING TIME

Some middle schools have improved instructional outcomes by extending the overall length of the school day or year. For example, Kuss Middle School in Massachusetts increased the length of the instructional day by 90 minutes in 2004 after being designated as Chronically Underperforming under the state’s accountability system.⁷⁰ The additional instructional time allowed the school to implement the improvement strategies shown in Figure 2.6. Over the first four years of the extended learning time initiative, the percentage of students obtaining proficient scores on state achievement assessments increased by 34 percentage points in math and 15.9 percentage points in English language arts (ELA).⁷¹

Figure 2.6: Kuss Middle School Extended Learning Time Strategies

Increasing instructional time in core subjects to 90-minute blocks in ELA, math, and science and 45 minutes in social studies

Adding elective classes to allow students to pursue personal interests

Weekly common planning time and professional development opportunities for teachers

Source: Massachusetts 2020⁷²

A 2015 review of the literature on extended learning time by the National Center on Time and Learning (NCTL) argues for a review of current school schedules to determine how to adopt new or innovative practices that better align with student learning. The collective findings of the studies examined in the report indicate that **when combined with other factors like supportive school culture and effective leadership, extended instructional time can improve student achievement.**⁷³

For example, a 2013 study examined 35 New York City charter schools serving Grades 3-8 to determine elements within schools that have the greatest impact on student achievement. The study found that an index of five policies explained approximately 45 percent of the overall variation in school effectiveness. These policies included frequent teacher feedback, the use of data to guide instruction, high-dosage tutoring, a strong focus on student achievement, and increased instructional time. When controlling for the other four policies, a 25 percent increase in instructional time was associated with an increase of approximately one-half of a standard deviation in annual student gains in scores on mathematics tests.⁷⁴

⁷⁰ “Kuss Middle School: Expanding Time to Accelerate School Improvement.” Massachusetts 2020, 2012. pp. 2–3. <https://eric.ed.gov/?id=ED534905>

⁷¹ Ibid., p. 5.

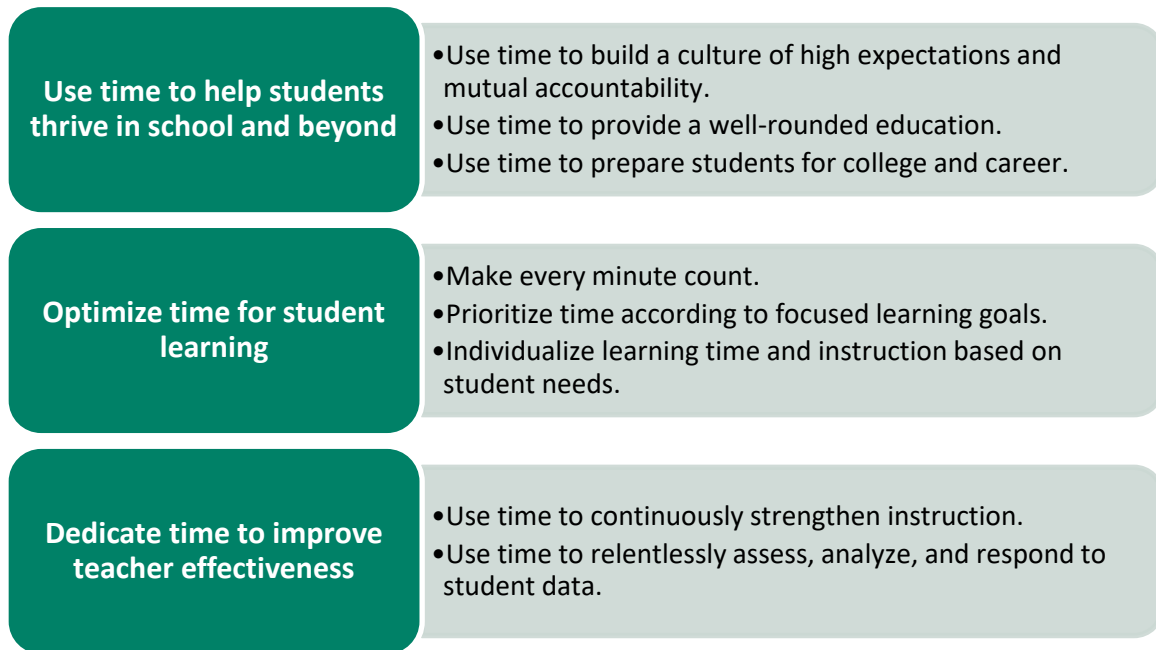
⁷² Chart contents adapted from: Ibid., p. 4.

⁷³ Farbman, D.A. “The Case for Improving and Expanding Time in School: A Review of Key Research and Practice.” National Center on Time & Learning, 2015. p. 1. <http://www.timeandlearning.org/sites/default/files/resources/caseformorelearningtime.pdf>

⁷⁴ Dobbie, W. and R.G. Fryer. “Getting beneath the Veil of Effective Schools: Evidence from New York City.” *American Economic Journal: Applied Economics*, 5:4, October 2013. p. 30. <https://www.aeaweb.org/articles?id=10.1257/app.5.4.28>

Figure 2.7 shows best practices for implementing extended learning time identified through site visits and interviews conducted by the NCTL. It is important to note that the best practices and strategies outlined can be used without extending the school day, but added time makes the strategies easier to facilitate.⁷⁵

Figure 2.7: Best Practices for Extended Learning Time



Source: NCTL⁷⁶

K-12 SPOTLIGHT – CLARENCE EDWARDS MIDDLE SCHOOL

Clarence Edwards Middle School in Boston provides an example of an urban middle school using an extended learning time improvement model. The school participated in the Massachusetts Expanded Learning Time Initiative with support from the Massachusetts Department of Elementary and Secondary Education and the NCTL beginning in 2005. Before participating in the Massachusetts Expanded Learning Time Initiative, Clarence Edwards Middle School had suffered from chronically low academic achievement and declining enrollment.⁷⁷ Figure 2.8 shows improvement strategies Clarence Edwards Middle School was able to implement as a result of increasing the length of the school day.

