# Best Practices in K-8 School Configuration

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In the following report, Hanover Research reviews best practices in K-8 school configuration. The report begins by reviewing scholarly literature on the benefits of K-8 schools compared to more traditional elementary and middle school configurations. Next, it identifies the factors that must be considered in implementing the K-8 model. Finally, it identifies districts that have successfully implemented K-8 schools.

HANOVER RESEARCH

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# Introduction and Key Findings

## Introduction

Over the past century, school leaders have sought to determine grade configurations that best support student achievement and positive long-term outcomes. In the early 20th century, most U.S. students of middle-school age attended K-8 schools. However, in the middle of the century, schools became interested in configurations that placed students in grades 6 to 9 in separate schools that provided support for students as they entered adolescence and transitioned to young adulthood. These junior high schools and middle schools, while promising, have since become viewed by critics as a flaw in the U.S. education system. Elementary school students typically perform well relative to students in other countries, but middle school students lag far behind in measures of academic achievement. In this current climate, schools have begun reconsidering the K-8 school model, which returns middle schools to the supportive environment of the elementary school.

This report examines the literature to evaluate the effects of K-8 school arrangements on student outcomes and to identify best practices for transitioning to K-8 schools from a traditional middle school system. Finally, the report identifies districts that have successfully implemented K-8 schools. The report proceeds as follows:

- **Section I: The Impact of K-8 Schools** examines research that provides evidence of the effectiveness of K-8 schools.
- **Section II: Best Practices in Implementing K-8 Schools** presents the factors that school districts must consider when establishing K-8 schools and describes some best practices for efficiently transitioning from a traditional middle school model.
- **Section III: Models of Exemplar K-8 Programs** identifies programs that serve as examples of effective K-8 school implementation.

## KEY FINDINGS

- **Most research suggests that K-8 grade configurations promote higher student achievement**. However, the number of studies on the subject is limited and research has yet to demonstrate *long-term* academic benefits from K-8 schools, as achievement gains often appear to dissipate during secondary school.
- **Some studies indicate that K-8 schools help improve student behavioral outcomes, including self-esteem.** Although the literature on this topic is not comprehensive, researchers have observed reduced disciplinary issues, absenteeism, and high school dropout rates among students from K-8 schools compared to students from traditional middle schools. This finding may be attributed to the social continuity provided by the K-8 school environment.
- **K-8 school configurations may help districts fill vacant teaching positions, encourage parent involvement, and facilitate student transportation, among other benefits**. In particular, K-8 schools support teachers and staff members in building longer-term connections with their students, which can enhance the school's learning environment. Older students in K-8 schools also have the opportunity to serve in leadership roles, providing an important opportunity for developing vital personal and social skills.
- **The most effective strategies for implementing K-8 schools involve focusing on proven middle-grade standards while adopting a student-centered focus.** In addition, involving parents in the decision-making process, establishing project-based instructional approaches, and ensuring that middle-grade teachers have the appropriate content expertise are critical steps to creating an effective K-8 learning environment that serves the needs of the community.
- **Challenges associated with the implementation of K-8 schools include ensuring access to elective courses and extracurricular activities, as well as building appropriate physical facilities for all age groups**. In addition, targeted professional development programs may be necessary to support educators in interacting with and teaching new age groups, as well as developing teachers' subject matter expertise.

# SECTION I: THE IMPACT OF K-8 SCHOOLS

This section reviews extant literature on the impact of K-8 schools on student achievement and student behavior. By developing a clear understanding of the effects of a transition from traditional middle schools and junior high schools (containing some combination of grades 6 through 9) to K-8 schools, district administrators can make sound, informed decisions about future grade configurations. Further, an understanding of the evidence supporting K-8 schools enables district representatives to communicate effectively with stakeholders about their decision-making processes.

## RESEARCH BASE

Although interest in K-8 school configurations is not new, much of the extant research addressing the impact of such configurations has been completed in the last 16 years. For instance, a mid-2000s review of K-8 configuration research in *Education Northwest Magazine* found that minimal research on the effects of K-8 configurations on student achievement had been conducted at the time of its publication. The review cited four studies of student performance in K-8 arrangements, none of which determined conclusively that placing students in a K-8 school necessarily improved their academic performance. The author noted that modern K-8 configurations were still growing in popularity, and "Researchers urge practitioners to study strengths and weaknesses of various configurations to create effective educational services."[1] Similar literature reviews have also failed to find any large-scale studies of the effects of K-8 schools.[2]

Additional studies of the impacts of K-8 schools on a variety of measures have been conducted since the publication of those reviews, yet, overall, the body of research surrounding K-8 schools has yet to identify clear and conclusive connections between K-8 grade configurations and improved long-term outcomes. This is complicated by the wide range of factors associated with grade configurations, including school and class size, teacher interaction, and curriculum.

However, some studies do suggest that K-8 grade configurations may support increased student achievement, especially in the short term.

[1] Klump, J. "What the Research Says (or Doesn't Say) About K-8 Versus Middle School Grade Configurations." Education Northwest Magazine. http://educationnorthwest.org/news/1694

[2] McEwin, C. K., T. S. Dickinson, and M. G. Jacobson. "How effective are K–8 schools for young adolescents?" *Middle School Journal*, 37:1. pp.24-28.

