

Facilities and Growth Committee Meeting Summary

March 26, 2019

March 26, 2019 Liberty Elementary School District Facility and Growth Committee

19871 West Fremont Road, Buckeye, AZ 85326

- Middle School vs. K-8 Research
- Board Approved Option 1 Enrollment Trajectories for all Campuses
- Board Approved Option 1 Enrollment Trajectories for all Campuses with Revised (Added) Classroom Capacities
- Design and Build Timeline
- Placeholder Bond Costs

1. **Middle School vs. K-8 School Configuration Research**

Dr. Shough compiled a summary of multiple research studies and shared the findings with the committee members prior to the meeting. During the meeting, Dr. Shough asked the group to divide into teams of three. Each member focused on two of the six pages of findings and then the teams discussed with one another what they learned regarding the impact findings of the research and any possible reasons for the impacts. Some members noted that it would be helpful to read the entire article. Dr. Shough agreed and explained that the information provided was based on the researcher's abstract of the entire research, basically the author's summary of the findings. The entire journal article would provide information on the demographics of the participants in the study, the methods used for data collection and analysis, as well as more in-depth explanation of the findings and some possible explanations for the findings. Many of the articles will require university library access to be able to gain access to the full articles.

The committee shared out in the whole group the impacts noted in the summary listing of the research findings (see Appendix A: Research Summary). Some of the impacts listed in the articles included the following:

p. 5 Schwartz -impact of top dog and bottom dog on status on bullying, safety, belonging, and academic achievement strongest for longer grade spans and for 6th grade

p. 5 Vigdor - 6th graders in middles school 2x as likely to be disciplined than K-8 counterparts

p. 1 Tamer -Middle School 6th/7th graders lose ground in reading and math compared to peers in K-8; also larger drop in achievement transitioning to HS than K-8's (1.4 percentage increase equal to an 18% increase in dropouts)

p. 5 Bedard- moving to middle school decreases on-time HS completion by 1-3%

p.2 Coldarci -Middle school lower academic achievement than K-8

p. 4 Schmitt - 6-8 middle school teachers more highly engaged in PD activities - however, didn't impact student achievement

p. 2 Offenberg - number of students in grade rather than school size contributed to K-8 schools having higher rdg, math, and sci achievement

p. 5 Blyth - K-8 schools had higher academic achievement and higher levels of participation in extra-curricular activities, demonstrated greater leadership skills, and were less likely to be victimized

p. 3 Hong - Middle school students dip in test scores, but 3rd-5th grades do better in a K-5 school

p. 3 Rockoff - no evidence of cost effectiveness moving to middle school (due to worse climate for student learning than K-8)

p. 4 Cook Middle schools more likely to have discipline problems

p.4 Scherdt - drop in achievement for middle school and increased absences and higher grade 10 dropouts

Additionally, committee members noted any reasons listed for better results with K-8 configurations than middle school configurations according to the research.

p.2 Offenberg - Number of students in a grade (cohort) rather than school size contributed to higher achievement in K-8 schools

p.3 Byrnes - Differing student and teacher populations, average grade size (cohort), and school transition, disadvantaged populations

p.5 Vigdor - 6th grade more impressionable age group; exposure to older peers and relative freedom from supervision has persistent negative consequences for 6th graders

p.5 Blyth - Intimacy of K-8 environment and delay of transition until students matured contributed to better outcomes for K-8 vs. middle school

p.2 Alspaugh - students in small cohort groups for long spans of time experience more desirable outcomes

Finally, the committee shared their personal thoughts and experiences with middle schools. Listed below are some of the comments and discussion among committee members.

