

Tulsa Public Schools

Research Supporting a 7-12 School Configuration

I. Minimizing Transitions to Improve Academic Achievement:

A transition from one school to another brings a different facility, unfamiliar teachers and administrators, new groups of friendships and classmates, as well as different expectations. As detailed below, research reveals that school-to-school transitions negatively impact academic achievement. The fewer transitions, the better chance a student has of completing high school. If there is a transition into a new school for high school instruction, however, grade 7 is preferable to transitioning in later years. Schools with more grades, and fewer students per grade, are also related to improvements in academic achievement and the dropout rate.

- There is a decline in achievement during a student's transition year from elementary school to the next level. As the number of transitions experienced by a student increases, so does the high school dropout rate. Further, the higher the transition grade level (the later the student transitions into the high school), the higher the dropout rate, most significantly for boys. Specifically, of the high school configurations studied (7-12, 9-12, and 10-12), the lowest high school dropout rates were seen in high schools where students transitioned in at grade 7. The highest dropout levels were seen in 10-12 grade high schools. Alspaugh suggests that the link between higher dropout rates and later-grade transition years is most likely attributed to the academic achievement loss commonly experienced during the transition year and the fact that students transitioning at grade 7, as opposed to grade 9 or 10, have more time to acclimate to high school. In addition, he notes that schools with more grades (i.e., 7-12 schools) are usually smaller schools with fewer students per grade. Smaller high schools typically have lower dropout rates than larger schools. Consequently, his findings also supported previous research that with regard to minimizing dropout rates, it is optimal to structure schools with more grades and fewer students per grade. (Alspaugh, J. W. (1999). *The interaction effect of transition grade to high school with gender and grade level upon dropout rates*. (ED 431066). Paper presented at the Annual Meeting of the American Educational Research Association); (Alspaugh, J. W. and Harting R. D. (1995). *Transition effects of school grade-level organization on student achievement*. Journal of Research and Development in Education. 28(3), 145-49).
- In a study of eight different schools with seven different grade spans, researchers found that sixth-grade students in both elementary and combination K-12 schools outperformed sixth graders in middle schools or junior high schools and considered the number of transitions a significant factor. (Paglin, Catherine, & Fager, Jennifer. (1997). *Grade configuration: Who goes where*. Northwest Regional Educational Laboratory. http://educationnorthwest.org/webfm_send/464).
- A 2003 study of 232 schools in Michigan revealed that the reduction of school-to-school transitions is correlated with improvements in student achievement and that longer grade spans within schools is positively correlated with student achievement. The number of transitions was a significant predictor of student achievement. The study evaluated student performance on the state assessment administered in grades 4, 5, 7, 8 and 11.

(Wren, Stephanie (2003). *The Effect of Grade Span Configuration and School to School Transition on Student Achievement*). ED479332. 2003. <http://www.eric.ed.gov>).

- A researcher from Johns Hopkins revealed in a 1987 study that the positive impact of longer grade spans in schools teaching sixth graders was an advantage most evident among students of lower socio-economic status. (Becker, H. J. (1987). *Addressing the needs of different groups of early adolescents: Effects of varying school and classroom organizational practices on students from different social backgrounds and abilities*. Office of Educational Research and Improvement, U.S. Dept. of Education).
- Some studies have found that schools with more grade levels per building (i.e., fewer number of transitions) evidenced not only higher academic achievement, but also better attendance rates, self-esteem and attitudes towards school, with fewer suspensions and behavior problems, regardless of socioeconomic status (Alspaugh, *supra*) (Offenberg, R.M. (2001). *The efficacy of Philadelphia's K-to-8 schools compared to middle grades schools*. Middle School Journal, 35(1)).
- A 1997 study of Connecticut elementary and middle schools found that sixth graders performed better on standardized tests when they were in K-6 configurations, as opposed to 6-8 middle school configurations. The researchers also determined that a K-6 configuration led to greater school accountability for sixth grade performance than that occurring in a 6-8th grade configuration. (Tucker, Charlene G., and Andrada, Gilbert N (1997). *Accountability Works: Analysis of Performance by Grade Span of School*. Paper presented at the Annual Meeting of the American Educational Research Association. ED 411 278. <http://www.eric.ed.gov>).

