Economic Connectedness: How U.S. High Schools Can Enable Economic Mobility

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Economic Connectedness: How U.S. High Schools Can Enable Economic Mobility

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EXECUTIVE SUMMARY

This research on economic connectedness aims to explore the role of high schools in promoting cross-socioeconomic class friendships and therefore economic mobility. Interventions in high schools possess enormous potential to increase economic mobility. This work examines patterns among high schools with integrated socio-economic social networks and identifies key programs and activities that can encourage cross-class friendships.

Problem: Economic mobility is declining in the United States, where absolute income mobility has fallen for families across the income distribution, with the greatest fall in the middle class.¹

New research from Opportunity Insights has found that social networks play a critical role in promoting economic mobility, with economic connectedness (i.e., cross-class friendships) being the single greatest predictor of whether a person from a low-SES (socio-economic status) background will experience economic mobility.² Economic connectedness has two primary components: exposure and friending bias.³

Quantitative analysis from existing data findings:
Analysis of existing data using Opportunity Insights’ Social Capital Atlas (2022) and the National Center for Education Statistics data (2017-2018) revealed that smaller schools have a higher proportion of schools with low friending bias. Schools with lower free and reduced lunch proportion, have lower friending bias. High density of white student population tends to have a higher proportion of low friending bias. Schools with a higher concentration of male or female students are more likely to be low friending bias.

Quantitative survey findings:
We conducted a survey among 225 schools with only 15 responses received, resulting in a low response rate. However, some early directional findings emerged that can inform future research. The curricular, extracurricular, and non-curricular interventions surveyed in this study were commonly offered among participating schools. Two interventions, randomized group projects and uniforms, were less commonly offered across schools. The survey indicates that the differences between high- and low-friending bias schools are more pronounced through whether the interventions are open access/free interventions, especially for field trips and summer programs. The interventions surveyed appear to be more effective in promoting social integration across economic class in low friending bias schools.

METHODOLOGY
Existing data analysis: Identify school attributes that increase friending bias
New survey data analysis: Determine whether specific offerings impact friending bias
Qualitative Interviews: Understand intangible cultural components and implementation effort that impact friending bias
Qualitative survey findings span curricular, extracurricular, and non-curricular domains.

- **Advanced Academic Tracking** (e.g., AP, IB) can function as a barrier for students from lower-SES backgrounds to make friends across income backgrounds. Schools can encourage lower-SES students to take advantage of AP offerings by: utilizing targeted marketing for AP and advanced classes, providing financing options for AP tests, and applying universal screening for advanced tracks.

- **Sports programs** play a critical role in shaping friend groups within high schools, but not all sports are equally accessible to students of lower socio-economic backgrounds. To reduce friending bias schools can: provide subsidies or fundraise for fees and uniforms, expand exposure to new sports through summer programs, middle school outreach, or dedicated gym time, and offer transit options after sports practice.

- **Music, Arts, and Academic programs** face similar challenges to sports programs, such as added costs that exclude lower-SES students. Schools can address this by: expanding during-school options for clubs, providing funding opportunities, and directly encouraging students from low-SES backgrounds to participate.

- **Student leadership** influences which students choose to join extracurricular activities. Evidence demonstrates several approaches to address this challenge: diversifying teacher sponsors and student leaders and creating additional student leadership positions to increase diversity in student leadership.

- **Feeder school system** often results in friend groups continuing from middle school into high school, leading to a lack of economic diversity in schools. Strategies to promote cross-mixing of friend groups and encourage diversity and inclusion include: leveraging orientation week to mix students, developing buddy and mentorship programs, and assigning randomized seating.

- **Political polarization** creates divides among high school students, where their political beliefs are often correlated with their socioeconomic status and racial identity. To promote open, inclusive, and encourage productive discourse, schools should: create a safe space for empathetic dialogue, offer professional development for teaching sensitive subjects, and establish debate programs.

- **Uniforms** can create a blank slate for students and make it difficult to discern economic class differences. However, there is little research on whether uniforms actually reduce biases, and previous research has shown that uniforms do not have a positive impact on student outcomes.

**Recommendations:** There are three levels of recommendation targeting (1) High school administrators, counselors, and teachers, (2) District-level leadership and Local-level policymakers, and (3) Opportunity Insights.
**Recommendations for high school administrators, counselors, and teachers:** Educators must first recognize the impact of friending bias on students’ economic mobility and invest in programs that foster lower friending bias. There are several behavioral and programmatic changes that are cost-free behavior tweaks, medium-cost programmatic changes, or high-cost programs or subsidies. These recommendations include encouraging and funding extracurricular participation, assigning randomized seating in classrooms and lunchrooms, and creating more opportunities for diverse student leadership.

**Recommendations for district-level leadership and local-level policymakers:** Leadership and policymakers must address the challenges that low-SES students face in social integration and friendship building due to the costs associated with curricular, extracurricular, and non-curricular activities. These measures include offering subsidies for student participation, expanding free transit options, implementing universal screening for advanced tracks, mandatory uniforms, professional development for teaching sensitive subjects, and expanding during-school options for extracurricular clubs. However, implementing these recommendations requires resources and time and involves multiple stakeholders, budget approvals, and accountability processes.

**Recommendations for Opportunity Insights:** As a team of researchers and policy analysts, Opportunity Insights is equipped to inform stakeholders about the importance of decreasing friending bias in high schools to increase student long-term economic mobility. To inform school administration, Opportunity Insights, first and foremost, should raise awareness of the importance of decreasing friending bias to increase student long-term economic mobility. Targeted marketing can help identify and activate champions within schools. Disseminating case studies can also enable high schools to implement effective interventions. To inform district and state level leadership, Opportunity Insights must gather more evidence to provide data-drive policy recommendations.
INTRODUCTION

Economic mobility has been declining in the United States. Despite the common conception of the American Dream, people living in the United States experience less economic mobility than other developed countries.\(^4\) Absolute income mobility has also fallen across the entire income distribution, with the largest declines for families in the middle class.\(^5\) In the midst of these economic realities, new research from Opportunity Insights has demonstrated the critical role that social networks hold in promoting economic mobility. They have found that the single greatest predictor of whether a child from a low-SES (socio-economic status) background will experience economic mobility is based on whether they have friends from the top of the economic distribution.\(^6\)

To build from these findings, we are eager to introduce our Policy Analysis Exercise, *Economic Connectedness: How U.S. High Schools Can Enable Economic Mobility*. Our primary goal is to answer questions about the role of high schools in promoting cross-class friendships and therefore economic mobility. What patterns do we see among high schools that have social networks that are integrated socio-economically? What key activities and programs can high schools offer to encourage cross-class friend groups?

These questions are important to consider because high school administrators and teachers hold enormous potential to counter the decline of upward mobility in the U.S.

BACKGROUND

The following section is intended to acquaint readers with Opportunity Insights, prior research from Opportunity Insights that our work builds from, and to define key variables in our study.

**INTRODUCTION TO OPPORTUNITY INSIGHTS:**

Opportunity Insights was founded by Raj Chetty, John Friedman, and Nathaniel Hendren and represents a partnership between leading economists from Harvard University and Brown University. The institute’s research on economic mobility harnesses the power of big data to document both the decline of the American Dream and potential solutions to revive it. Its central mission is to develop scalable policy solutions that empower families throughout the United States to rise out of poverty and achieve better life outcomes.\(^7\)
PRIOR RESEARCH:

Over the last five years, Opportunity Insights has released several research studies that have provided radical insights to our understanding of economic mobility in the United States. Notable studies include research about how each neighborhood in our country advantages or disadvantages the children’s futures, which colleges have the most successful track record of advancing lower-SES students into higher-SES futures, and how Black boys and men are more disadvantaged both in whether they will experience upward economic mobility and whether those gains will be sustained by future generations. See Exhibit A for more data on the connection between geography and economic mobility.

The most recent Opportunity Insights research, published in 2022, uses big data to begin to understand why some neighborhoods are better than others at advantaging children. Using Facebook friendship data from 72 million people, or 84% of U.S. adults between 25-44, Opportunity Insights has found that the greatest predictor of whether children moved up the income ladder is the connectedness of the rich and poor in that community. The study found that if poor children grew up in a neighborhood where 70% of their friends were rich – which is the average rate for high-SES children – that their future incomes would increase an average of 20%. See Exhibits B, C, and D for more data on the linkages between economic connectedness and upward mobility.

