

#276. Share the research in support of and counter research that was mentioned on slide 7 with the Board

A number of studies have explored the impact of attending more diverse schools. Research definitively identifies significant academic improvements for minority groups and low-income students. To a lesser extent, research speaks to the impact for non-minority/non-disadvantaged students. While literature indicates that school diversity may also have social-emotional impacts on students (Juvonen, Kogachi, & Graham, 2017), ORSI's initial literature review focused largely on the academic impacts related to student success. The following provides additional detail on research findings on these academic impacts.

Mahard and Crain (1983) conducted a meta-analysis of 93 studies exploring the impact of desegregation on academic achievement. Their findings indicate that achievement for Black students increased while there were no detrimental effects on the academic achievement of White students. Other researchers further explored the impact of desegregation and concluded there were limited impacts on non-minority, non-disadvantaged students (Wortman and Bryant, 1985; Mayer and Jencks, 1989). Meta-analytic work has not been undertaken to update Mahard and Crain's findings from 1983. Mahard and Crain continue to be cited as seminal work in this area and are referenced in national publications such as the National Coalition on School Diversity (e.g., <https://school-diversity.org/pdf/DiversityResearchBriefNo10.pdf>) when addressing diversity impacts on student achievement.

Since the 1980s, the research field has broadened from looking only at the impact of desegregation to looking at the impact of diversity of the student population. By diversity, researchers are referring to a more diverse and balanced student population. For example, a school that comprising 90 percent Black and Hispanic students is no more diverse than a school comprising 90 percent White and Asian students.

In a review of more recent literature on diversity and achievement outcomes, Rivkin and Welch (2006) investigated the impacts of the demographic composition of schools on the academic outcomes for Black students. They conclude that the majority of evidence shows that increasing racial diversity in schools leads to improved academic outcomes for Black students. Similar findings were reported by Rothwell (2012), Hastings and Weinstein (2008), and Schwartz (2010) for low-income students. While all discuss the academic gains for these specific student groups, none of these researchers address whether there were academic benefits for students falling outside the Black and low-income student groups..

Some recent studies have addressed the impact of diversity on all student groups. For example Wells, Fox, and Cordova-Cobo (2016) stated that diversity benefits all students' achievement by citing evidence of diverse districts in Massachusetts closing achievement gaps in 5th grade reading and mathematics more rapidly than less-diverse districts in the same state. However, closing such gaps means that previously lower-performing groups (minority, low SES) were improving and higher performing groups (non-minority, higher SES) were maintaining performance so does not provide support that the latter student groups are demonstrating stronger achievement in diverse schools. Card and Rothstein (2006) studied the impact of diversity on SAT scores by school districts nationwide and found lower Black-White performance gaps in more diverse districts than in more segregated districts (<https://www.nber.org/papers/w12078.pdf>). More importantly to the question posed here, schools with less segregation and more diversity were associated with higher performance levels for both Black and White students, with segregation more significantly impacting performance of Black students than White students. Thus, overall, the majority of research

examining achievement of non-minority and higher SES students finds no impact on achievement from attending a diverse school.

Current research does speak to benefits of school diversity for all students when looking at non-achievement benefits. For example Wells et. al. (2016) cited research that associated diverse college classrooms to increased development of creativity, critical thinking, problem-solving, and greater interracial understanding among undergraduate students. Juvonen, Kogachi, & Graham (2017) speak to the impacts of diversity on positive school culture for students. Specifically, their research indicated that diversity was associated with a lower sense of vulnerability, more positive perceptions of other racial/ethnic groups, and more positive perceptions of fair and equal treatment by teachers. The researchers note that class placement to realize these outcomes is crucial. "Our findings also underscore the importance of class placement," notes Sandra Graham, distinguished professor of education at UCLA, who contributed to the study. "To reap the social benefits of ethnic diversity, students need to be placed in classes that reflect the overall diversity of their school. It may not be sufficient to focus solely on increasing the overall ethnic diversity of schools, which is the goal of most policy initiatives that address racial and ethnic segregation. Equally important is whether students of different ethnic groups are exposed to one another during the school day, even in very diverse schools."

277. (a) Include health and safety impacts of travel time -slide 10

While there is no research on the impact of long bus rides or geographic proximity on student achievement, a large body of research has documented an inverse relation between student well-being, specifically students' sleep, and school performance (Carrel, Maghakian, & West, 2011; Millman, 2005; Owens, Belon, & Moss, 2010; Wheaton, Chapman, & Croft, 2016). Geographic proximity and travel times may be proxies for sleep when considering the impact on school performance.