## ACADEMIC ACHIEVEMENT

The primary focus of most studies on K-8 school impact is student academic achievement. Proponents of the K-8 model argue that the continuity offered in this school environment helps support optimal emotional and social outcomes, which may contribute to improvements in academic achievement.[3] Additionally, student achievement is among the most straightforward outcomes to measure, as student test scores and grade point averages (GPAs) provide a consistent data set for achievement analysis.

### *ACHIEVEMENT GAINS*

**The vast majority of studies consulted for this report indicate that students in K-8 schools perform better academically than their counterparts in middle and junior high schools**. However, the studies vary in the extent to which they attribute performance differences to grade configurations rather than other factors such as student socioeconomic status. Additionally, most comparative studies of student achievement at K-8 schools focus on short-term results and provide less conclusive evidence of program effectiveness in the long term as students transition to high school and beyond.

For example, a 2005 study comparing students at K-8 and middle schools in Miami Dade County found significant short-term differences in student academic outcomes between students in different grade configurations. Sixth- and seventh-grade students at Miami Dade County K-8 schools significantly outperformed their peers from middle schools in both mathematics and reading.[4] A similar study in Philadelphia that compared performance between students at K-8 schools and middle schools found that in eighth grade, students from K-8 schools outperformed eighth-graders in middle schools by a significant margin. By ninth grade, students in K-8 schools continued to show higher achievement than middle school students. K-8 school students earned significantly higher GPAs than middle school students, and K-8 school students earned higher scores on standardized tests and completed more credits than middle school students.[5] Finally, a 2011 article noted that observed K-8 schools met adequate yearly progress goals more often than traditional middle schools.[6]

Research shows that there is a general loss of achievement when students enter the middle grades and high school, regardless of grade configuration. However, students in K-8 schools appear less susceptible to these losses than middle school students. A 1998 study by John Alspaugh supports this claim. This study of 16 different school districts found that although there was a general loss of achievement as students transitioned to high school, students

[3] Blair, L. "Back to the Future: The Shift to K-8 Schools." SEDL, April 2008. http://www.sedl.org/pubs/sedl-letter/v20n01/k-8_schools.html

[4] Abella, R. "The effects of small K–8 centers compared to large 6–8 schools on student performance." Middle School Journal, 37:1, 2005.

[5] Offenberg, R. "The efficacy of Philadelphia's K-to-8 schools compared to middle grades schools." Middle School Journal, 32:4, 2001. pp.23-28.

[6] Hough, D. "Hough: K-8 schools perform better than middle schools." *News-Leader.com*, December 21, 2011. http://www.news-leader.com/article/20111221/NEWS04/112210378/elemiddle%20middle%20schools

from K-8 schools had lower rates of achievement loss than students from traditional middle schools. Ultimately, the study's authors concluded that "students placed in relatively small cohort groups for long spans of time tend to experience more desirable educational outcomes."[7]

Research also suggests that **K-8 schools are particularly beneficial for underperforming students.** For instance, one 2010 study on the impacts of grade configuration in New York City found that students in traditional middle schools fall behind their peers from K-8 schools, particularly in math and English, and that "students with lower initial levels of academic achievement fare especially poorly in middle school."[8] This research and other studies all point to improved academic outcomes for students in K-8 schools.[9]

### *Sources of Achievement Differences*

While the body of research indicates that middle-grade students in K-8 schools tend to outperform middle school students, it does not illuminate exactly which components of a K-8 grade configuration are responsible for achievement gains. A 2007 empirical study conducted by researchers affiliated with Johns Hopkins University identified the following differences between K-8 and middle schools that may contribute to the reported differences in achievement:

- Students in middle schools tend to be from higher poverty backgrounds and are more likely to be a member of a minority group
- Teachers are generally trained at colleges of education to be either elementary or high school teachers, so they are less prepared for the type of instruction needed for successful middle school education
- Attending middle school requires students to make an additional jarring transition between schools
- K-8 schools tend to be smaller overall with smaller grade-level cohorts[10]

**Some of these factors, such as demographic backgrounds and school size, may not be alleviated simply by transitioning students to K-8 schools**. Other research suggests that achievement differences can be attributed to the relatively better learning climate that K-8 schools offer over middle schools, which Is discussed further in Section II of this report.[11]

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[7] Alspaugh, J. "Achievement loss associated with the transition to middle school and high school." Journal of Educational Research, 92:1, 1998. pp.24-25.

[8] Rockoff, J. and Lockwood, B. 2010. "Stuck in the Middle." *Education Next*, 10:4. http://educationnext.org/stuck-in-the-middle/

[9] [1] Byrnes, V. and Ruby, A. "Comparing Achievement Between K-8 & Middle Schools: A Large Scale Empirical Study." Center for Social Organization of Schools, Johns Hopkins University, 2007. http://www.csos.jhu.edu/new/Comparing%20Achievement.pdf

[2] Do, C. and Bedard, K. "Are Middle Schools Effective? The Impact of School System Configuration on Student Outcomes." *Journal of Human Resources*, 40:3, 2005.

[10] Byrnes and Ruby, Op. cit., p.7.

[11] West, M., and G. Schwert. "The Middle School Plunge." *Education Next*, 12:2, 2012.