Professor Johannes Stroebel, one of the four administrator authors of the Social Capital study, said: “People interested in creating economic connectedness should equally focus on getting people with different incomes to interact.” Building from Professor Stroebel’s call to action, our research seeks to provide high schools with key ideas of how to spur cross-class friendships.

KEY DEFINITIONS FROM SOCIAL CAPITAL ATLAS:

Economic connectedness, the primary variable from the Social Capital Atlas that informs the economic mobility of a community, has two primary components: exposure and friending bias.

- Exposure: The share of members in any group that are high-SES. For cross-SES interaction, exposure is necessary but not sufficient. Exposure is the fraction of any group, such as a school, religious organization, neighborhood, or college, which is high-SES.

- Friending Bias: The rate at which people befriend the high-SES people. When friending bias is zero, low-SES people make friends with high-SES people at the exact same rate as higher-SES peers. In practice, if high-SES people befriend other high-SES people at a
bigger rate than low-SES people befriending high SES-people, friending bias will be larger.

For a precise explanation of how exposure and friending bias are measured by Opportunity Insights, visit Exhibit E.

The Social Capital study found that the social disconnection in the United States today is 50% attributable to exposure; meaning that higher-SES students are more likely to go to schools comprised of other high-SES students, and 50% attributable to friending bias, meaning that within a group, high-SES people are more likely than lower-SES people to for friendships with high-SES peers. To see how U.S. High Schools map along exposure and friending bias axis, see Exhibit F.

To increase economic mobility, policies need to be enacted that both promote exposure and reduce friending bias. In our research for the Policy Analysis Exercise, we are focused on interventions that decrease friending bias, because this is less studied than exposure. Our unit of analysis is individual high school institutions and therefore we are interested in interventions that enable and encourage social integration between students of different socioeconomic statuses. Exposure is important and many existing studies dig deeper into this lever, but our research will not explore interventions that facilitate economically diverse environments.

For more details on the methods of the Social Capital study please visit the Social Capital Atlas.
METHODOLOGY

The main objective of our research was to identify and comprehend high school-based interventions that have the potential to mitigate friending bias. To achieve this, we employed a multi-method approach, which entailed a synthesis of quantitative data from existing sources, directional data gathered through our survey, and qualitative insights derived from the structured interviews. Given the timeframe of our research, we sought to generate early insights into potential drivers of friending bias and build hypotheses, rather than test hypotheses, for further research and policy initiatives. Our analysis synthesized the amalgamation of data and present a series of questions, proposals, and opportunities for future research.

QUANTITATIVE ANALYSIS FROM EXISTING DATA:


With the Social Capital Atlas, we identified high economic exposure schools that have low friending bias and high economic exposure schools that have high friending bias. High economic exposure schools are defined by Exposure level of 80th percentile or higher. Low friending bias is defined by friending bias level of 20th percentile or lower while high friending bias is defined by friending bias level of 80th percentile or higher.

With the National Center for Education Statistics data, we compared school size, racial diversity, and gender diversity between economically diverse schools with low friending bias and economically diverse schools with high friending bias.

QUANTITATIVE SURVEY:

Our survey aimed to gather information from economically diverse schools with a focus on interventions that contribute to a reduction in friending bias. The purpose of the survey data was not to provide a comprehensive statistical analysis, but rather to serve as preliminary evidence to inform directional insights and guide the structured interviews we will conduct.

Our analysis compared low friending bias economically diverse schools and high friending bias economically diverse schools. We aim to hold the following variables constant in our comparative analysis to remove confounding variables:

- Economic diversity level (high: 80th percentile and above)
- Gender parity (46-55% female)
- Size (medium+: 500+ students)
- Racial diversity (close to average: 61-90% white, we extended our scope to 46-60% white in our qualitative interviews to learn from more diverse schools)

Our survey focused on schools with high exposure and then compared schools with low vs. high friending bias:

We narrowed school selection to compare schools that are similar in gender parity, school size, and racial diversity:
To inform the interventions that we tested in our survey, we interviewed seven teachers and professors (including Professor Richard Weissbourd). We included the following interventions in the survey:

- **Extracurricular**
  - After-school academic clubs or programs
  - After-school art or music clubs or programs
  - After-school sports programs
  - Summer programs

- **Curricular**
  - Different academic tracks (e.g., AP, IB)
  - Randomized, diverse group projects
  - Field trips

- **Non-curricular**
  - Uniforms
  - Transportation options
  - Parents’ expectations of the types of friends that students make
  - Students in leadership roles

For these interventions we asked:

- If they are offered
- If yes, if they are (1) high quality (Y/N), (2) open access/free cost (Y/N), (3) long-term offerings (Y/N)
- If they have an impact on whether students make friends across socio-economic backgrounds? (scale)

Our full survey is included in Exhibit G. We distributed the survey via email to administrators and counselors of the selected schools.

**QUALITATIVE INTERVIEWS:**

We conducted structured interviews with approximately 10 administrators and counselors from positive deviance schools. A full list with anonymized details of the schools we surveyed and interviewed is in Exhibit H. We define positive deviance schools as economically diverse schools that exhibit low levels of friending bias when the characteristics of the school tend to drive high friending bias. The selection of schools and specific interventions to be explored in-depth was informed by our survey and existing quantitative data.

For our interviewee targets, we chose to employ the approach of Positive Deviance, which has been used in the social sciences to understand what makes outliers successful. This observational approach centers on studying positive outliers to understand what uncommon but successful strategies and tactics have contributed to positive outcomes, despite having similar resources as their peers.16
In the context of our research, we used Positive Deviance to explore how schools that are counter to high-friending bias trends have managed to achieve low-friending bias. Similar to the survey methodology, we chose schools that are over the 80% threshold for economic exposure yet still have friending bias in the bottom 20%. To look at schools that counter the trends in friending bias, we considered only large schools (1000+), because large schools tend to have larger friending bias. We also removed schools that are far from gender parity (removing single sex schools), schools that have over a student body that is over 90% white (focused on 46-90% white schools), and schools with less than 5% of the student body on Free and Reduced Lunch. We chose to remove these intervening variables because we wanted our learnings to be applicable to many high schools in the US and felt that schools with one of these attributes might have low friending bias for reasons that are not replicable in the average high school.

These conversations provide color on which interventions create social stratification versus which create social integration in high schools. Our interview questions included:

- Do students of different socioeconomic backgrounds make friends with one another in your high school?
- How do students from different socioeconomic backgrounds interact with each other at your school?
- What are programs that impact friend groups at your school? (curricular, extra-, non-curricular)
- How does your school culture impact friend groups?
- What are the barriers that prevent friend groups of different socioeconomic backgrounds from mixing?
- What are the effective practices that encourage friend groups of different socioeconomic backgrounds to mix?
- Have you noticed any changes in the level of social integration among students in recent years? If so, what do you attribute those changes to?
- What steps has your school taken to increase interaction and collaboration among students from different socioeconomic backgrounds?
- What are the most effective tools for promoting social integration among students from different socioeconomic backgrounds?
- How does your school work with families and the community to promote social integration among students from different socioeconomic backgrounds?
QUANTITATIVE FINDINGS

QUANTITATIVE ANALYSIS FROM EXISTING DATA FINDINGS:

In our analysis of high economically diverse schools (80th+ percentile), we contrasted high friending bias (80th+ percentile) and low friending bias (<20th percentile) schools on three dimensions: (1) school size, (2) racial diversity, and (3) gender diversity. Our findings suggest that:

- Smaller schools, with enrollment ranging from 251 to 1000 students, have higher proportion of schools with low friending bias
- Schools with lower proportion of students on free and reduced lunch (<20% with Free and reduced lunch) have lower friending bias
- Schools with higher white student density (76%+ white) tend to have higher proportion of low friending bias
- The gender diversity in low friending bias schools is comparable to that in high friending bias schools. However, schools with a higher concentration of either male or female students at extreme of the gender spectrum are more likely to be low friending bias.