According to the National Sleep Foundation (2019), children ages 6 to 13 need between 9 and 11 hours of sleep and teenagers need between 8 and 10 hours of sleep every night. Children who get insufficient sleep show reductions in motivation, engagement, concentration, and problem-solving skills, all which influence students' achievement and behavior in school (Buckhalt, El-Sheikh, Keller, & Kelley, 2009; Meijer, Habekoth, & Van Den Wittenboer, 2000). If longer commutes cause earlier mornings and later evenings for students, long bus rides could ultimately influence the amount of sleep students are getting.

There is also research (largely from Canada) related more broadly to travel to school. Research supports that students who walk or bike to school regularly are more physically active than those who are driven or bused to school (Larsen, 2016; Bulium, & Faulkner, 2016). Research has not only tied active travel to school with shorter travel times (Larsen, Gilliland, & Hess, 2012) but has also linked the siting of schools (and by extension boundaries) to differences in active (walk, bike) versus passive (car, bus) modes of travel (Spinney & Millward, 2011)

277. (b) provide percentage of out of district commuters on longer bus rides multi-agency

The Bus Route Travel Times table provided on slide 10 of the February 25, 2019 Work Session includes only small and large buses to elementary, middle, high, and nontraditional sites/special education centers. Out of district commuters and other transportation services, such as vans and taxi services, were not provided in the table.

Longer transportation routes for special education (those routes 45-59 minutes and 60 minutes or greater) are attributable to the placement of programs and services at special education centers or particular school locations. Service needs of students and placement at a special education center or a school with those services may increase the time traveled. For example, a special education center may provide services for students from all over the county.

278. (a) Include heat map showing placement of specialized programs, specifically special ed programs, page 2 of report, [Map](#)

In response to Item #3, the following three sets of maps are provided:

1. Concentration of Special Education and Instructional programs at elementary, middle, and high schools.
2. Concentration of Special Education programs at elementary, middle, and high schools.

Concentration of Instructional programs at elementary, middle, and high schools.

278. (b) talk about impact of concentrating programs in one area including Title I -slide 7

Program placement and the rules associated with participation may or may not impact student achievement. Program placement has been noted in the literature as an additional diversity-related factor that should be considered when making boundary adjustments. In fact, school district desegregation efforts have sometimes relied on placement of special programs (such as magnet programs) to increase diversity at schools with high minority membership (Kahlenburg, 2016; Crouch, 1999; Mickelson, 2001). While there is limited literature that directly ties program placement to boundary decisions, literature has examined the extent to which special programs attract a diverse group of students. Historically, some school divisions relied on magnet programs as a court-approved approach to desegregate through choice routes rather than through forced approaches, such as bussing (Rossell, 1990).

However, there are programs such as Title I that are not likely to change student diversity. This program provides additional resources to the school based on their student demographics. Local education agencies cannot relocate this program to a different site with a different student population or use the program to intentionally attract a different student population because it is tied to schools with a specific skewed demographic. The intent of Title I is to use the additional resources to serve the intact population and raise student achievement.

279. Identify attendance islands

Attendance islands are identified in the adopted FY 2020-24 CIP on page 145.

280. Superintendent to re-send information on existing moratorium on administrative boundary changes, and Supt. to send response to McLean community

On May 3, 2018, I sent the following message to Elizabeth Schultz, Tammy Derenak Kaufax and Karen Corbett Sanders regarding my follow-up communication with Rolling Valley parents regarding boundary decisions:

The One Fairfax policy, adopted by both the School Board and the Board of Supervisors, emphasizes the importance of making County-wide decisions through the lens of racial and social equity. There is perhaps no decision with the potential for impact on equity within FCPS than boundary adjustments.

Given the significant interconnectedness countywide of schools and programs, I believe it is critical in implementing One Fairfax both in spirit and intent, that all boundary changes should receive complete School Board input and discussion. This input and discussion from all 12 members of the School Board also furthers the School Board's larger goal, and my goal, that important issues for the school system be considered and decided by the full School Board, rather than only some members.

We owe it to the entire FCPS community to hold transparent and thoughtful discussions about all boundary changes, recognizing the rippling effect that any one decision may have, no matter the size and scope.

To this end, I am suspending making any administrative boundary recommendations for the 18/19 school year until we can engage together in a dialogue regarding potential revisions to Policy and Regulation 8130 that better align boundary decision making to our One Fairfax policy.

I will be working with the Chair to determine the best and most appropriate manner in which to hold this important Board discussion.

In addition, the following information was shared the next day:

Boundary Policy- (Brabrand Briefing on May 4, 2018)

FCPS staff and the School Board will begin a review of Policy 8130 Local School Boundaries, Program Assignments, and School Closings during a September work session. At that work session, there are no plans to consider any actual boundary changes.