- One parent of elementary age students shared that one advantage of middle schools is the number of options and choice available to students such as career and technical courses. Dr. Shough shared that next year, in four of the six schools, the district is providing more choice for students, particularly in music. For example, students and their parents will be able to choose from choices such as band, percussion, choir, or keyboards, or general music. In art, they may be able to choose from 2-dimensional or 3-dimensional art. Some schools will be able to offer computer science or Spanish. The reason for the greater opportunities is that the schools are slightly larger and the schools are staffed with more special area staffing. Additionally, the district is doing some creative shared staffing among schools.
- A parent of high school children shared that her children experienced difficulty making the transition to high school and believes that students need to experience more freedom, similar requirements for turning in assignments on time, attendance, etc. to promote better transitions to high school
- If K-8 model is continued, the group recommended adjustments to expectations for middle school students within the K-8 schools to include more high school freedoms/privileges, still being respectful of younger grade levels
- High schools and possible middle school could have counselors that provide social/emotional support for students going through adolescence. Only four schools (Title I) will have counselors next year. The district should consider adding counselors so that all adolescents have access to counselor supports.
- If students were combined in a middle school, there would be greater diversity and mixing of Estrella/Westar students with Title I school students. If we continue a K-8 model, the district should intentionally create more inclusion of diversity amongst students from all schools in district
 - e.g. shared field trips or intra-school events
- The district should make school configuration decisions based on academic basis
- The district should consider a school-wide survey to gain broader and additional community input. Other participants added that the survey should not be given without the context of the research. Dr. Shough added that a town hall could be considered where people could convene to learn and discuss before responding to a survey.
- The district should look for efficiencies in how it configures the grades with a focus on education.
- Overall, the committee supported the district continuing with a K-8 model while exploring above interests before considering a shift to a middle school model
- Continue to add to the summary of research additional research studies

Dr. Shough asked the group to indicate their interest in moving to a middle school model. Most of the participants indicated they could live with it. A few were against it entirely, and only one favored a move to a middle school configuration. Based on the interests of the committee and the research, Dr. Shough confirmed with the group that for the immediate work of proposing ideas for addressing the growth of the district and the capital and facility needs for a potential bond election, we will move forward with models for a K-8 configuration. In the coming years, the district will need to continue to review and evaluate growth and the consideration of a middle school could still be considered. Dr. Skip Brown noted that regardless of the type of school built, schools can be reconfigured by adding a gym or additional classrooms if a change to school grade configuration is desired in the future. Dr. Shough also shared that more information later in the agenda would start to speak to the timeline for building of facilities and associated costs.

Board Approved BOUNDARY OPTION 1 (Scenario 7- Adjustment #3)

- Expanded Low-Growth base service areas for Freedom and Las Brisas
- Allocate Growth Section 15 into Las Brisas

Scenario:

School	Current SY2019	SY2020	SY2021	SY2022	SY2023	SY2024	SY2025	Capacity	Capacity Ratio SY2024	Open Seats SY2024
Freedom	713	682	648	620	597	541	523	834	65%	293
Las Brisas	238	283	336	394	501	578	626	692	84%	114
Liberty	599	719	838	950	1089	1188	1250	1196	99%	8
Regional Total	1550	1684	1822	1964	2186	2307	2400	2722	85%	415

Comment

- Freedom and Las Brisas have well-defined service areas
- Freedom SY2024 @ 65% capacity (293 seats)
- Las Brisas SY2024 @ 84% capacity (114 seats)
- Liberty SY2024 @ 99% capacity (8 seats)
- Liberty overcapacity (1.05%) in SY2025

* All figures based on resident enrollment and Updated capacity for SY2020 new programs and special education self-contained programs

All projected enrollment data provided by Applied Economics, Inc. January 2019



- Growth Grids outlined in Light Blue
- Enrollment Growth # to SY2024 in Bolded Yellow
- Active growth sub-sections outlined in Red

Board Approved BOUNDARY OPTION 1 with Added Classroom Capacity at Las Brisas, Estrella, & Westar

Without Added Classrooms

School	SY2019	SY2020	SY2021	SY2022	SY2023	SY2024	SY2025	SY2026	SY2027	SY2028	Capacity	Capacity Ratio SY2024	Open Seats SY2024
Freedom	713	682	648	620	597	541	523	486	467	442	834	65%	293
Las Brisas	238	283	336	394	501	578	626	654	656	655	692	84%	114
Liberty	599	719	838	950	1089	1188	1250	1304	1348	1377	1196	99%	8
Estrella	435	426	449	490	522	550	593	624	681	739	716	77%	166
Rainbow Valley	602	591	591	570	525	503	471	469	488	490	796	63%	293
Westar	667	672	684	695	687	718	747	789	819	866	828	87%	110
Blue Horizon	na	950	na	na									
Regional Total	3254	3372	3547	3719	3920	4077	4210	4327	4450	4560	5862	70%	1785

With Added Classrooms:

School	Current SY2019	SY2020	SY2021	SY2022	SY2023	SY2024	SY2025	SY2026	SY2027	SY2028	Added Classroom Capacity	Capacity Ratio SY2024	Open Seats SY2024
Freedom	713	682	648	620	597	541	523	486	467	442	834	65%	293
Las Brisas	238	283	336	394	501	578	626	654	656	655	804	72%	226
Liberty	599	719	838	950	1089	1188	1250	1304	1348	1377	1196	99%	8
Estrella	435	426	449	490	522	550	593	624	681	739	828	66%	278
Rainbow Valley	602	591	591	570	525	503	471	469	488	490	796	63%	293
Westar	667	672	684	695	687	718	747	789	819	866	996	72%	278
Blue Horizon	na	na	na	na	na	na	na	na	na	na	950	na	na
Regional Total	3254	3372	3547	3719	3920	4077	4210	4327	4450	4560	6254	65%	2177

* All figures based on resident enrollment and Updated capacity for SY2020 new programs and special education self-contained programs

All projected enrollment data provided by Applied Economics, Inc. January 2019

Campus	Original Capacity	# Added Classrooms (@28/RM)	Added Classroom Capacity
Freedom	936	834	834
Las Brisas	692	692	4
Liberty	1196	1196	1196
Estrella	840	716	4
Rainbow Valley	796	796	796
Westar	924	828	6

2. Board Approval of Boundary Option 1

The Governing Board approved the boundary option recommended by the committee. Dr. Sloat shared the slide presented at the board meeting. He also discussed the enrollment growth expected for the district for all schools and analysis of facility capacity. The facility capacity was updated by district administration for SY2020 to include new programs such as reading interventionist at some schools, a counselor, and a change in school locations for self-contained special education programs. An additional slide was provided that showed how student enrollment could be accommodated with additional classrooms added to Westar and Estrella.

Placeholder Costs

New School – 950 Students	\$26.5m (\$13m paid by School Facilities Board)
Liberty Rebuild – 600 Students	\$20.5m
Westar Classroom Addition	\$2m
Estrella Classroom Addition	\$3m
Las Brisas Classroom Addition	\$3m
Deferred Maintenance	\$10m
Buses	\$3m
Bus Bay	\$4m
Technology	\$5m
District Office Expansion	\$2m
Total	\$66m

3. **Capital and Facility Need Placeholder Costs**

Some categories of needs for capital or facilities were listed with placeholder costs provided by the architect contracted by the district to provide support with cost estimation, not actual design. Dr. Shough explained that the district is eligible for a new school to be approved in November of 2023, with funding as of January 2024, and a building ready for students for August 2024 (SY2025). School Facilities Board currently pays for approximately 50-60% of the costs of a school. The remaining funds would need to be obtained through the sale of bonds, for which voter approval is required. The district would be able to accommodate the growth in student enrollment if a school is built and open in SY2025. This means that a bond approval would be needed at this next November election.

The Las Brisas addition is a consideration because the school is expected to exceed its capacity based on the high number of open enrollment students with parent school choice. The deferred maintenance list will be reviewed by the committee. The committee will set the recommendation of the amount to include in a potential bond budget. The committee was interested in knowing more information about the schedule of purchase recommended for buses and how much money would be needed throughout the 10-year of bond sales. The committee asked for an explanation of the technology and the distribution of 1:1 devices. Dr. Shough explained that the \$5m is based on expanding 1:1 devices to include 5th-8th grade. The committee asked for costs related to K-8 or 3-8 for comparison. The committee discussed priority of a district office expansion. Because the bond sales extend over 10 years, the committee was interested in keeping it on the list of possibilities because the district is using storage spaces and office space at Liberty. Liberty is expected to grow and use all of that space and then the space would be eliminated if the school is rebuilt. More explanation was requested about the Bus Bay. The district transportation supervisor shared that the facility was needed to make repairs to the buses. A parent shared that the transportation audit indicated that the district needed to invest in a new transportation facility. In the next couple of weeks, the architect will provide more fine tuned estimates to support decision making. The costs for the facilities include the costs of the furniture and equipment for the facilities.