These findings provide valuable insight into the characteristics of high and low friending bias schools that we further explored in our qualitative interviews. They confirm patterns that Opportunity Insights included in the Social Capital Atlas.
Our survey was sent to 225 schools, but only 15 responses were received, indicating a much lower response rate than we had hoped. While the small sample size precludes drawing any conclusive insights, some early directional findings emerged that can inform our qualitative interviews and guide future research hypotheses. The full result of our survey is in Exhibit I. Early, directional learnings that we gathered include:

- **The curricular, extracurricular, and non-curricular interventions surveyed in this study were largely common among the participating schools.** The interventions were offered by almost all of the schools surveyed. However, two interventions, randomized group projects and uniforms, were less commonly offered across schools.

- **Assessing the degree to which schools offer "open access / free" interventions may provide a better understanding of the differences between high- and low-friending bias schools, rather than focusing on if the interventions are of "high quality".** Specifically, our findings indicate that the differences between high- and low-friending bias schools are more pronounced through whether the interventions are open access / free interventions, such as field trips and summer programs. While most interventions surveyed were rated as high quality across the board, the data indicate that they are not universally open access or free, which may have implications for economic stratification among students.
• **Interventions surveyed may be more effective in promoting economic integration in low friending bias schools.** Our limited data showed that a higher proportion of high friending bias schools indicated that the interventions created more economic stratification than in low friending bias schools. However, given the small sample size, further research is necessary to confirm this finding and to investigate the potential mechanisms behind these effects.

One limitation of this survey is the low response rate, which suggests that email distribution may not be an effective method to reach high school administrators and counselors. Therefore, alternative methods, such as phone calls, targeted listservs, and focus groups, may be more successful in reaching this population. Additionally, an observation study such as this survey is not able to collect objective data to lead to more conclusive insights.
QUALITATIVE FINDINGS

OVERVIEW:
Stemming from our quantitative findings, the qualitative findings were designed to provide more nuance to the barriers that schools encounter with students developing economically insular friend groups, and to highlight best practices of schools that have made efforts for greater economic inclusion at their schools.

Our qualitative interviews focus on the positive deviance schools in the data. We interviewed counselors and administrators from 10 schools across the country to inform them of our findings. As mentioned in the methodology, we targeted schools using a positive deviance approach, in order to pass along best practices to a wider segment of schools. Positive deviance schools are the schools that have characteristics that would make the school more likely to be a school with high friending bias, yet the school showcases low friending bias. These positive deviance schools are schools that are: (1) large schools (1000+), (2) have higher racial diversity (<76% white), and (3) have gender parity (45-55% female). However, in our interviews it became clear that a few schools did not self-identify as having a socio-economically diverse population while a couple other schools thought that their student body was fairly stratified by income level.

This was a surprising finding, because with our positive deviance approach we expected to be speaking mostly with schools that were economically diverse (with high levels of exposure) and that had integrated student bodies (with low friending bias). This first finding suggests that the time lag inherent in Opportunity Insights’ data may mean that schools have changed in terms of where they fall on the exposure or friending bias spectrum. Despite this complication, our interviews provided rich insight into the barriers schools face and what practices might successfully encourage greater cross-class friendships.

Our findings from these interviews will be categorized into curricular, extracurricular, and non-curricular buckets; with each containing the barriers schools face and effective practices that are being practiced.

CURRICULAR FINDINGS:

Advance Academic Tracking
Most schools that we spoke to mentioned that their offered AP courses, IB curriculum, or local college courses often segment students and can function as a barrier preventing students from making friends across income backgrounds. Administrators noted that students who
predominantly take AP or IB courses tend to come from higher-SES backgrounds, whereas few students from lower-SES backgrounds enroll in the same courses.

**Observations:**

“In classroom settings, stratification can definitely also happen. We see the level of classes that students take might stratify them by income, like for students in our AP classes.” - Counseling Department Chair at Indiana Public School

“There are students who have taken opportunities for AP class or local community college courses. But those classes usually cost money, so they can be dividing Sometimes it can be paid for students that qualify for Free & Reduced Lunch, but our English Language Learners tend to be intimidated and not encouraged to take these courses.” - Cultural Liaison at Colorado Public School

“AP classes and honors classes are more often taken by students who are more economically well off, but the students who need these opportunities more should be in AP but usually are not.” - Counselor at Colorado Public School

**Analysis & Recommendations:**

The disparity in access to AP courses is well documented and has been studied for decades, as many experts note how the AP program nationally often magnifies structural inequities rather than diminishing them. AP classes are less likely to be offered in schools in lower-SES communities and pass rates of exams are also lower among low-SES students. Nearly 50% of lower-SES students score 3 or more on AP exams, compared with over 65% of students from better resourced families. In the context of increasing friending bias, AP and honors courses may contribute to higher friending bias by separating students into different classrooms based on income. It is evident that unequal access to AP courses, whether driven by K-12 preparation, family awareness of offerings, or teacher encouragement further stratify students by dividing students into different learning environments. Some recommendations to encourage lower-SES students to take advantage of AP offerings at similar rates to high-SES students include:

- **Utilize targeted marketing for AP and advanced classes:** To expand access to a wider assortment of students within a school, our interviews and research suggest that direct outreach to lower-SES students and their families can be helpful to simply increase awareness of AP and advanced offerings. We have heard of schools doing this in a personalized, one-on-one manner, or in a broader mass awareness campaign. One of the Colorado public schools we spoke to ensures that minority and low-SES students have specialized registration support that encourages advanced classes, because students from these backgrounds are under-represented in advanced classes in their school. In Connecticut, the State Department of Education sent out mailers to 20,000 lower-SES families before school started, ensuring they were aware of advanced course
opportunities. Additionally, some districts with a high proportion of Latinx students have had success integrating Spanish-language and culturally relevant examples into their AP coursework to improve enrollment and exam scores.

- **Financing options for AP Tests:** The College Board and school districts around the country have made considerable efforts to expand the share of low-SES students that have access to AP Courses and Exams, often by providing subsidies for the Exam fees. These efforts have led to a 44% increase in the number of lower-SES students that take AP tests over the last ten years. Even with federal subsidies to the College Board for low-SES students, AP Exams still cost lower-SES students $53 per exam. Many states offer further subsidies for lower-SES students to diminish the financial burden, but schools still can play a role to ensure that families know about federal and state subsidies and can provide additional funding as needed.

- **Apply universal screening for advanced academic tracking:** Instead of eligibility for advanced and AP courses being referral or opt-in, many schools and districts have seen increased diversity in advanced courses by ensuring all students are screened for advanced opportunities. Some schools draw on previous state scores or PSAT scores to identify whether students would succeed in advanced coursework. When Denver Public Schools switched from an application process for gifted and talented programs to a universal screening method, the share of Latino students in the gifted and talented program doubled, to account for 1 in 4 students instead of 1 in 8 students before universal screening.

For more recommendations on advancing equitable access to advanced courses, we recommend looking at these resources compiled by the Education Trust and the Aspen Institute.

**EXTRACURRICULAR FINDINGS:**

**Sports Programs**

All our interviewees noted that extracurriculars, sports in particular, play a critical role in shaping friend groups within high schools. Interviewees noted that sports are one of the most powerful equalizers in high schools, bringing together students of various economic backgrounds with an opportunity to become close friends. Overall, sports seem like one of the most promising offerings of high schools to decrease friending bias. However, we heard that not all sports are equally accessible to students of lower-SES backgrounds, such as sports with higher participation fees, those with year-round participation, and sports where students from lower-SES backgrounds are less likely to have exposure prior to high school. We also heard that
students from lower-SES backgrounds are more likely to have after-school jobs, which can inhibit their ability to play on sports teams.