It is my hope going forward and as discussed at our most recent Boundary Work Session, that we continue our focus and decision-making process based on the current plans outlined in the most recent CIP; sanctioned by full school board support and approval.

281. Break down travel time statistics by school level and region

Response

282/289. Compare projections in CIP current with capacity numbers on slide 14, print maps larger size [Response](#)

In response to Item #282 and #289, larger sized maps have been printed for CIP current and projected capacity utilization at elementary, middle, and high schools, SY 2018-19.

283. Provide more information on why and how the three conclusions on slide 17 were chosen

The Office of Research and Strategic Improvement's review of educational research related to boundary changes uncovered four ways in which boundary decisions may be linked to achievement: through student diversity, student well-being, social connections critical for success, and overcrowding concerns. Three of these four areas (student diversity, student well-being, overcrowding) offered sufficiently clear evidence to support the three conclusions in the presentation. More specifically:

- Address overcrowding by first utilizing existing building capacity
- Balance student diversity (socioeconomic). This was also tied to program placement as research evidence supported the link between program placement and the diversity of students at schools.
- Minimize travel time, which was linked to sleep and student well-being. For more details see the response to health and safety concerns related to travel time in the above response.

284. Provide plan for external communication

The current version of Regulation 8130 outlines general guidelines for timeline and process for boundary adjustment community engagement:

- Community meetings to include presentation on purpose of meeting, background information, summary of previous Board action, and boundary realignment scenario(s)
- Participant facilitated groups for discussion
- Community dialogue comments may be considered for developing optional scenarios and may aid in developing staff recommendations
- Follow up survey to gather feedback

Community engagement outcomes may include:

- Identifying factors to consider when changing attendance assignments and suggest neighborhoods that might be included in new alignment
- Evaluating attendance assignment options and advantages and disadvantages
- Soliciting additional comments or options for consideration
- Posting comments and survey results on FCPS public website

The Office of Communication and Community Relations will take the following steps to support these activities:

1. Draft email messages to notify families about boundary process and invite to meetings
2. Post meeting events on school's website calendar
3. Develop a web page to provide information about the boundary process to include:
 - Boundary scope
 - Boundary study
 - Program enrollment and capacity information
 - Dates of boundary meetings
 - PowerPoint presentations
 - Options
 - Feedback

- Dates of scheduled School Board action
4. Facilitate community meetings to include providing:
- Agenda
 - Sign-in sheets
 - Maps
 - PowerPoint presentation
 - Meeting materials: markers, chart paper
 - Directional signage
 - Interpreters
 - Explanation of small group discussion and gallery walk
 - Feedback transcription

Members of the Department of Facilities and Transportation will be available throughout the process as subject matter experts.

285. Show maps on pages 14-16 with modulars taken out [Map](#)

In response to Item #285 maps showing the current capacity without including modular classrooms in the capacity calculations for elementary, middle, and high schools have been provided. All capacity utilization calculations are based on the same method as described in the CIP

286. Show capacity maps pulling out pupil placements and map showing only pupil placements [Map](#)

In response to Item # 286 maps showing the current capacity using base population for elementary, middle, and high schools have been provided. Base population is students who live within the school boundary. All capacity utilization calculations are based on the same method as described in the CIP

287. Slide 11, what are critical social connections for success

Critical social connections for success in school are typically defined as relationships with peers and with teachers that promote academic motivation and achievement. For example, research supports that positive peer relationships are associated with better academic engagement and achievement (Juvonen, Espinoza & Knifsend, 2012; Wentzel, 2009). A body of research also supports that peers can contribute to skill acquisition, such as through cooperative learning and other peer-to-peer interactions. Additionally, students who have close, positive and supportive relationships with teachers have been shown to attain higher levels of achievement than those with more conflictual or distant relationships (Birch & Ladd, 1997; Curby, Rimm-Kaufman, & Ponitz, 2009; Hamre & Pianta, 2001; Hoge & Coladarci, 1989; Klem & Connell, 2009).

288. Slide 13, provide data for first bullet on Slide 13 (“School overcrowding has a significant, negative impact on teaching and learning.”)

Research on school overcrowding has linked this factor to lower achievement (Batiz & Marti, 1995; Lee, Ready & Welner, 2002). More specifically, overcrowding has been associated with a four to nine percentage point decrease in pass rates on standardized reading tests and two to six percentage point decrease in pass rates on standardized mathematics tests. Other negative impacts tied in the research to school overcrowding include teacher and student absenteeism (Corcoran et al., 1988), problems focusing (Batiz & Marti, 1995), limitations on

instructional techniques and classroom activities (Batiz & Marti, 1995), noise levels in schools (Fernandez & Timpane, 1995), teacher working conditions (Corcoran et al., 1988), and teacher burnout (Batiz & Marti, 1995).