In the 2007 study cited above, researchers also found that students at *more established* K-8 schools outperformed students at newer K-8 schools and middle schools. In this study, students at the newer K-8 schools in the study shared more characteristics with middle school students, such as high-minority and high-poverty statuses. Although students at the *old* K-8 schools did tend to outperform their middle school counterparts, the study found that the *new* K-8 schools did not outperform their middle school counterparts as much or as significantly, despite "smaller grade sizes and lower rates of school transition." The results of the study led the authors to conclude:

> Much of the old K-8 advantage clearly resides in the different student populations that are served by old K-8 schools and Middle Schools. [. . .] So long as the new K-8 schools consist of the same high-minority and high poverty student populations as the Middle Schools, it seems unlikely that they will develop the same sizeable achievement advantage seen in the old K-8 schools.[12]

However, the Alspaugh study did find differences in achievement depending on the *type* of transition to middle schools. Specifically, students who transitioned to a traditional middle school that merged cohorts from multiple elementary schools fared more poorly than students who entered a traditional middle school that comprised only students from one elementary school.[13] This finding suggests that there may be an academic benefit to maintaining consistent and relatively small grade cohorts from the elementary grades to the middle grades.

### *LIMITATIONS*

**It is important to note that the studies cited in this report typically did not study long-term outcomes and failed to prove any long-term differences in outcomes associated with the K-8 grade configuration.** For instance, the 2005 Miami Dade County study showed that by ninth grade, student reading scores were essentially identical between students who attended K-8 schools and students who attended traditional middle schools. Students from K-8 schools still outperformed their traditional middle school peers in mathematics, albeit at a non-significant level.[14] A separate review of Alspaugh's work similarly determined that in his other studies, K-8 and middle school students typically gained back any achievement losses during the year after transitioning to a new school.[15]

The Johns Hopkins study, which found some differences in achievement between K-8 and middle school students, observed that achievement differences could be attributed to a number of factors, including population characteristics. Citing the complexity of the situation, the authors cautioned:

> Districts and schools eager to convert to the K-8 structure because of this advantage should not rush into any such policies but rather should reflect upon history. K-8 Schools, once the dominant school structure in the U.S. middle grades landscape

[12] Byrnes and Ruby, Op. cit., pp.41-42.
[13] Alspaugh, Op. cit., pp.24-25.
[14] Abella, Op. cit.
[15] Klump, Op. cit.

> have fallen out of fashion before, and they may yet do so again as the rush to revert to them is likely to leave many reformers disappointed.[16]

Similarly, in 2006, one research team expressed concern that focusing on grade configuration ignored more serious issues. They argued that schools' energy would be better invested in developing more engaging curricula, family outreach strategies, and organizational structures.[17] As discussed in Section II, educational experts often encourage districts to use the K-8 transition process to incorporate instructional and curricular best practices into school programming.

## BEHAVIOR

In addition to potentially promoting greater student achievement, K-8 schools have had a well-documented impact on student behavior.

### *DISCIPLINE AND STUDENT SELF-PERCEPTION*

The Alspaugh study found that students from K-8 schools exhibited better self-esteem and positive self-perception than their peers from traditional middle schools. Such differences in self-perception may have significant impacts on other areas of student behavior such as student discipline.[18] Other studies echo this finding and conclude that K-8 schools have a positive impact on student discipline.[19] The Miami Dade County study concluded that "even though the out-of-school suspension rates tended to increase as the students aged, the suspension rates of K-8 students increased at a significantly slower rate than that of comparison students in sixth and seventh grades."[20]

Additionally, administrators at K-8 schools in Oklahoma City observed that middle-level students who share a building with younger students "not only watch their language but take a protective attitude toward the little ones."[21] A 2008 study demonstrated that traditional middle school configurations "may exacerbate behavioral problems" and that "students who attend middle school in sixth grade are twice as likely to be disciplined relative to their counterparts in elementary school," a potential negative consequence of "exposing sixth graders to older peers."[22]

[16] Byrnes and Ruby, Op. cit., p.46.
[17] Beane, J., and R. Lipka. "Guess again: Will changing the grades save middle-level education?" *Educational Leadership*, 63:7, 2006. pp.26-30.
[18] Hough, "The Rise," Op. cit., pp.24-25.
[19] Hough, "Hough K-8," Op. cit.
[20] Abella, Op. cit., p.34
[21] Herman, B. "The Revival of K-8 Schools." Phi Delta Kappa Fastbacks, 519, 2004. p.18. Retrieved from ProQuest.
[22] Cook, P., MacCoun, R., Muschkin, C., and Vigdor, J. 2008. "The Negative Impacts of Starting Middle School in Sixth Grade." *Journal of Policy Analysis and Management*, 27:1. http://conium.org/~maccoun/CookMacCounMuschkinVigdor2008.pdf As cited by Meyer.