Timeline

	SY2020	SY2021	SY2022	SY2023	SY2024	SY2025	SY2026	SY2027	SY2028
Accelerated Design/Build Schedule	Nov 2019 Contractor procured Liberty & New School Spring 2020 Design Liberty Summer 2020 Liberty Infrastructure	Fall Design New School Spring Liberty Infrastructure		Dec 2022 SFB Approves New School Jan 2023 Build New School Phase 1	Jul 2023 Open New School Phase 1 for 600	Jul 2023 Open New School Phase 2 for 350			
Design /Build Schedule	Nov 2019 Procurement Jan 2020 Design Liberty Rebuild Summer 2020 Infrastructure	Rebuild Phase 1 Liberty	Phase 1 Liberty Open Rebuild Phase 2 Liberty	Dec 2022 SFB Approves New School Spr 23 Design New School & Phase 2 Liberty Open	June 2024 Build New School	July 2025 New School Open			
Bond Funds \$45m	\$11,250,000		\$11,250,000		\$11,250,000		\$11,250,000		
Bond Funds \$55m	\$13,000,000		\$13,000,000			\$13,000,000			\$16,000,000

4. Timeline

Dr. Shough shared two possible timelines for construction of a rebuild and a new build. She shared that the costs for phased construction is much more expensive and is not reflected in the costs. Additionally, the architect will have to confirm whether Liberty campus could be constructed in a phased model while maintaining the space needed for the enrollment with our adopted boundaries. The release of funding available through bond sales was shared with a hypothetical \$45m or \$55m bond. The district has bonding capacity up to about \$65m. However, community support is needed for any bond sale. The committee will have to carefully consider what we ask for in a bond election. Any purchases or procurement for construction would have to be scheduled in alignment to availability of funds. In an upcoming meeting, we will ask Stieffel to share information on tax rates and models for amount of bond funding with the committee.

Next Meeting:

April 2, 2019, 5:30 - 7:30 PM

Appendix A: Research Summary

K-8 vs. Middle School Grade Configuration Research

Article	Author	Date	Abstract Findings
<p>Do Middle Schools Make Sense?</p> <p>https://www.gse.harvard.edu/news/ed/12/09/do-middle-schools-make-sense</p>	Tamer	2012	<p>In sum, students who left elementary schools for middle schools in grades six or seven "lose ground in both reading and math compared to their peers who attend K-8 schools," he wrote in "The Middle School Plunge," published in the spring 2012 issue of <i>Education Next</i>. Additionally, Florida students who entered middle school in sixth grade were 1.4 percentage points more likely than their K-8 peers to drop out of high school by 10th grade — a whopping increase of 18 percent. "We do find clear evidence of a drop in achievement to high school, but it is one-quarter the size of the drop we see with the middle school transition," he says. "By grade 10, those students are back up" where they were expected to be before making the transition. "In middle school, the decline persists as long as they remain in a middle school and even into high school; they don't just have a one-time drop. That suggests to me ... that while there is a cost with school transitions in general, the middle school transition is particularly tough."</p>
<p>Attending a Middle vs. a K-8 School Matters for Student Outcomes</p> <p>https://www.nyu.edu/about/news-publications/news/2017/october/attending-a-middle-vs-a-k-8-school-matters-for-student-outcomes.html</p>		October, 2017	<p>Cappella and her colleagues found that attending a middle or junior high school negatively impacted certain measures of beliefs about students' academic abilities. The most dramatic effect was measured in students attending middle schools; they were more likely to have a negative view of their reading skills and interest levels. The researchers also saw negative effects of middle and junior high schools on teachers' views of student reading and writing competence. No difference was detected in students' test scores.</p>
<p>What the Research Says (or Doesn't Say) About K-8 Versus Middle School Grade Configurations</p> <p>https://educationnorthwest.org/news/what-research-says-or-doesnt-say-about-k-8-versus-middle-school-grade-configurations</p>		August, 2011	<p>NWEL Summary of Research - See articles referenced below included in the NWEL summary</p>