**Observations:**

“**Sports stands out to me as a key way kids make friends and intermix.** Overall, I see our sport programs encouraging intermingling more than other clubs or academics.” - Counselor at Colorado Public School

“**Friend groups are based on extracurriculars,** so if students are not involved in these, it can be harder to meet people. We see different outcomes depending on the extracurriculars. Some sports are great at bringing students from diverse backgrounds in - like track and soccer. Others are what I think of as ‘country club sports,’ like lacrosse and swimming. **Many of these kids do these sports year-round, so other kids who cannot afford to do that don’t really join these sports as frequently.**” - Counseling Department Chair at Indiana Public School

“At our school, we have a big division between lower-SES students, who tend to be Latino, and more affluent white students. We see a lot fewer lower-SES students playing sports. We tried to get more students involved with sports like soccer, but we found that **many kids don’t have time for extracurriculars because they work.** So not all students have an option to partake in sports.” - Cultural Liaison at Colorado Public School

“**Sports at our school tend to be competitive. If a student enters high school and has never played a sport like volleyball before, it’s unlikely that they will have a high enough skill level to make the team.** Our volleyball coach, because she saw how students were excluded from the opportunity to participate, she and her team have started going to lower-SES middle schools that feed into our high school to offer volleyball camps so that more students have exposure. It’s a great program for our future students and for our current students to give back.” - Administrator at Kansas Private School

**Analysis & Recommendations:**

Sports programs hold enormous potential for reducing friending bias and encouraging cross-class friendships. However, research from the RAND Corporation demonstrates that lower-SES families nationally are less likely to involve their students in sports (52% of lower-SES students versus 66% of middle and high-SES students participate in school sports).27

- **Provide subsidies or fundraise for fees and uniforms:** The RAND study found that 35% of families reported that their student was not involved in school sports because of associated fees. This study also found that nationally, about 49% of school sports programs have associated fees that families are expected to pay out of pocket.28 Another nationwide survey found that the average cost for high school sports programs is $408.29 Most interviewees that we spoke to mentioned subsidies or fundraisers as options that their schools offer for low-SES families to offset these costs, but we also
heard that low awareness of these subsidies has been a challenge. Lower-SES students are more likely to take advantage of these programs if there is wide awareness of fee waivers related to free and reduced lunch. Administrators and coaches should also be aware of incidental costs, such as required equipment, uniform cleaning, travel expenses, etc. related to sports to ensure that students have a way to cover these costs.

- **Expand exposure to new sports through summer programs, middle school outreach, or dedicated gym time:** Some sports have higher barriers to entry for lower-SES students if students have not encountered these sports before high school. We heard examples about tennis, golf, lacrosse, volleyball, and swimming being harder to access depending on income. One private school we spoke to in Kansas, quoted above, discussed an initiative by the volleyball coach to provide summer and middle school outreach to expose a broader range of students to the sport before they matriculated in high school. During the first few weeks of gym class, high schools can also consider focusing on exposure to sports, so that students may choose to join a sport that was previously unfamiliar to them.

- **Offer transit options after sport program training:** For students that rely on school transit to get home, the lack of buses after sports can be a barrier to participation. One public school in Illinois that we spoke to mentioned that providing transit options after sports practice ended was critical to boost engagement among students who relied on transit options to get back home.

**Music, Arts, and Academic Clubs**

Similar to sports based extracurriculars, we heard a lot of friend groups form through involvement in extracurriculars related to the arts and academics. Some schools we spoke to highlight these extracurriculars as activities that attracted diverse groups of students, while a few schools noted that students who engaged with certain types of extracurriculars may be more affluent on the whole.

**Observations:**

“**Band and choir are big at our school and tend to be ethnically and economically diverse.** Teachers really encourage students to engage with these programs, so they’re mostly promoted through word of mouth. But they can be just as expensive as sports programs, with the instruments for band and the uniform cleanings for choir.” – Administrator at Oklahoma Public School

“I can see some of our extracurriculars as less accessible for lower-SES students. Our show choir for example, the uniforms are really expensive. I think they do fundraisers to help some students, but I think cost is an issue for some families still.” – Director of Guidance at Indiana Private School
Analysis & Recommendations:
Music, Arts, and Academic Clubs face many similar engagement challenges to sports programs, as they carry challenges of added costs and excluding students who must work after school. Recent research found that 18% of middle and high students do not participate in any extracurricular at all, including sports.\textsuperscript{30} For families that earn less than $100,000 annually, the non-participation rate is twice as high.

- **Expand during-school options for clubs:** Children from low-SES families are three times less likely to participate in after-school activities.\textsuperscript{31} Schools can lessen extracurricular participation disparities by exploring which activities could happen during the school day, such as over a lunch period or as an elective class. If extracurriculars like the Student Newspaper, Student Council, and the Debate Club can happen as elective courses rather than after school, students with after school obligations are more likely to be able to participate.

- **Provide funding opportunities:** While non-sport related extracurriculars tend to be cheaper than sports, total expenses for families average $251 for arts and $126 for other club activities.\textsuperscript{32} 29% of parents said that costs of extracurricular activities were higher than they anticipated, and non-participation among their students is twice as high.\textsuperscript{33} Similar solutions for inclusion in sports, subsidies for fees and equipment can greatly improve access. Awareness of subsidized program fees needs to be well advertised to students and their families. Research from a nationwide poll found that for every parent that requests a waiver for extracurricular fees, three other parents did not know how to request for these accommodations and another parent was not comfortable asking for assistance.\textsuperscript{34} By making information on waivers and subsidies widely available, schools can increase parents’ understanding of the process and comfort asking for accommodation.

- **Directly encourage students from low-SES backgrounds to participate:** Throughout our interviews, it was clear what a pivotal role teacher and staff encouragement had on student involvement. We heard that many students choose to engage with extracurriculars because the staff sponsors and coaches directly encouraged them to do so. For teachers that sponsor music, arts, and academic clubs, we recommend ensuring that a diverse group of students are encouraged to participate in these extracurriculars.

Student Leadership
Interviewees and the teachers we engaged in the survey portion of our research underscored how student leadership of various clubs impacts which students choose to join. Additionally, a number of schools that we spoke to mentioned facing some challenges getting students from non-majority backgrounds to join the Student Council or other student leadership positions.
Observations:
“I feel like the identity of the club or activity leader will play a significant role in the diversity of the group. When we had a student of color step in as the leader of the robotics club, many more students of color joined without much recruiting.” – Teacher at Massachusetts Public School

“Our school is predominantly white and higher income, but that is especially true of our student leaders. Our student leadership definitely lacks diversity and could be improved.” – Counselor at Colorado Public School

“We probably don’t have as much diversity in student leadership as we would want. Our school is about 70% white, and probably a much larger share of our student leadership is white.” – Director at Private School in Iowa

Analysis & Recommendations:
- **Diversify Teacher Sponsors & Student Leaders:** As anecdotally noted in the quote above from a teacher in an Indiana Public School, by having a student leader or teacher sponsor from a diverse background, more students who shared attributes with this leader were more likely to join. While there is little research to prove that diverse student leaders and club sponsors impact extracurricular engagement, there is evidence of improved student engagement and outcomes with student-teacher matching on race.
- **Create Additional Student Leadership Positions:** One private school in Kansas that we spoke to (detailed further in the case study on page 27) managed to increase diversity in student leadership by creating a much greater number of leadership positions. By having more leadership positions with varying degrees of commitment and responsibility, more students had the opportunity to trial leadership roles earlier in their high school experience. From our interviewee’s perspective, by providing more and earlier leadership opportunities, the makeup of student leaders diversified on both economic and ethnic dimensions.

NON-CURRICULAR FINDINGS:

Feeder Schools / Catchment System

After conducting interviews with several schools, we noted that the different middle schools or different parishes that feed into the high school reinforce economic stratification. The reason for this is that these middle schools are geographically based, with one middle school having a higher concentration of students from a higher socioeconomic class, while another middle school has a higher concentration of students from a lower socioeconomic class. Due to this, existing friend groups from each middle school tend to persist in high school, and friend groups
from different socioeconomic backgrounds do not mix. Similarly, parishes have different socioeconomic divides that feed into religious high schools. Therefore, it is critical to implement early intervention strategies in ninth grade to break up these existing middle school / parish originated friend groups and promote cross-mixing of friend groups to promote diversity and inclusion.

Observations:
"The populations stay with their niche. If they went to elementary and middle schools with the other students, they are more likely to stay in those friendship groups. Since we receive students from schools that have different practices with language learners, this further stratified students. In one of our feeder middle schools, they put all ELL [English Language Learners] in the same home room class. As a result, the Latino students from that school do not make friends with others when they come here” – Cultural Liaison at Colorado Public School

“Students from poorer parishes would sit together. Our cafeteria is cliquish by parish and activity. People did not have conversations with people outside of those parameters” – Administrator at Kansas Private School

Analysis & Recommendations:
● Leverage Orientation Week to Mix Students: Orientation week in high school is often designed to help new students to adjust to the new school environment and get to know their classmates. A University of Iowa study found that students who participated in a pre-orientation program had higher levels of social integration and felt more connected to their community compared to those who did not participate. Enabling students to mix from different socioeconomic backgrounds during this first week can break the ice and enable foundational new friendships to form. San Francisco University High School (San Francisco) has an orientation program that includes a community-building exercise where new students work in small groups with a diverse mix of classmates to create a project that benefits the local community partner. The program also encourages students to think about the lived experience of those with lower socioeconomic backgrounds. Haverford School (Haverford) has an orientation program that includes an outdoor team-building retreat where new students participate in activities that require them to work together and support each other.