### *ABSENTEEISM AND DROPOUT RATES*

The Miami Dade County study found that while all students were more likely to be absent in older grades, "K-8 students were less likely than comparison students to increase their level of absenteeism."[23] David Hough, one of the most cited researchers in the realm of K-8 schools, notes that student attendance is generally higher at K-8 schools than at traditional middle schools.[24] The study that compared students at K-8 and middle schools in Philadelphia similarly found that students from K-8 schools had higher attendance in ninth-grade than students from middle schools.[25]

In addition, the Alspaugh study observed lower high school dropout rates among students from K-8 students than students from traditional middle schools. The authors hypothesized that the difference in dropout rates may be associated with achievement losses and multiple transitions typical of the traditional middle school experience.[26] Similarly, a 2005 study by Bedard and Do revealed that on-time high school graduation rates are lower by 1 to 3 percent among students who attend a separate school starting in grade 6.[27]

## OTHER IMPACTS

Research indicates that K-8 school configurations can increase cost effectiveness and reduce maintenance and facility management costs,[28] encourage greater parent involvement, increase student participation in extracurricular activities, improve students' views of teachers,[29] and increase teacher satisfaction and productivity.[30]

[23] Abella, Op. cit., p.33
[24] Hough, "Hough K-8," Op. cit.
[25] Offenberg, Op. cit., pp.27-28.
[26] Hough, "The Rise," Op. cit., pp.24-25.
[27] Do and Bedard, Op. cit.
[28] Byrnes and Ruby, Op. cit., p.7.
[29] Gomez, M. O., G. A. Marcoulides, and R. H. Heck. "Examining culture and performance at different middle school level structures." International Journal of Education Management, 26:2, 2012. pp.205-222.
[30] Hough, "Hough K-8," Op. cit.

# SECTION II: BEST PRACTICES IN IMPLEMENTING K-8 SCHOOLS

While numerous studies have been conducted on the difference in outcomes between students at K-8 and middle schools, less research has been published on best practices in implementing K-8 schools. In particular, few research teams have studied exactly what components of a K-8 school are most effective at improving student outcomes. However, in the past decade, some researchers have explored this topic and identified key factors that must be considered in the K-8 transition decision-making process.

## FIDELITY TO MIDDLE SCHOOL STANDARDS

True best practices begin with setting program standards, and, overall, program standards for the middle grades in K-8 schools are identical to those for middle schools. These standards, enumerated in *Turning Points 2000: Educating Adolescents in the 21st Century*, consist of the following best practices:

- True middle schools are divided into smaller communities for learning
- A core of common knowledge grounded in robust standards is at the center of middle level schools
- Middle level schools implement interdisciplinary teams that develop and facilitate meaningful learning opportunities
- Success for all students is the philosophy of well-organized middle level schools
- Teachers and principals have the major responsibility to make decisions about their student's learning
- Good health development and academic strength run parallel to ensure all students are supported
- Families are allied with school staff through mutual respect, trust, and communication
- Schools and communities are partners in educating youth[31]

As an additional example, Dr. M. Lee Manning, professor of educational curriculum and instruction at the Darden College of Education, has established seven benchmarks for implementing student-friendly environments in middle schools that apply to middle-grade students in K-8 schools as well.[32] These benchmarks include:

- Education experiences that address young adolescents' tremendous diversity

[31] Bullet points taken verbatim from "School Grade Configuration: What's Best for Young Adolescents?" New England League of Middle Schools. pp.1-2. http://www.nelms.org/pdfs/pos_statements/pos_8-1.pdf
[32] Ibid., pp.15-30.

- Teachers who are trained in middle school concepts and early adolescence development
- Exploratory programs
- Developmentally responsive, comprehensive guidance and counseling programs
- Equal access to all educational experiences
- A positive and safe learning environment
- Involvement of parents, families, and community members[33]

However, K-8 school research consistently notes that these targeted strategies, which undergird the original movement in favor of middle schools, are not the source of the middle school achievement challenge. Rather, middle schools face challenges implementing these principles and many schools have failed to meet the original standards and benchmarks prescribed for middle schools. In contrast, K-8 schools may be in a better position to truly embrace the principles laid out in *Turning Points* and by Dr. M. Lee Manning. For instance, researchers throughout the literature cite fidelity of implementation as the primary explanation for K-8 schools' high performance relative to traditional middle schools.[34]

Simply reconfiguring grades, therefore, is not sufficient to improve student outcomes; K-8 schools must still implement proven middle-level best practices. Hough notes that only schools with continuous grade spans between kindergarten and eighth grade *and* sound implementation of middle-level best practices meet the standards of his exceptional "elemiddle" school classification, discussed in more detail below. He argues that the reason K-8 schools succeed is that they truly implement the middle-level transitional concept. According to Hough,

> whenever well-implemented elemiddles are compared to well-implemented middle schools, the elemiddles come out on top. Whenever well-implemented elemiddles are compared to poorly implemented middles, the elemiddles come out on top. Whenever well-implemented middles are compared to poorly implemented elemiddles, the middle schools come out on top.[35]

One study published in the *Middle School Journal* notes that "it has been easier to provide effective middle grades education in a K-to-8 environment, though it is possible to provide it in a middle grades school." Thus, the strength of the K-8 model may be its ability to simplify the implementation of existing middle-grade education best practices.[36] Additionally, an article published by the California Department of Education noted that a number of different related factors affect student learning beyond grade configuration:

[33] Bullets quoted with slight variation from Manning, M. 1999. "Benchmarks of Student-Friendly Middle Schools." Contemporary Education, 71. As cited by Herman.
[34] Yecke, C. 2006. "Mayhem in the Middle: Why We Should Shift to K-8." Educational Leadership, 63:7. http://www.ascd.org/publications/educational-leadership/apr06/vol63/num07/Mayhem-in-the-Middle@-Why-We-Should-Shift-to-K%E2%80%938.aspx
[35] Hough, D. "The Rise of the 'Elemiddle' School." *School Administrator,* 62:3, 2005.
[36] Offenberg, Op. cit., p.28.