II. Other Benefits of the PK-6/7-12 Grade Configuration:

- In elementary schools, student environment is more nurturing with fewer stressors than a middle school. The stressors of a middle or high school—navigating through the school, forming peer relations, organizational instructional adjustments—are so critical that they neutralize or even diminish the achievement gains made in elementary school. (Wren, *supra*).
- Schools with a broad span of grade levels present opportunities that do not exist in middle schools. There is more opportunity for cross-age activities such as tutoring and older role model programs like “kindergarten buddies.” Parents are more involved in a school in which their children are more likely to be in the same building. (Paglin & Fager, *supra*).
- The shift to longer grade span elementary schools allows students to stay in their neighborhood schools for a longer period of time. (George, P.S. (2005). *K-8 or Not? Reconfiguring the Middle Grades*. Middle School Journal. 37(1)).
- Having schools with longer grade spans allows for more collaboration among teachers across grade levels as well as better alignment of curriculum across grades. With regard

to a K-7 school, it can become a place where subject matter depth and expertise is more highly valued and leveraged than before the reconfiguration, and its secondary students and teachers can benefit from the “whole child” perspective of education more commonly found in elementary schools. (George, *supra*).

III. Challenges and Criticisms of Middle Schools

A significant number of districts across the nation are transitioning away from the use of middle schools. The use of middle schools peaked in 2005 with just over 9,000 across the United States, and as of 2007-2008, the National Center for Education Statistics reported 500 fewer middle schools. David Hough, the dean of Missouri State’s education school and a former editor with the Research in Middle Level Education recently reported that “the trend is definitely away from stand-alone middle schools” and estimated there will be fewer than 7,950 when the 2010 data are in. (*The Middle School Mess*, Education Next, Winter 2011). Many in the education reform community believe that the reconfiguration of schools is a response to the evidence showing that middle schools have failed to serve the academic and developmental needs of 6-8th grade students. *Id.* Studies critical of the middle school configuration include the following studies.

- In an award winning study by researchers from Duke and the University of California, researchers studied and compared sixth graders in North Carolina in the 2000-2001 school year who were in middle schools serving grades 6-8 and sixth graders who were kept within the elementary school. The researchers found that students who attended middle school in sixth grade were twice as likely to be disciplined relative to their counterparts in elementary school. They found that the behavioral problems of these middle-school sixth graders persisted beyond the sixth grade year through the ninth grade and that exposing sixth graders to older peers had persistent negative consequences on their academic trajectories. The authors note that their results complement the recent findings by other researchers that school systems that move sixth graders from elementary to middle school experience a 1-3 percent decline in on-time graduation rates. As such, the authors explained, “Based on our results, we suggest that there is a strong argument for separating sixth graders from older adolescents (Philip Cook, Robert MacCoun, Clara Muschkin, and Jacob Vigdor (2008). *The negative impacts of starting middle school in sixth grade*. Journal of Policy Analysis and Management, 27, 104-121).
- The 2010 study by Columbia Business School researchers Jonah Rockoff and Benjamin Lockwood concluded that “middle schools are not the best way to educate students” in urban districts. These researchers compared academic achievement of New York City’s middle schools (6-8) to the city’s K-8 schools. Data revealed that students who enter public middle schools in New York City fall behind their peers in K-8 schools. The effects are large, present for both math and English, and evident for girls as well as boys. The academic achievement lag persists at least through 8th grade, the highest grade for which we could obtain test scores. The most notable lag by students in middle school as compared to a K-8 school was experienced by children with lower initial levels of academic achievement. The researchers also found evidence that student absence rates increased when students entered middle schools as compared to their counterparts in a

K-8 school. Further, parents' perception of schools declined more in the 6th to 8th grade years when the students attended a middle school than when they attended a K-6 or K-8 school. Finally, sixth grade students reported less academic rigor, less mature social behavior among students, that the schools are less safe and that the school provides lower quality education than do sixth graders in K-6 or K-8 schools.