● Develop Buddy and Mentorship Programs: Mentorship programs could pair students from different socioeconomic backgrounds and different grade levels together, allowing them to build relationships and learn from each other. The mere connection of a student and another student through a mentorship relationship can strengthen each other’s social capitals, as their social networks extend. A cross-cultural exchange program or joint extracurricular activities could also help students from different schools or parishes to meet and interact. The Hockaday School (Dallas) provides the Broader Buddy Families
Program that enables established families in the school community to open their homes to newly enrolled residents. Buddy families maintain close contact with the new students, integrating and supporting them into new experiences.

- **Assign randomized seating:** Seat proximity, whether it is in the classroom or in the cafeteria, predicts friendship formation. The classroom and cafeteria environment plays a critical role in shaping social interactions because interactions tend to be confined to near-seated peers. Sitting next to each other increased the probability of students becoming mutual friends, for all pairs who differed in their educational achievement, gender, or ethnicity, by 7 percent. Closer-seated classmates tend to receive higher concurrent likeability ratings than those seated farther away. It has also been shown that they impact each other’s level of prejudice. Hence, utilizing classroom or cafeteria seating as a means of integrating students from diverse socioeconomic backgrounds presents a crucial opportunity.

## Political Polarization

Student’s political leanings are often correlated with their socioeconomic status and racial diversity. In the current political climate, social media and fashion are two common platforms for students to express their political beliefs and distinguish themselves from their peers. For example, one school that had a minority Latinx and lower socioeconomic status student population found that these students were more likely to identify as Democrats than their predominantly white peers who had higher socioeconomic status. In some school environments, these political differences are explicitly expressed which enabled a more divisive environment between diverse students with lower economic status and predominantly white students with higher socioeconomic. Partisan politics has trickled into high school environments and increased rates of hostility between socioeconomic divides.

**Observations:**

“Political polarization is a driver of division between students of different socioeconomic backgrounds. Our school is in a conservative area of the state and students will distinguish themselves by wearing clothes with political party associations such as MAGA shirts. This creates separation between socioeconomic groups because socioeconomic status and political alignment are often correlated.” — Administrator at Oklahoma Public School

“Around election time, it was toxic. That was an interesting dynamic, especially given that we have a large Hispanic population. We had conversations. We had our small groups. Our president is Hispanic, she can talk and talk. But the environment still created a divide among our student groups” — Administrator at Kansas Private School

**Analysis & Recommendations:**
• **Create safe-space for empathetic dialogue:** According to a study by University of California researchers, schools can create a culture of respect and tolerance by promoting open dialogue and encouraging students to listen to each other. By creating a school culture where treating each other with compassion and inclusion has social currency, students are more open-minded and empathetic. Essential Partners is an organization that provides training and resources for schools that want to encourage open, inclusive, civil discourse about tough topics alongside self-reflection and self-exploration. The Peer Assistance Leadership (PAL) program, which is implemented by the Orange County Department of Education, trains student leaders to facilitate discussions on difficult topics, such as racism and prejudice. The program also hosts school-wide assemblies to promote empathy, inclusivity, and respect.

• **Offer professional development for teaching sensitive subjects:** In red communities, the rate of administrators saying their school or district provided professional development in how to conduct productive discussions of controversial issues dropped from 40% to 27%. Purple communities saw the steepest decline, from 54% to 33%. The Learning for Justice (formerly Teaching Tolerance) program, a project of the Southern Poverty Law Center, provides free professional development resources and workshops for educators on topics such as race and ethnicity, LGBTQ+ issues, and social justice. The School District of Philadelphia provides training to teachers on topics such as culturally responsive teaching, LGBTQ+ inclusion, and implicit bias. They also offer a program called "Courageous Conversations," which trains teachers to lead difficult conversations about race and equity with their students.

• **Establish debate programs:** Respectful and open debate emphasizes the ability to establish and defend an informed position on a topic while empathically listening to opposing views. This practice provides opportunities for students to practice their emotional regulation skills, as they learn how to engage in respectful discourse with those who hold different beliefs. The National Speech and Debate Association (NSDA), currently reaching 2,800 schools, provides resources and competitions for high school debate teams. The program emphasizes respectful discourse and encourages students to engage in civil discussions about controversial topics. Lake Highland Preparatory School, in Orlando, Florida, offers a Speech and Debate class that is open to all students. By integrating debate into the curriculum, high schools can promote critical thinking, effective communication, and the ability to engage in respectful discourse with those who hold different beliefs.

**Uniforms**

The three private schools we spoke to each implemented uniforms for their students. Each of them independently suggested that uniforms offer a blank slate for their students, in many ways diminishing student’s ability to make quick judgments about the economic class of other students.
Observations:
“We have a dress code. Much of the philosophy behind the uniform is to eliminate division, and I think it does a good job of that.” - Director of Guidance at Indiana Private School

“We have a uniform, so everyone looks the same. Even the kids that have re-used the uniform a lot, there’s no way to see who has money and who doesn’t. It levels the playing field.” – Director at Private School in Iowa

Analysis and Recommendations:
We anecdotally found that there are directional benefits of uniforms reducing friend bias, because the socioeconomic backgrounds of students are less evident to another. There is little research about uniforms impacting friend bias, although previous research has disproven uniforms having a positive impact on academic performance and other student outcomes. More research would be needed to determine whether uniforms effectively and ethically provide more of a level playing field.
CASE STUDY: KANSAS PRIVATE SCHOOL

Establishing a New Homeroom System to Diversify Student Connections in Kansas Private School

Context: An administrator at one private catholic school in Kansas had thought a lot about how students were making friends at his school. His school has over 1,000 students from very diverse backgrounds, as their model is a non-tuition stewardship school. Their non-tuition model allows them to have students from a wide range of economic backgrounds, including 28% that are eligible for Free & Reduced Lunch.

Student Friendship Challenges: The administrator we spoke to, with almost 30 years of experience at the school, noticed that students were forming cliques based on their parish and extracurricular activities. Students from the poorer parishes tended to sit together at lunch, and the cafeteria was entirely cliquish based on parish and activity. Additionally, students from certain parishes were more likely to take advanced or AP classes, further dividing students on income lines.

The parishes that fed into the high school were highly socio-economically and ethnically divided, because they were based on geographic neighborhoods that tend to be stratified by income. In addition to cementing friend groups by parish, the parish that a student came from generally was also predictive of whether they would take advanced or AP classes.

Our interviewee elaborated: “Some schools from the neighborhoods with higher-SES parishes are sending us students that are better prepared for advanced classes, and those students are doing better on our placement tests. It generally means that the parish school a student comes from is often predictive of whether kids will be ahead or behind.” In addition to students dividing themselves at lunch time based on parish and thus based on income level, the classes that students ended up taking were also dividing students on income lines.

The Intervention - A New Homeroom System: Wanting to create a more inclusive high school culture, the administrator instituted a new initiative called the Community System. The Community System randomly sorts students into one of 64 Houses, which are then grouped into eight distinct communities. Each house comprises approximately 20 students from all grade levels. The staff ensured that houses and communities are diverse along economic, racial, and parish dimensions. The Houses act as a homeroom for students to meet with daily, and both the house and community provide students with consistent touchpoints with teachers and staff at the school.

Intervention Objectives: The goal of the program was for students to gain comfort with discomfort, learn about the cultures and backgrounds of students unlike themselves, and interact with each other. The aim was to create conversations and friendships among students
who did not know each other before, especially for students who did not know anyone in their “House.”

**Intervention Impact on Friending:** While the COVID pandemic did disrupt the evaluation of the Community System, our interviewee reflected that the program overall has succeeded in providing students opportunities to befriend other students with whom they have less in common.

After the intervention, he shared stories of students who met their best friends through the House system, including other students they would not have crossed paths with before. He also shared stories of students who personally praised the program for preparing them socially to interact and befriend other students that come from different backgrounds.

