RESEARCH BRIEF

ROSE-ANN MCKERNAN & SARA BAUTISTA    JULY 2015

COMPARISON OF EFFECTIVENESS OF K8 SCHOOLS

The logistics of schooling such as start times, school size, schedules and grade configuration has been the topic of both empirical and qualitative research. This policy brief provides a review of some of the literature specifically around grade configuration.

Grade configuration gained notice in the 1900s when junior high schools were created typically for 7th – 9th graders. In the 60s, middle schools emerged as an environment best suited to meet the academic and psychosocial needs of young adolescents.

More recently a return to K-8 schools has emerged as a strategy to address transitions and instructional needs of the middle age student. As with much educational research, the outcomes of studies are mixed, but for grade configuration of K-8 versus 6-8 middle school, the K-8 model appears to have an advantage.

Studies\(^1\) examining the advantages of K-8 or separate elementary and middle school models looked at: GPA, state achievement scores in Reading and Math, composite scores in achievement, and subjects failed.

Of 28 studies reviewed by Gordon evaluating academic achievement, 22 found a statistically significant advantage of K-8 models over middle or junior high models. In some instances the academic advantage was found for specific groups of student such as students with disabilities, or African-American student, or low performing students. In other studies, the academic advantage of K-8 was found to exist for all students.

A 2015 study by Hong, Zimmer & Engberg was able to control for bias established by elementary school selection by using rezoning and school closures. This study found that statistical models underestimate the negative effects of transitioning to a 6-8 middle school. Students in this study who moved to a stand-alone 6-8 school performed worse in math by nearly a half standard deviation (0.45) and by 3/4th a standard deviation in reading. By 8th grade, students experienced recovery in reading, but no such recovery was found in math.

Studies in New York and Florida found similar academic shock when students moved from elementary to middle school, but did not report recovery. Students in both studies showed sharp decreases in learning trajectories that continued through 8th grade in New York and on into high school in Florida. Jacob & Rockoff suggest that a .1 standard deviation loss in academics stemming from a transition to middle school could result in a $10,000 loss in lifetime earnings.

\(^1\) Because of the number of studies, findings are not broken up by references. Where significant for the reader the citation will be included otherwise all citations are found in references.
Comparison of Effectiveness of K8 Schools

The psychosocial aspects of K-8 compared to middle grades (6-8) are often included as part of empirical studies in academics and in a few instances are the focus of study.

Across 24 studies reviewed all but 3 found significant differences in the psychological and social benefits of K-8 schools. Students’ academic self-efficacy, class preparation, extra-curricular activities participation, and self-images were all found to be more positive for K-8 students over middle or junior high students. Some of these studies also found risk behaviors were reduced for the K-8 students. A North Carolina study found that the odds of a behavioral infraction increased by 2.2 for students going to middle school and by 3.8 for drug infractions. Of note, the authors pointed out the students in the study were of higher SES and maternal education. Many studies found the transition to middle school resulted in increased suspension rates and lower self-esteem.

Two studies looked at the differences in students who attended a long standing K-8 school and those enrolling in newly created K-8s. While students in established K-8 models outperform their middle school peers those in new K-8 schools had only a slight and not statistically significant advantage. The idea behind the development of middle schools was that young adolescents would thrive in an environment specifically designed to their academic and developmental needs. However, Jacob & Lockhart point out the K-8 or K-12 configurations are favored among private institutions. Further, the creation of middle schools coincides in many districts with the advent of public kindergartens. This changed elementary schools from 6 grades (1-6) to 7 grades (K-6) resulting in crowding. Creating the 6-8 configuration addressed the crowed elementary schools in many districts.

Many authors hypothesize and speculate on the reasons for the outcomes focused in these studies. Some reference data showing any transition has a negative impact on student achievement.

In many districts elementary schools are smaller than the middle schools. Students coming in from several elementary schools create much larger middle schools. School size has long been found to be a significant factor in student achievement.

The building of relationships, with teachers and among peers, has been studied in other contexts and found to be critical to student success. It is speculated that the K-8 schools afford a stronger student to teacher relationship that establishes a student for future success.

K-8s also create an environment in which peer cohorts are built. These cohorts create a social support system for students as they transition to 9th grade. When several elementaries feed into a single middle school, cohorts fade and the associated social support goes with it.

School culture, teaching practices, relationship building and school size and demographics will continue to have an impact on student educational achievement and deserves continued study. However, while each study may have its limitations, there is a growing body of empirical research demonstrating an advantage in academic performance and social development of K-8 schools over middle schools.
References


Hong, K., Zimmer, R. & Engberg, J.; How Does Grade Configuration Impact Student Achievement; February 2015

Jacob, B. & Rockoff, J. The Hamilton Project; 2011 Brookings