Rockoff and Lockwood explain that the grade size (cohort size) has a pronounced influence on student achievement in the 6th to 8th grade years. Though they could not find evidence to support any particular cause, they speculate that it is harder to educate middle-school aged students in large groups because of their developmental stage, which is characterized in part by negativity, low self-esteem, and an inability to judge the risks and consequences of actions. They also suggest that some of the difficulty is a result of the combining of students from multiple elementary schools, which disrupts students' immediate peer group.

(Benjamin Lockwood, Jonah Rockoff (2010, December). *Stuck in the Middle: Impacts of Grade Configuration in Public Schools*, Journal of Public Economics). (Offenberg, *supra*.)

- Several studies on grade configuration have reported middle schools to be less effective in terms of test scores than K-8 schools in the same district. The evidence is especially strong for students in high-poverty schools. (Offenberg, *supra*).
- An analysis and comparison of middle schools with various configurations revealed that each time students switch schools, their feelings of anonymity increase. Further, the researchers found that sixth-grade students in both elementary and combination K-12 schools outperformed students in middle schools or junior high schools and considered the number of transitions a significant factor. (Paglin & Fager, *supra*).
- Authors of a book regarding the interaction of puberty and school context report that upon transition into middle school or junior high school, girls in early adolescence frequently suffered from a drop in self-esteem, extracurricular participation, and leadership behaviors, but not if they remained in an elementary school setting. The effects of this transition persisted throughout the school years. For boys transitioning into middle and high school, there were similar negative effects in extracurricular participation and grades, but not in self-esteem. The authors concluded that the relatively protected elementary school setting made the entry into adolescence less stressful for both boys and girls. Moreover, the authors state that the students who had not had the stress of the earlier transition seemed to cope better with the transition into high school than did other students (Simmons & Blyth (1987). *Moving Into Adolescence: The Impact of Pubertal Change and School Context*).
- In a study undertaken in rural Louisiana schools that examined the relationship between grade configuration and student behavior, researchers concluded that longer grade spans were linked better behavior. Specifically, they found that sixth-grade boys experienced more suspensions in middle schools or junior high schools than in elementary schools, possibly related to the effects of the transition, the school organization, or school size.

(Franklin, B., Glascock, C. (1996). *The relationship between grade configuration and student performance in rural schools*. Paper presented at the Annual Conference of the National Rural Education Association).

IV. Recommendations and Caveats Relating to School Configuration

- While research suggests that the absence of school-to-school transitions may be one factor that contributes to higher academic achievement in longer-spanning elementary schools, the programming and practices within those schools resulting from the longer grade span configuration are also likely drivers in the schools' improved achievement. As some educators and researchers explain: "Effective programs and practices, not grade configuration, determine the quality of schools." and "Grade configuration per se may not make the difference, but it does make a difference." (Coladarci, T. & Hancock, J. (2002). *Grade-Span Configurations: The (Limited) Evidence Regarding Effects of Academic Achievement*. ED467714, 8/2002. <http://www.eric.ed.gov>) quoting a finding of the National Middle School Association Research Summary.) (Regional Educational Laboratory Northeast and Islands (2010). *Reference Desk Response No. 431: School Grade Configurations K-8*. Newton, MA).
- When school-to-school transitions must occur, regardless of the grade, there should be articulation and transition activities that ensure the alignment of curriculum and the smooth transition of students into a new school. "Teachers and students alike should have an informed view of the instructional and social world of the next school in line." (Coladarci, T. & Hancock, J. (2002). *Grade-Span Configurations: The (Limited) Evidence Regarding Effects of Academic Achievement*. ED467714, 8/2002. <http://www.eric.ed.gov>).
- When making decisions regarding grade configurations and adapting to new grade configurations, schools should consider and address the following:
 - The cost and length of student travel
 - That parent involvement typically decreases in the higher-level schools, but parent involvement is greater in elementary schools.
 - Combining schools into separate grade centers may affect whether neighborhood schools close or remain open.
 - Current buildings may have a design more suitable for several grade levels.
 - School population may increase or decrease substantially as configurations change.

(Clearinghouse on Early Ed. and Parenting. <http://ceep.crc.uiuc.edu/poptopics/gradeconfig.html>).