⁷⁵ “Time Well Spent: Eight Powerful Practices of Successful, Expanded-Time Schools.” National Center on Time and Learning. p. 8. <https://issuu.com/nationalcenterontimelearning/docs/timewellspent>

⁷⁶ Chart contents taken directly from: Ibid.

⁷⁷ Britt, M. and E. Raine. “Clarence Edwards Middle School: Success Through Transformation.” National Center on Time and Learning, October 2, 2012. pp. 2–3. <https://www.timeandlearning.org/school-resources/clarence-edwards-middle-school-success-through-transformation>

Figure 2.8: Clarence Edwards Middle School Extended Learning Time Strategies

Increased Instructional Time in Core Subjects

An Academic Support Period Four Days Per Week

Increased Collaborative Planning Time for Teachers

Additional Enrichment Programs and Community Partnerships

Source: National Center on Time and Learning⁷⁸

As part of the extended learning time initiative, Clarence Edwards Middle School provides all students with one hour of targeted intervention four days each week. Teachers use formative assessment data to group students into tiers, referred to as Academic Leagues, based on their learning needs. For example, students with proficient achievement in ELA but low achievement in math receive additional math instruction during Academic Leagues, while students with proficient achievement in math but low achievement in ELA receive additional ELA instruction. Students with proficient achievement in both ELA and math receive additional science instruction during Academic Leagues, while students with low achievement in both subjects receive an additional support period in place of an elective two days per week.⁷⁹ Clarence Edwards Middle School also provides accelerated learning opportunities during breaks in February and April for students identified by teachers as close to the next level of proficiency on state assessments.⁸⁰

Using these strategies enabled the school to increase student achievement substantially. Figure 2.9 shows the percentage of Grade 8 students obtaining proficient achievement test scores in Math and ELA in 2006, the year before implementing the extended learning time initiative, and in 2009, after three years of implementation.⁸¹

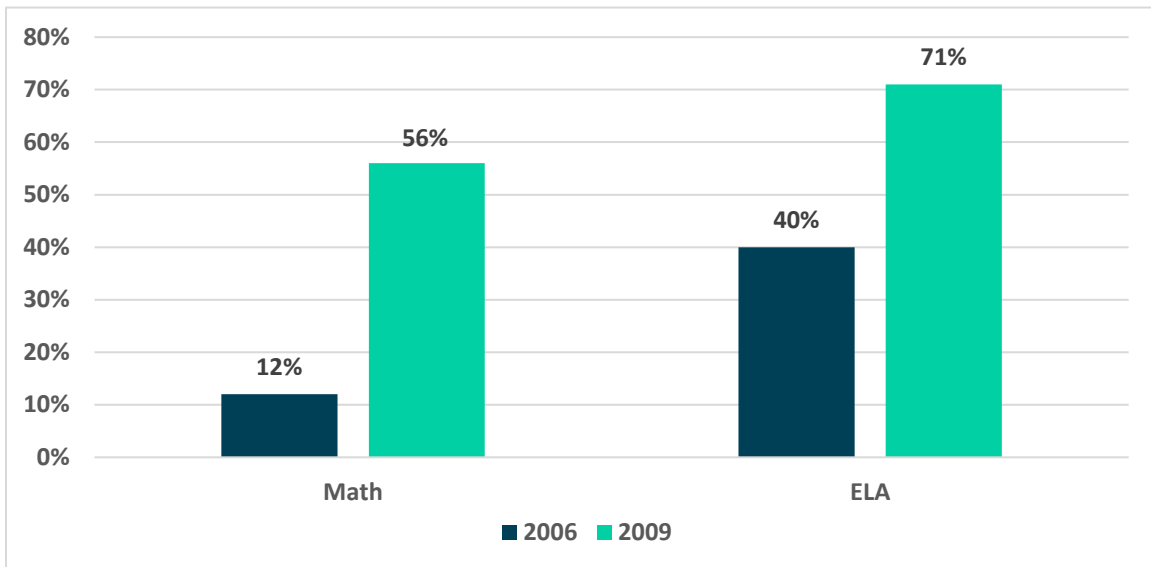
⁷⁸ Chart contents adapted from: Ibid., p. 4.

⁷⁹ "Academic Leagues at Clarence Edwards Middle School." National Center on Time and Learning, October 25, 2012. <https://timeandlearning.org/school-resources/academic-leagues-tiered-academic-support>

⁸⁰ "Acceleration Academies - Supporting Individual Student Needs." National Center on Time and Learning, August 23, 2012. <https://timeandlearning.org/school-resources/acceleration-academies-supporting-individual-student-needs>

⁸¹ Britt and Raine, Op. cit., p. 5.

Figure 2.9: Percent of Grade 8 Students at Clarence Edwards Middle School Obtaining Proficient Achievement Test Scores



Source: National Center on Time and Learning⁸²

⁸² Chart contents obtained from: Ibid.

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