**Impact on Student Leaders:** Another key component of the Community System is the increased number of student leadership roles and opportunities that it provides. By having multiple leadership opportunities in each house and community, the school created 260 roles for student leaders. Relative to before, there are lower-touch ways for younger students to engage with student leadership.

Our interviewee reflected: “Before the Community System, we had the same types of students who did student leadership. But now with so many more roles, we are having so many different types of kids participate. Our school is 25% Hispanic, and our student leadership before never represented these students. But now that we have more leaders, we have far more Hispanic students taking leadership roles.”

**Overall Reflections:** Five years after implementing the Community System, the administrator we spoke to admits that it has not entirely eradicated cliques from their school. But he shares that there is more acceptance, understanding, and connectedness across the student body. He sees more inter-mixing and thinks the Community System has provided ample opportunities for friending that did not exist before.
CASE STUDY: ILLINOIS PUBLIC SCHOOL

Cultural Drivers to Promote Social Integration at a Chicago Public School

Context: This public high school is located in the suburbs of Chicago, Illinois. The student body is almost 2,000 students with 75 full-time teachers, creating a 19 student to teacher ratio. The total minority enrollment is 12 percent. The school is committed to promoting social integration among students and creating an inclusive and welcoming environment.

Student Friendship Challenges: While our school has a diverse student population, with 14% Hispanic students and 12% coming from low-SES families, the majority of students (81%) identify as white. As a result, the school needs to take proactive measures to promote integration and prevent minority students from feeling excluded. The school should implement programs that foster cross-cultural interaction and create a sense of community among students from different backgrounds.

The Interventions – Curricular Interventions: One of the curricular interventions used is the auto-enrollment of students into the highest level of class based on PSAT scores. This ensures that no student is left out of honors classes because of their academic track or financial status. Teachers also use a lot of group work in the classroom to mix levels, friend groups, and everything in between. This promotes social interaction and helps students get to know their peers from different backgrounds.

The Interventions – Non-Curricular Interventions: The school also has an activities coordinator who works hard to ensure that there are activities for a variety of students. The coordinator meets with every student to encourage them to participate in activities and ensure that they get involved.

Additionally, the high school offers free transportation for students after activities, which reduces the barrier for students to participate in extracurricular activities. The music program is well-known and popular, and many students get involved in it. The school fees cover the extra costs of activities, and low-SES students do not have to pay for them. The school also has fundraisers to help support the costs of sports that require additional gear.

To further promote social integration, students who cannot afford school fees are automatically put on free and reduced lunches. This removes the barrier of needing to get students to opt in, which is especially difficult when there is stigma and embarrassment towards applying in the high school environment. The school gives free school shirts on the first day of school, which enables all students to have school spirit gear for school activities and events.

The school has a Warrior Way leadership program that includes an orientation and a breakfast club. The program trains a group of student leaders who are expected to create an inclusive
and welcoming environment for all students. The leadership program selects ~60 engaged and invested students who then establish goals and objectives for the type of environment they want to provide for the students every year. The orientation program sets the tone of inclusivity for the rest of the year while the breakfast club encourages to grab free breakfast and hangout cross-class, cross-friend groups once a week for the rest of the year.

**Intervention Impact on Friending:** This high school has successfully created a culture of inclusivity and social integration for its students. This ethos enables students and staff to have school pride for social inclusivity and integration. Students want to be helpful and involved in Warrior Way leadership program and staff want to put in the extra hours to champion and supervise activities and programs that increase social integration.

**Overall Reflections:** Building a school culture is a complex and intangible process that relies on multiple factors, including culture carriers, the school’s ethos, and the availability of open and accessible programs and activities. To create an inclusive environment that fosters social integration among students from diverse socioeconomic backgrounds, our school has implemented a range of interventions. These include the appointment of a dedicated activities coordinator, the implementation of the Warrior Way leadership program to encourage student leadership and social integration, and a variety of curricular and non-curricular initiatives. Together, these efforts have contributed to the successful development of our school culture.
RECOMMENDATIONS

FOR HIGH SCHOOL ADMINISTRATORS, COUNSELORS, AND TEACHERS:

Recognize and inform educators about the impact of friending bias in your school

First and foremost, we recommend high school administrators and staff to understand that lower friending bias in schools can increase students’ economic mobility. In all our data collection, it was evident how committed high school teachers, counselors, and administrators are to improving the outcomes of their students. We identified new programs that schools are piloting to expand access to high quality curricula and creative ways to expose students to a wide array of fulfilling extracurriculars.

However, Opportunity Insights research suggests that one of the most impactful drivers of students’ outcomes is influencing how they make friends and who is ultimately in their social circle. High schools have enormous potential to both provide lower socioeconomic status students with opportunities to befriend their higher socioeconomic status peers, and to provide all students with a set of tools and behaviors that will influence who they choose to share community with for the rest of their lives.

Ultimately, high school administrators and staff must understand this relationship between lower friending bias and higher economic mobility to enable them to catalyze programs and cultures that foster lower friending bias. We encourage high school administrators and staff to recognize and invest in the nature of friending within their community. This recognition will encourage and enable administrators and staff to champion lowering friending bias with each initiative and interaction.

From the cafeteria to the football field and into the classroom, friending bias should be a key consideration that is top of mind for administrators and staff seeking to improve the life outcomes of their students. Are students from lower-SES backgrounds provided ample opportunity to befriend their higher-SES peers? Are there any barriers that prevent lower-SES students from engaging in activities at a different rate than their peers?

In the following section, we detail specific interventions that provide students more opportunities to befriend other students that come from different backgrounds. We recognize and encourage school administrators and staff to consider how school culture greatly shapes
how students navigate their social lives. To make progress on the cultural development of inclusion, school leaders must examine the behaviors and expectations that shape the culture of their school as well.

Consider behavioral and programmatic changes to lessen friending bias

As noted in our qualitative findings section, there are a myriad of changes that high schools can make today that we predict would decrease friending bias. While the evidence does not yet provide causal linkages between the interventions we propose and changes on friending bias, we are directionally confident that these interventions. These interventions are foundational hypotheses to test in future research and initiatives.

Some of the interventions recommended to our team were relatively simple tweaks in how administrators speak to students, while others were more complex changes to the systems of the school. We present the recommendation in order of cost and implementation complexity. The following recommendations to lessen friending bias among high school students are for high school administrators to implement, test, and learn:

Cost-Free Behavior Tweaks

- **Encourage extracurricular participation:** Lower-SES students are less likely to participate in extracurricular activities, despite being an important piece of development in high school and an excellent space for making friends. Teachers and counselors should continue to provide students with personalized and targeted recommendations that might fit students’ interests and obligations, particularly looking for clubs that meet during the school day for students that hold jobs after school.

- **Encourage diverse student leaders:** Within clubs and at the school-wide level, diverse student leaders are more likely to spark engagement of students that share their demographic attributes. When considering which students to nominate or encourage for leadership positions, consider pushing diversity in economic and racial background to ensure student leaders reflect the entire school community.

- **Assign randomized seating:** In the classroom and the lunchroom, randomized seating provides students opportunities to meet new friends and have conversations outside of their clicks. Schools can randomize and rotate seating charts and locker assignments to encourage continued friend formation throughout the four years of high school.

- **Leverage physical education class to expose students to new sports:** Before sports have hosted try-outs, expose students in gym class to the range of sports available at
the school. This will enable students to not automatically be eliminated from participating in some sports because they have never played it before.

Medium-Cost Programmatic Changes

- **Expand during-school options for extracurricular clubs:** To include more students that have family or work obligations after school, consider which extracurriculars could be moved to fit within the school day, either as a lunchtime activity or as an elective course. School district leadership would need to work with school administrators, teachers, and club advisors to identify which clubs could be offered during the school day and how to adjust the school schedule to accommodate these activities. The district would also need to approve the curriculum impact with the expansion and provide additional funding for resources and staffing to support these activities. A potential tradeoff is that offering clubs during the school day could potentially reduce instructional time for core subjects or elective choices if the school schedule is not adjusted accordingly.

- **Provide additional course registration support:** During course registration, establishing for counselors a new priority in developing classrooms that are inclusive of economic backgrounds. Through personalized registration support, counselors or other administrative support can identify lower-SES students that would succeed in advanced course work and encourage students to enroll in advanced or AP courses. Our interviews provided evidence that dedicating resources to provide personal attention and encouragement will give students of lower socioeconomic status confidence and guidance to take more advanced level coursework.