> While a move to K-8 schools may eliminate the harmful effect of transitioning between schools, three additional factors can affect student learning: school size, student SES, and instructional delivery. There is evidence that smaller schools and fewer transitions are good for students, but so is the middle school concept of organizing and delivering developmentally-appropriate programs for young adolescents. However, only the negative effect of the number of times a student transitions from one school to the next is solved by a move to K-8 schools.[37]

Another study notes that "the major factors in determining student achievement include a motivated staff and strong leadership, and not simply the configuration of the school or a change in the educational program."[38] Schools that consider transitions to K-8 schools must keep in mind the importance of developing programs that continue to meet the unique needs of middle-grade adolescents.

## FACTORS FOR CONSIDERATION

When planning a transition from traditional middle schools to K-8 schools, districts must consider a wide variety of factors. According to Barry Herman's "The Revival of K-8 Schools," there are nine major factors that school administrators should take into account when making the decision to transition from traditional middle school configurations to K-8 schools. Herman states that schools must consider:

- Number of students
- Transportation costs
- Socioeconomic status of student population
- Budget considerations
- Effects on other schools
- Number of transitions for affected students
- School building layout and design
- Effects on parent involvement
- School system goals for student achievement[39]

The number of transitions, in particular, is an important element of the decision-making process. A recent article published in *Education Next* concluded that "transitions into both middle schools and high schools cause drops in student achievement but that these effects are far larger for students entering middle schools." Such transitions are inherently disruptive, and exposing students to a newer, more intimidating group of students may have a negative effect on their achievement.[40]

Schools should also consider the effects of mixing older and younger students in the same facility, the impacts of different grades on staff organization, and the effect of the changes on the school's curriculum.[41] Each of these factors has wide-ranging implications for the

[37] Erb, T. "The Making of a New Urban Myth," *Middle School Journal*, 37:1, September, 2005. pp.2-3.
[38] Gomez, Marcoulides, and Heck., Op. cit., pp.205-222.
[39] Bullet points taken verbatim from Herman, Op. cit., p.12.
[40] West and Schwert, Op. cit.
[41] Anfara, V. A., and A. Buehler. "Grade configuration and the education of young adolescents. *Middle School Journal*, 37:1. pp.53-59.

operation and composition of new K-8 schools. Because fidelity to true middle-grade standards is critical for student success, schools should not transition to K-8 schools without a thorough understanding of how such schools will change the overall structure of the school and district as a whole.

## CHALLENGES IN K-8 SCHOOLS

Implementing K-8 schools is not a simple process, and K-8 schools have some disadvantages relative to middle schools that must be addressed. For instance, students entering adolescence face a number of transitional challenges regardless of the type of school they attend during the middle grades. Those challenges include:

- Rigorous academic demands
- Accountability to multiple teachers
- The onset of puberty and growing awareness of the opposite sex
- Joining new social groups
- Stricter behavioral standards

In addition, as students enter new schools (particularly traditional middle schools), they may also be forced to adapt to larger school and class sizes, as well as environments where they are no longer the oldest students on campus. K-8 schools present an opportunity for districts to address these challenges in a constructive way. The middle grades at K-8 schools can serve as transitional areas, where students can adjust to higher academic and behavioral standards while delaying their introduction to entirely new schools and social groups.[42] However, Dr. Anthony Recasner, principal of a K-8 school in New Orleans, observes that combining students in grades K-5 and 6-8 may create challenges for teachers, who are often trained in the developmental and academic needs of certain grade spans. In particular, Dr. Recasner notes that teachers of younger students may feel out of their element interacting with older students.[43]

By limiting students' rapid introduction to large, unfamiliar environments, K-8 schools may also lose some of the positive benefits of traditional middle schools. For example, K-8 schools, which tend to have smaller cohorts, are often less able to offer a wide variety of electives and extracurricular opportunities. Faculty and resources needed to sustain school newspapers, drama groups, and athletic teams are less available at smaller schools. To satisfy older students' developmental needs, K-8 schools must find ways to provide extracurricular offerings that allow students to explore creative and social interests outside the classroom. The introduction of new students of different age groups also requires physical modifications to a school. However, these modifications may be cheaper than the cost of building completely new facilities or updating existing middle schools.[44]

[42] Herman, Op. cit., p.15.
[43] Blair, Op. cit.
[44] Herman, Op. cit., p.20.