	Paglin & Fager	1997	...study showed that sixth-graders did better in a K–8 setting rather than a middle school setting, but it didn’t demonstrate how the configuration affects other students of different grade levels
	Abella	2005	...noted in her study of Miami-Dade County schools that K–8 students had significant short-term beneficial effects on achievement, attendance, and suspension rates. She also observed that sixth and seventh grades showed greater improvement in mathematics and reading compared to the same grades in middle schools, but the two groups had identical scores in ninth grade, so the effects were not long term.
The Efficacy of Philadelphia's K-to-8 Schools Compared to Middle Grades Schools. https://eric.ed.gov/?q=source%3a%22Middle+School+Journal%22&ff1=pubSpeeches%2fMeeting+Papers&id=EJ630006	Offenberg	2001	Found that students attending K-8 schools had higher reading, mathematics, and science achievement than students attending middle schools serving similar communities. Suggested that number of students in a grade rather than school size contributed to the difference.
	Alspaugh	1998	...studied 16 school districts and found that students who attended middle schools experienced greater achievement loss in the transition to high school than students making the transition from a K–8 school. “The findings imply that students placed in relatively small cohort groups for long spans of time experience more desirable outcomes” (Alspaugh, 1998, p. 25). The schools studied were primarily in rural and small-town districts, with no schools in urban areas
Grade-span Configuration Journal of Research in Rural Education. Winter, 2002, Vol. 17, No.3. 189-192 http://sites.psu.edu/jrre/wp-content/uploads/sites/6347/2014/02/17-3_6.pdf	Coldarci & Hancock	2002	In short, these results generally suggest that achievement in the middle grades is higher in schools having an elementary -wide configuration than a middle-grades configuration.
Stuck in the middle: Impacts of grade configuration in public	Rockoff & Lockwood	2010	We examine the implications of separating students of different grade levels across schools for the purposes of educational production. Specifically, we find that moving students from elementary to middle school in 6th or 7th grade causes significant drops in academic achievement. These effects are large (about 0.15 standard deviations),

<p>schools</p> <p>https://www.sciencedirect.com/science/article/abs/pii/S0047272710000824</p>			<p>present for both math and English, and persist through grade 8, the last year for which we have achievement data. The effects are similar for boys and girls, but stronger for students with low levels of initial achievement. We instrument for middle school attendance using the grade range of the school students attended in grade 3, and employ specifications that control for student fixed effects. We find little evidence that placing public school students into middle schools during adolescence is cost-effective. “The overall climate for student learning is worse in middle schools than in schools that serve students from elementary school through the 8th grade.” “We find that moving to a middle school causes a substantial drop in student test scores (relative to that of students who remain in K–8 schools) the first year in which the transition takes place, not just in New York City but also in the big cities, suburbs, and small-town and rural areas of Florida. Further, we find that the relative achievement of middle-school students continues to decline in the subsequent years they spend in such schools. Nor do we find any sign that the middle-school students catch up with those who remained in the K–8 environment once all of them have entered high school.”</p>
<p>How does grade configuration impact student achievement in elementary and middle school grades?</p> <p>https://www.sciencedirect.com/science/article/pii/S0094119018300081</p>	<p>Hong, Zimmer, and Engberg</p>	<p>2018</p>	<p>When taking into the consideration the effect at the elementary level, our results are much less supportive of a K-8 policy than previous research.</p> <p>Like past research, the study finds that transitioning to a middle school leads to a dip in test scores in math. But students in grades three through five do better at a stand-alone elementary school, making up for that sixth-grade dip. By eighth grade, attending a K-8 school has no effect in math.</p> <p>The results in reading were even more surprising: students in separate middle schools made larger gains in seventh and eighth grade, and ended middle school with higher scores than their peers in K-8 schools.</p>
<p>Comparing Achievement between K–8 and Middle Schools: A Large-Scale Empirical Study</p> <p>https://www.journals.uc</p>	<p>Byrnes & Ruby</p>	<p>2007</p>	<p>The results find that older K–8 schools perform significantly better than middle schools, and this advantage is explained by differing student and teacher populations, average grade size, and school transition. Newer K–8 schools did not enjoy the same advantage despite having smaller grades and lower transition rates, due to their more disadvantaged populations.</p>

chicago.edu/doi/abs/10.1086/520693			
<p>The impact of alternative grade configurations on student outcomes through middle and high school</p> <p>https://www.sciencedirect.com/science/article/abs/pii/S0047272712001107</p>	<p>Scherdt & West</p>	<p>2013</p>	<p>We find that students moving from elementary to middle school suffer a sharp drop in student achievement in the transition year. These achievement drops persist through grade 10. We also find that middle school entry increases student absences and is associated with higher grade 10 dropout rates. Transitions to high school in grade 9 cause a smaller one-time drop in achievement but do not alter students' performance trajectories.</p>
<p>The Relationship between Middle Level Grade Span Configuration, Professional Development, and Student Achievement</p> <p>https://www.tandfonline.com/doi/abs/10.1080/19404476.2004.11658166</p>	<p>Schmitt</p>	<p>2015</p>	<p>This study found a significant percent of 6-8 middle level schools to be more highly engaged in professional development activities than their K-8 and 7-12 counterparts. However, when taken together, professional development and grade configuration were not found to have a direct relationship to student achievement. Some variance in state assessment scores, albeit not statistically significant, was found to be marginally related to grade configuration, indicating the need for further study.</p>
<p>Math and Reading Differences Between 6-8 and K-8 Grade Span Configurations: A Multiyear, Statewide Analysis</p> <p>https://cie.asu.edu/ojs/index.php/cieatasu/article/view/1144</p>	<p>Clark, et al</p>	<p>2013</p>	<p>Regardless of student grade level or school year examined, students who were enrolled in K-8 schools had higher average passing rates on the TAKS Reading and Math assessments than did students enrolled in middle schools. Implications of our findings are discussed.</p>