- **Promote advanced coursework opportunities:** Strategies such as mailers to families’ homes, personal phone calls, open house information sessions, and dedicated class previews can ensure that lower-SES families are aware of advanced coursework opportunities. Within these methods, schools should include information on any associated costs, scholarships, subsidy opportunities, and how to enroll. Allocating staff time and providing promotion materials are important considerations to implement.

- **Develop buddy and mentorship programs:** Provide one-on-one opportunities for students to make friends with other students from different backgrounds. Whether your school pairs younger students with older students or peer tutoring opportunities, ensure that buddy pairings mix students across income backgrounds. Allocating staff and student time is essential to execute this intervention. Additionally, building a culture to achieve student buy-in is also critical for the buddy or mentorship program to succeed.
• **Create more opportunities for student leadership:** Expand the number of student leader roles so that younger and more diverse students can opt in earlier in their high school careers. This can include creating new student structures or adding required leadership positions to existing clubs.

• **Establish debate programs:** A debate program will require a dedicated staff to oversee and coach the program as an extracurricular or a curriculum component. This could require hiring a new staff member or assigning existing staff to the program. Staff and students will need to be trained in debate strategies and communication skills. This training can come at a cost in the form of workshops, seminars, or training programs offered by organizations like the National Speech and Debate Association.

**High-Cost Programs & Subsidies**

• **Subsidize AP test and other advanced coursework costs:** The federal government and many states have provided subsidies that make the average cost per exam between $15 and $53 for low-SES students. However, not all families are aware of these subsidies. To ensure that more students can access these opportunities, high schools should actively inform families about reduced costs and provide additional funding, if possible, to families that are still unable to meet these costs.

• **Provide waivers and subsidies related to extracurriculars:** As school and district budgets become tighter, the costs for participating in sports and extracurricular activities are increasingly being borne by families. This can create a financial barrier for low-SES students who are interested in participating in these activities. To address this, schools should actively waive costs for low-SES students and ensure that parents are informed about the available accommodations. Additionally, schools should explore additional funding sources to subsidize the costs for low-SES families.

• **Create safe space for empathetic dialogue:** Staff and student buy-in is critical to the success of the programs that foster empathetic dialogue. High schools will need resources to facilitate the program, such as materials for activities and discussions, as well as speakers for school-wide assemblies. The cost of implementing the program will depend on the resources needed and the level of support provided by the school district. Some expenses to consider include training costs, speaker fees, and materials.

• **Expose students to new sports in summer & middle school programs:** Coaches of high school sports teams can expand the diversity of their teams by providing some summer or middle school programs to provide lower-SES students exposure to a wider range of sports before matriculating. To provide summer or middle school programming,
additional staff members must be allocated to be such as coaches or trainers. Space, facility, and equipment are also critical resources that are necessary to run the program successfully.

- **Host an orientation week for incoming students:** The program will need to be carefully planned and designed, with specific goals and learning objectives in mind. This will require careful curriculum development, collaboration, and buy-in, with input from a range of stakeholders, including school administrators, teachers, students, and parents. Incremental additional cost for the program will depend on the existing orientation budget and programming that the school already has. Careful assessment of program cost will ensure that it is sustainable over the long term.

**FOR DISTRICT-LEVEL LEADERSHIP AND LOCAL-LEVEL POLICYMAKERS:**

For students from low-SES families, the costs associated with curricular, extracurricular, and non-curricular activities can pose significant obstacles to social integration and the formation of friendships with peers from different backgrounds. In order to address these challenges, school district-level leadership and local-level policymakers can implement a variety of measures to create a more inclusive and equitable school environment.

Implementing these recommendations is not without its complexities. The recommendations for district-level leadership and local-level policymakers to enable and encourage social integration and friendship building among high school students from different SES backgrounds are more complex and require more resources and time due to the required involvement and alignment of multiple stakeholders, multi-function budget approvals, and accountability processes needed for successful implementation.

- **Offer district level subsidies for student engagement:** While noted as a key recommendation for high schools, districts can also earmark and dictate subsidies and waivers for students to engage in curricular and extracurricular activities. Activities that require additional money from families, including AP tests, sports, and other extracurriculars, can be a tremendously helpful way for districts to support high schools with tightening budgets.

- **Expand free transit options for after school activities:** Expanding transit options for after school activities will require collaboration between school district leadership, transportation agencies, and local policymakers. School district leadership can work with transportation agencies to identify the specific transportation needs of students who rely on free transit. School district leadership can work with transportation agencies to
explore different transportation options. This could include arranging school buses or vouchers for public transportation, or other forms of transit that leave after the activities are finished. Funding, from local or state budgets, grants, or other sources, will be needed to cover the costs of additional transportation options.

- **Apply universal screening for advanced academic tracking:** School district leadership or state level policymakers would need to agree to utilize a standardized testing process to screen students for advanced tracks. Then district/state would need to ensure that it aligns with the district’s overall equity goals and identify a standardized and objective method for screening all students. Existing standardized testing (e.g., PSAT or state tests) could be utilized or new testing methods could be established. The new testing method would require the use of outside testing agencies and the development of new testing materials. Overall, tradeoffs to consider when implementing a universal screening process include concerns about establishing students’ academic courses based on one test score.

- **Implement a mandatory uniform:** School districts should conduct an assessment to determine the feasibility of mandatory uniforms. Cost, parent and student buy-in, enforcement mechanisms, and logistical considerations are essential. The district may need to work with uniform suppliers and/or seek external funding to provide uniforms for families in need. Clear guidelines and consequences for non-compliance should be established, and staff should be trained to enforce the policy in a fair and consistent manner. Additionally, the district should communicate with parents and students to ensure understanding and support for the policy, especially if students feel that uniforms stifle their creativity and individuality.

- **Offer professional development for teaching sensitive subjects:** School district leadership or state policymakers would need to prioritize teacher training for teaching sensitive subjects in order to shift funding and time allocation for it. Resources are required for funding and organizing workshops, seminars, and training sessions for teachers. Local policies can mandate a certain number of hours or requirements for teachers to participate in professional development related to sensitive subjects. Additionally, teacher hiring, retention, and promotion could also emphasize teachers with the skills and knowledge to navigate these topics can ultimately create a safer and more inclusive learning environment. This includes professional development opportunities and rewards for sensitivity and respect, acknowledging that teaching sensitive subjects can be emotionally challenging for both teachers and students.
FOR OPPORTUNITY INSIGHTS:

As a team of researchers and policy analysts, Opportunity Insights has the expertise and resources to raise awareness and inform stakeholders on the importance of decreasing friending bias in high schools to increase student long-term economic mobility. While anecdotal exemplary evidence and directional data can motivate school-level officials, district and state level policymakers require more causal linkages before implementing broader budget-intensive or legislative approaches.

- **Source champions within high schools**: Aligned with the first recommendation for high schools, greater awareness about the linkages friending bias and children’s economic outcomes later in life is foundational to other recommendations. In the schools that had made the most progress in terms of implementing creative programs to diminish friending bias, there was always a clear champion within the school – either an administrator, counselor, or key teacher that tried to influence inclusion or culture at the school.

We believe that more targeted marketing efforts on behalf of Opportunity Insights to share your Social Capital research findings with target high schools would be well received and could make immediate impact on the number of high schools and administrators that are paying attention to and prioritizing connectedness.

- **Expand case studies and disseminate learnings to enable high schools to implement interventions that are directionally effective**: We are optimistic that the detailed high school recommendations we suggested are directionally correct and for the most part highly logical, as most of the interventions we suggested would simply allow for more points of contact among economically diverse groups of students.

Our interviews with school administrators and counselors showed clear indications that schools are interested in learning about other exemplar schools and the interventions they implemented to diminish friending bias. Collecting best practices would enable schools to pilot these programs more confidently and successfully.

While Opportunity Insights builds upon the demonstrable quantitative dataset, we recommend compiling an expanded set of case studies and effectively distributing the insights that span the curricular, extracurricular, non-curricular, and cultural domains.

- **Gather more evidence to make policy recommendations at the district and state levels**: While anecdotal and directional evidence seems to be sufficient to motivate school-level officials, district and state level policymakers will seek more causal linkages before implementing broader legislative approaches to diminish friending bias. Similar to
high school level measurement, more up to date data that can assess the impact of interventions would be helpful to persuade policymakers.