## ADVANTAGES TO K-8 SCHOOLS

In addition to examining the downstream effects and challenges of K-8 implementation, districts should also look to the advantages that K-8 schools offer. Some advantages of K-8 schools include:

- **Hiring advantages**: it may be easier to hire and retain teachers and staff at the middle grades of a K-8 school than in a traditional middle school.
- **Safety**: older children with younger siblings at the same school often assume roles as protectors, tutors, and role models in school.
- **Parental involvement**: parents with one or more children at the same school for an extended period of time are more likely to remain connected to the school and enroll other students at the school.
- **Staff connection**: working at schools in a smaller geographic area with students who remain for a longer period of time allows school staff members to feel more connected to the communities in which they work. Staff members are also able to build lasting bonds with students and watch their students develop into young adults throughout their time at school.
- **Travel convenience**: siblings can travel to school together at the same time, simplifying the logistics of sending multiple children to school.
- **Discipline**: students who remain at one school for a longer period of time are more well-known to parents, teachers, and other adults and are less likely to get into trouble at school. Smaller cohorts of seventh- and eighth-graders are also easier for teachers to manage.
- **Shared knowledge**: teachers with middle school teaching experience can share their subject matter expertise with elementary school teachers, while elementary school teachers can inform middle-grade teachers about specific students' histories, learning styles, and other unique characteristics.
- **Lasting relationships**: teachers and students build lasting bonds that can foster a supportive, trusting environment. Older students can return to teachers from younger grades for support, advice, or friendship. Students also build lasting relationships with classmates.
- **Leadership development**: older students in K-8 schools have the opportunity to develop leadership skills as role models, teachers' aides, tutors, and bus monitors.
- **Minimizing transitions**: students in K-8 schools only make one transition before graduating.
- **Cost-effectiveness**: K-8 schools are typically smaller than middle schools and therefore are more cost-effective for utilities, maintenance, and staffing costs.[45]

Administrators at K-8 schools in Philadelphia echoed these observations, noting that it was easier at K-8 schools to fill vacant teaching positions, encourage parent involvement, arrange student transportation, and connect staff members to the community.[46] Furthermore, a recently published article in *Education Next* pays particular attention to the

[45] Ibid., pp.32-34.
[46] Anfara and Buehler, Op. cit., pp.53-59.

value of giving seventh- and eighth-grade students the opportunity to develop leadership skills in K-8 schools.[47]

## IMPLEMENTATION STRATEGIES

Below we outline several strategies for teachers and administrators to consider during the transition to and implementation of K-8 schools.

### *IMPLEMENTATION FRAMEWORK*

A 2006 article published in *Educational Leadership* provides a comprehensive framework for implementing K-8 schools that considers curricular, instructional, social, and community factors. According to the article, schools should consider 10 different strategies for the transition to K-8 schools:

- **Include parents in the process**: parents should be involved in every phase of the planning process. Research has revealed that many of the most academically successful K-8 schools, regardless of socioeconomic factors, also have the most involved parents.
- **Add higher grades rather than lower grades**: adding higher grades to elementary schools minimizes grade-level imbalances and requires fewer modifications to existing school facilities. Staff at one school examined for the article unanimously agreed that adding one grade per year to an elementary school was the best method of grade expansion.
- **Ensure grade-level balance**: because K-8 schools contain nine different cohorts, it is important that no single grade becomes more important to the school than other grades, dictating policy that may not benefit the school as a whole. To avoid this, attempt to maintain cohorts that are similarly sized or educate the staff to be aware of possible grade imbalances.
- **Use sixth-grade as a transition year**: retain some elements of elementary school, such as recess and classroom learning centers, while moving students to new locations in the school and introducing them to new academic and behavioral standards.
- **Establish a strict transfer policy**: because older students at K-8 schools are typically well-established in the schools, transferring from another school into the older grades at a K-8 school can be challenging. To support transfer students, some schools require mandatory after-school lessons to help students adjust to the K-8 environment and the level of work required for their grades.
- **Modify school facilities**: middle-grade students have different facility needs than elementary school students. Schools need to add computer labs, age appropriate books, science labs, and other resources for older students. Schools may even choose to create a separate wing for older students to limit the amount of interaction with students from much younger grades. Finally, changes to schedules and cafeteria menus may provide additional support to middle-grade students.
- **Maintain high behavior and academic expectations**: schools should establish consistent standards while providing older students some flexibility to accept additional responsibility and prepare for high school.

[47] West and Schwert, Op. cit.

- **Decide upon an academic approach**: schools may choose to organize middle-grade classes into academic departments or employ a self-contained model. However, it is critical that middle-grade teachers, regardless of the school's organization, possess subject-matter expertise. As the author notes, "A truly compassionate education cannot allow the desire for a nurturing environment to trump access to a rigorous, well-taught curriculum."
- **Provide access to advanced courses and electives**: smaller cohort sizes in upper grades make it difficult to offer challenging, specialized courses. However, students need access to such courses, especially advanced math. One method of addressing this challenge is to collaborate with other K-8 schools or high schools to share teachers and materials.
- **Provide access to extracurricular activities**: small cohort sizes also make it difficult to provide a variety of extracurricular activities. Schools must find a way to allow students to pursue a range of opportunities outside of the classroom.[48]

One California school that successfully transitioned to a K-8 configuration included the purchase of laptops, middle-grade reading materials, and projectors and document cameras. Modifications to the cafeteria were also included in the transition strategy.[49]

David Hough, who coined the term "elemiddle" to refer to "K-8 schools that implemented promising or best practices for young adolescent learners,"[50] explains that the most successful K-8 schools are those that are fully employing middle-level best practices. **This integration of effective elementary-level and middle-level programming may include "promising practices such as teaming, cross-age tutoring, integrated inquiry-based teaching and learning strategies, intramural sports programs, and cooperative learning."** In addition, these K-8 schools tend to foster an environment that is more nurturing and child-centered, similar to an elementary school.[51] Proponents of K-8 schools argue that this nurturing environment is a key factor in the positive behavioral outcomes associated with this grade configuration.