<p>The negative impacts of starting middle school in sixth grade</p> <p>https://onlinelibrary.wiley.com/doi/abs/10.1002/pam.20309</p>	<p>Cook, MacCoun Muschkin Vigdor</p>	<p>2007</p>	<p>We find that sixth grade students attending middle schools are much more likely to be cited for discipline problems than those attending elementary school. Furthermore, the higher infraction rates recorded by sixth graders who are placed in middle school persist at least through ninth grade. An analysis of end-of-grade test scores provides complementary findings. A plausible explanation is that sixth graders are at an especially impressionable age; in middle school, the exposure to older peers and the relative freedom from supervision have deleterious consequences. "Students who attend middle school in sixth grade are twice as likely to be disciplined relative to their counterparts in elementary school... [and] exposing sixth graders to older peers has persistent negative consequences on their academic trajectories."</p>
<p>Mayhem in the Middle</p> <p>Thomas B. Fordham Institute</p> <p>https://files.eric.ed.gov/fulltext/ED499797.pdf</p>	<p>Yecke</p>		<p>Junior High is "where academic achievement goes to die." And while the statement is provocative, the data she mined, along with that uncovered by others, does reveal an unfortunate academic decline for students who attend a new school for grades 6-8.</p>
<p>The early adjustment of adolescents to school transitions</p> <p>https://www.researchgate.net/publication/233896927_The_Adjustment_of_Early_Adolescents_to_School_Transitions</p>	<p>Blyth, Simmons, Carlton-Ford</p>	<p>1983</p>	<p>They found that students in K-8 schools had higher academic achievement, as measured by both grade point averages and standardized test scores, especially in math. These students also had higher levels of participation in extracurricular activities, demonstrated greater leadership skills, and were less likely to be victimized than those in the elementary/middle school setting. They concluded that the intimacy of the K-8 environment and delaying the transition to a new school until students were more mature may have caused the improvements.</p>
<p>Are Middle Schools More Effective? The Impact of School Structure on Student Outcomes</p> <p>http://jhr.uwpress.org/content/XL/3/660.short</p>	<p>Bedard & Do</p>	<p>2005</p>	<p>While nearly half of all school districts have adopted middle schools, there is little quantitative evidence of the efficacy of this educational structure. We estimate the impact of moving from a junior high school system, where students stay in elementary school longer, to a middle school system for on-time high school completion. This is a particularly good outcome measure because middle school advocates argued that this new system would be especially helpful for lower achieving students. In contrast to the stated objective, we find that moving to a middle school system decreases on-time high school completion by approximately 1–3 percent.</p>

<p>Do Top Dogs Rule in Middle School? Evidence on Bullying, Safety, and Belonging</p> <p>https://journals.sagepub.com/doi/full/10.3102/0002831216657177</p>	<p>Schwartz, Steifel, and Rothbart</p>	<p>2005</p>	<p>Recent research finds that grade span affects academic achievement but only speculates about the mechanisms. In this study, we examine one commonly cited mechanism, the top dog/bottom dog phenomenon, which states that students at the top of a grade span (“top dogs”) have better experiences than those at the bottom (“bottom dogs”). Using an instrumental variables strategy introduced in Rockoff and Lockwood (2010) and a longitudinal data set containing student survey data for New York City public middle school students, we estimate the impact of top dog and bottom dog status on bullying, safety, belonging, and academic achievement. This article provides the first credibly causal evidence that top dog status improves the learning environment and academic achievement. We further find that the top dog effect is strongest in sixth grade and in schools with longer grade spans and that the top dog effect is not explained by new students to a school or student height.</p>
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