Barry Herman, professor of education at Sacred Heart University in Connecticut, also describes a number of features of K-8 "elemiddle" schools that have been found to be promising, which include:

- Having middle-level students change classes and work with a team of three or four teachers, each of whom teaches one or two subjects.
- Implementing a curriculum that "includes such core subjects as English, mathematics, science, and social studies; but it also includes art, music, physical education, computer lab, and some industrial arts and home economics courses."
- Providing "facilities and programs once found only in middle and high school: science labs, foreign language classes, guidance services, chorus, band, and algebra in the eighth grade"

[48] Yecke, Op. cit.
[49] Masatani, M. "Azusa Unified transitioning elementary to K-8 school." *San Gabriel Valley Tribune*, September 4, 2013. http://www.sgvtribune.com/social-affairs/20130902/azusa-unified-transitioning-elementary-to-k-8-school
[50] Hough, "Hough K-8," Op. cit.
[51] Hough, "The Rise," Op. cit.

- Emphasizing "project-based learning and problem-solving activities" more than may be typical in the elementary grades. To address the academic needs of middle-level students in a K-8 school, teachers must pay close attention to developing pupil-centered activities that advance the curriculum.
- Offering "strong extracurricular programs that give older students the chance to produce a school newspaper, participate in band or drama, and engage in expanded sports and athletic programs."
- Implementing a focused transition plan, which in many districts involves phasing in the new grade span "over several years by adding one grade a year to existing K-5 and K-6 schools."
- Enlisting "a broad-based committee of teachers, parents, board of education members, and community leaders [to] plan the physical design for the new school and develop new curriculum and instructional programs."[52]

The above strategies thus shed light on the various ways in which schools can help ensure that K-8 schools adopt middle-grades best practices to promote student learning as well as positive social and emotional development.

### *Student-Centered Focus*

The literature on K-8 schools frequently contains discussions of the importance of **student-centered classes**. In student-centered or "self-contained" classes, students spend the majority of their day with one teacher who instructs on a variety of topics. This model is typical of traditional elementary schools, but traditional middle schools generally deliver courses using a content-centered approach. Teachers in content-centered classrooms focus on one or two academic subjects and teach different groups of students.[53]

Researchers tend to agree that students should transition from self-contained classrooms to content-centered classrooms in preparation for secondary education; however, proponents of K-8 schools argue that K-8 schools provide the best opportunity for students to gradually transition to the content-centered format by slowing phasing out self-contained classes and incrementally introducing content-focused classes.[54] This practice allows for the development of a stronger and more sustained relationship between teachers and students. According to Hough, "any school with a nurturing learner-centered environment, staffed by competent, caring teachers who fully implement promising practices should be able to document positive student outcomes."[55]

### *Teacher Training*

The need to balance student-centered, individualized attention, and rigorous content standards will require that K-8 schools support their teachers with ongoing professional development. In particular, teachers from elementary schools may need additional content

[52] Herman, Op. cit., pp.15-30.
[53] Herman, Op. cit., pp.15-30.
[54] Ibid., pp.15-30.
[55] Hough, "The Rise," Op. cit.

training if they are going to work with middle-grade students, while middle school teachers will need to learn how to lead student-centered classrooms. Although a limited amount of research has been conducted on the best ways to train teachers for transitions to K-8 schools, below we review the existing literature on this topic.

In a 2011 study, researchers at Texas A&M University and University of Texas at Dallas investigated the impact of training elementary school teachers to teach middle-grades science at K-8 schools. Advanced science instruction is often challenging for elementary school teachers because they may lack the content expertise generally acquired by middle and high school teachers during their undergraduate and graduate education. **The study's authors observed that lack of subject matter experience often damaged teachers' confidence. Further, they found that feelings of competence and self-efficacy are strong factors in teachers' willingness to adopt new teaching methods and explore new subject matter**. However, this study also demonstrated that an intensive professional development program can help improve teachers' content knowledge and feelings of self-efficacy with regards to their capacity to teach new content.[56]

It is therefore critical that schools empower teachers to absorb new knowledge and engage new topics. For science teachers, the study found that a summer learning institute and monthly follow-up sessions were effective at improving teachers' understanding and confidence. The summer institute focused on introducing inquiry-based instruction techniques and science content, led by collaborative instructors. Inquiry-based instruction techniques were used to educate teachers, and instructors encouraged teachers to ask questions throughout the training process. During the monthly follow-up sessions, which were offered in half-day or full-day formats, additional science content was introduced, as well as any other science topics in which teachers saw a need for additional instruction. The ultimate result of this training program was a teaching staff that felt not only capable of teaching science, but also interested in continuing to participate in professional development in the future.[57]

Implementing small learning communities (interdisciplinary teams) is also a promising practice for introducing teachers to new grade configurations.[58] While the above-mentioned study focused on science education, similar professional development programs can be developed to introduce teachers to new subject matters and teaching styles. In fact, schools may choose to implement programs that introduce middle school teachers to student-centered teaching by placing them in the role of students in a student-focused classroom during summer training sessions.

[56] Sinclair, B. B., G. Naizer, and C. Ledbetter. "Observed Implementation of a Science Professional Development Program for K-8 Classrooms." Journal of Science Teacher Education, 22:7, November, 2011. pp. 579-594.
[57] Ibid., pp.579-594.
[58] Wallis, C. 2005. "Is middle school bad for kids? Cities across the U. S. are switching to K-8 schools. Will the results be any better?" TIME, 66.

### *PLANNING PROCESS*

Schools may develop a variety of strategies to guide their decision-making process. Some administrators and researchers recommend that schools form representative planning committees early in the planning process. These committees may include teachers, administrators, members of the school board, parents, and community leaders. Each group provides feedback that is used to guide future decisions. Committees may discuss a wide range of topics related to the transition to K-8 schools, including physical school design, curriculum design, extracurricular offerings, and instructional programming.[59]

Most of the research consulted in this report supports a gradual introduction of new grades into existing schools. This typically entails the addition of one new grade each year until the school is fully integrated into a K-8 school. This can be done either by adding older grades to an existing elementary school or adding younger grades to an existing middle school.[60]

[59] Herman, Op. cit., pp.21-22.
[60] Ibid., p.21.

# Section III: Models of Exemplar K-8 Programs

The final section of this report is intended to provide a number of case profiles of exemplar K-8 programs. Hanover extensively reviewed research on the impact of K-8 schools and best practices in K-8 configuration design to identify schools and districts that have successfully implemented K-8 programs. We focused on features such as instruction and curriculum, as well as professional development.

Unfortunately, detailed case studies and profiles of exemplary K-8 schools are not widely available. Extensive research on the general impact of K-8 schools, supported by studies of individual programs, exists. However, the literature pays little attention to the steps taken by each school to establish new K-8 programs. Rather, the research focuses on K-8 programs *after* they have already been implemented.

The following school districts have been identified in the literature as districts where K-8 configurations have resulted in improved student achievement or behavior. However, our research revealed little additional detail explaining how these districts reconfigured facilities, designed curricula, trained teachers, or solicited community feedback. Below, we provide a brief introduction to the K-8 programs in two major school districts. Among the most promising examples of K-8 programming are:

- Baltimore City Public Schools (Maryland)
- Cincinnati Public Schools (Ohio)
- Cleveland Metropolitan School District (Ohio)
- Fayetteville City Schools (Tennessee)
- Milwaukee Public Schools (Wisconsin)
- The School District of Philadelphia (Pennsylvania)
- Portland Public Schools (Oregon)
- Oklahoma City Public Schools (Oklahoma)

Many of the school districts presented above acknowledged a common impetus for their grade reconfiguration: parent dissatisfaction. For instance, Cincinnati Public Schools, Oklahoma City Public Schools, and Baltimore City Public Schools all began increasing their use of K-8 schools after parents expressed concerns over student achievement, behavior, and safety.[61]

[61] Pardini, P. "Revival of the K-8 School." *The School Administrator*, 59:3, March, 2002. https://www.aasa.org/SchoolAdministratorArticle.aspx?id=10396

## THE SCHOOL DISTRICT OF PHILADELPHIA (PENNSYLVANIA)

The School District of Philadelphia was the focus of a widely-cited 2001 study examining the impact of K-8 schools on student achievement. The study, which was published in *Middle School Journal*, found that students at K-8 schools in Philadelphia outperformed their middle school peers in a range of categories, including GPA, test scores, attendance, and credits earned. The differences in outcomes remained even when the researchers controlled for factors such as socioeconomic status and minority status. The achievement differences persisted to high school, where students from K-8 schools tended to outperform students from middle schools in ninth grade.[62]

Although the School District of Philadelphia example is widely cited as evidence that K-8 schools can produce better outcomes than traditional middle schools, research was not conducted on the steps taken by the district to effectively transition to the K-8 program.[63] **District administrators stated in later interviews that the ideal form of transition to K-8 schools was a gradual expansion of successful K-5 or K-6 schools**. By expanding schools that were already high-performing, the district was able show parents and school staff "the value of extending a positive environment through the 8th grade."[64]

Currently, the District is in the process of phasing out middle schools, converting them to smaller high schools and expanding elementary schools to serve students in grades K-8. The District notes that one of the goals of this transition is to alleviate overcrowding.[65]

## CINCINNATI PUBLIC SCHOOLS (OHIO)

Cincinnati Public Schools implemented a gradual, five-year transition to K-8 schools in the early 2000s. District administrators observed a flight away from the district between elementary and middle school as parents chose to enroll their students elsewhere in the transition to the middle grades. Citing discipline, attendance, and achievement issues, the district began using K-8 configurations. During the transition to K-8 schools, administrators observed declining incidence of discipline problems and lower absenteeism among students.[66] However, Cincinnati Public Schools appears to have shifted to a different grade configuration. The District currently has elementary schools the serve students in grades K-6 and high schools that serve students in grades 7-12.[67]

[62] Offenberg, Op. cit., pp.26-28.
[63] Ibid., pp.27-28.
[64] Pardini, Op. cit.
[65] "K-8 Expansions." The School District of Philadelphia. http://webgui.phila.k12.pa.us/offices/d/designandconstruction/programs--services/projects/k-8-expansions
[66] Pardini, Op. cit.
[67] "Schools." Cincinnati Public Schools. http://www.cps-k12.org/schools

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