One example to enable data-driven decisions is to enable schools to collect granular data about their programs and culture as related to friending bias. We heard that many schools conduct surveys among their students to measure feelings of belonging, such as the Panorama Survey. This could be a low lift way of to gain objective data on how effective interventions are and track a school’s progress. It may be difficult to disaggregate the data to focus on low SES students, but these data points will enable triangulation of effective interventions.
CONCLUDING ACKNOWLEDGMENTS

The Opportunity Insights findings regarding the role of economic connectedness as the sole form of social capital that enhances economic mobility were groundbreaking. However, the significance of this research goes beyond presenting evidence. This study’s inspiration arose from the question, “what can be done about it?”

The results presented in this paper represent just the beginning of a long process of developing and testing hypotheses, as well as educating and implementing interventions that ensure more equitable outcomes for students.

We are immensely grateful for the guidance, support, and collaboration of our professors, client, colleagues, and friends, without whom this work would not have been possible. We would like to extend special thanks to Professors Dutch Leonard, John Haigh, Richard Weissbourd, and Brian Trelstad for their invaluable input. We also acknowledge the crucial contributions of Opportunity Insights team members, including Professor Raj Chetty, Florian Mudekereza, Abby Hiller, and Armelle Grondin. Furthermore, we express our gratitude to all the school teachers, counselors, and administrators who generously provided input during our data collection. We recognize that the impact on student outcomes is truly made possible through the dedication and hard work of educators.
**EXHIBITS**

**Exhibit A: Opportunity Insights Data Demonstrating the Geographic Nature of Economic Mobility**

*The Geography of Upward Mobility in the United States*
Mean Income Rank at Age 35 for Children whose Parents Earned $27,000 (25th percentile)

[Map of the United States with color-coded data indicating income ranks.]

*Source: Chetty, Friedman, Hendren, Jones, Porter (2018)*

Source: [Opportunity Insights Social Capital Slides](#)

**Exhibit B: Opportunity Insights Data Demonstrating the Relationship Between Upward Mobility and Economic Connectedness**

*Upward Mobility vs. Economic Connectedness, by County*
200 Largest Counties

[Scatter plot showing the relationship between economic connectedness and predicted household income rank for children with parents at 25th income percentile.]

*Source: Opportunity Insights Social Capital Slides*
**Exhibit C:** Opportunity Insights Data on Friending Income Decile

![Graph showing friends' income decile by own income decile](Image)

Source: [Opportunity Insights – Social Capital Non-Technical Overview](#)

**Exhibit D:** Opportunity Insights Data Demonstrating that Higher Income Households have Greater Economic Connectedness and More Upward Mobility

![Graph showing economic connectedness vs. median household income by ZIP code, colored by upward mobility](Image)

Source: [Opportunity Insights – Social Capital Non-Technical Overview](#)
Exhibit E: Opportunity Insights Definition of Exposure and Friending Bias

**Determinants of Economic Connectedness**

<table>
<thead>
<tr>
<th>50% Exposure Segregation by Income</th>
<th>50% Friending Bias Interaction Conditional on Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Diagram of School A]</td>
<td>![Diagram of School B]</td>
</tr>
<tr>
<td>![Diagram of School A]</td>
<td>![Diagram of School B]</td>
</tr>
</tbody>
</table>

Measuring Exposure and Friending Bias (From Social Capital II):

“We measure exposure in a group as the share of above-median-SES individuals in the group multiplied by two, so that exposure is equal to 1 for a group with 50% above-median-SES individuals (see Section VI.D for algebraic definitions of this and subsequent terms in this section). Exposure is below 1 for groups that have a below-average share of high-SES individuals and above 1 for groups that have an above-average share of high-SES individuals.

We define a person’s friending bias in each group as one minus the share of friends they make in that group who have high SES divided by the share of people in the group with high SES. If friendships were formed at random—and if high- and low-SES people made the same number of friends—then individuals’ share of high-SES friends in each group would equal the share of high-SES individuals who belong to the group and friending bias would be equal to 0. Friending bias greater than 0 implies a lower probability of making high-SES friends than if friendships were formed at random within a given group.”53

Source: Opportunity Insights – Social Capital Non-Technical Overview and Social Capital II
Exhibit F: High Schools Mapped Along Friending Bias and Exposure

Source: Opportunity Insights – Social Capital Non-Technical Overview
Exhibit G: Survey to High School Administrators and Counselors on Drivers

High School Drivers

Start of Block: Introduction

Q1 Thank you for taking the time to complete this survey about your school. Your school has students from diverse economic backgrounds. Your responses will contribute to important research to understand students' economic mobility. This survey should take about eight minutes and we recommend you complete the survey on a computer. If you have any questions, please reach out to nharstad@hks.harvard.edu. Thank you for your help!

Q9 School Name: ____________________________________________________________

Q13 School Type:

☐ Traditional public school (1)

☐ Traditional private school (2)

☐ Charter school (3)

☐ Religious school (4)

☐ Other (5) ____________________________________________________________

Q8 Current Role Title: ______________________________________________________
Q10 How many years have you worked for this school?

End of Block: Introduction

Start of Block: Extracurricular Activities

Q34 Terms: Throughout this survey, we define driver of economic stratification as programs that drive students to be more divided on the basis of their socio-economic status. Drivers of economic integration are programs encourage that students to make friends across socio-economic background.

This first section will focus on extracurricular activities that your school offers for students, and to what extent these activities encourage friendships across socio-economic groups.

Q25 Does your school offer after-school academic clubs or programs? (e.g., math club)

▼ No (1) ... Yes (2)

Display This Question:
If Does your school offer after-school academic clubs or programs? (e.g., math club) = Yes

Q26 Are the after-school academic clubs or programs that your school offers...

<table>
<thead>
<tr>
<th></th>
<th>Yes (1)</th>
<th>No (2)</th>
<th>Don't Know or N/A (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Quality? (1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open Access / Free Cost? (2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A long-term (5+ year) offering? (3)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Q36 Overall, do the **after-school academic clubs or programs** have an impact on whether students make friends across socio-economic backgrounds?

<table>
<thead>
<tr>
<th></th>
<th>Key Driver of Economic Stratification (1)</th>
<th>Modest Driver of Economic Stratification (2)</th>
<th>No / Little Impact (3)</th>
<th>Modest Driver to Economic Integration (4)</th>
<th>Key Driver of Economic Integration (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>After-school Academic Clubs and Programs are a... (1)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Q27 Does your school offer **after-school art or music clubs or programs**?

▼ No (1) ... Yes (2)

Q28 Are the **after-school art or music clubs or programs** that your school offers...

<table>
<thead>
<tr>
<th></th>
<th>Yes (1)</th>
<th>No (2)</th>
<th>Don’t Know or N/A (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Quality? (1)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Open Access / Free Cost? (2)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>A long-term (5+ year) offering? (3)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Q37 Overall, do the after-school art or music clubs or programs have an impact on whether students make friends across socio-economic backgrounds?

<table>
<thead>
<tr>
<th>Art &amp; Music programs are a... (1)</th>
<th>Key Driver of Economic Stratification (1)</th>
<th>Modest Driver of Economic Stratification (2)</th>
<th>No / Little Impact (3)</th>
<th>Modest Driver of Economic Integration (4)</th>
<th>Key Driver of Economic Integration (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Q29 Does your school offer after-school sports programs?

▼ No (1) ... Yes (2)

Display This Question:
If Does your school offer after-school sports programs? = Yes

Q30 Are the after-school sports programs that your school offers...

<table>
<thead>
<tr>
<th>High Quality? (1)</th>
<th>Yes (1)</th>
<th>No (2)</th>
<th>Don't Know or N/A (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Open Access / Free Cost? (2)</td>
<td></td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>A long-term (5+ year) offering? (3)</td>
<td></td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Display This Question:
If Does your school offer after-school sports programs? = Yes
Q38 Overall, do the after-school sports programs have an impact on whether students make friends across socio-economic backgrounds?

<table>
<thead>
<tr>
<th>Sports programs are a... (1)</th>
<th>Key Driver of Economic Stratification (1)</th>
<th>Modest Driver of Economic Stratification (2)</th>
<th>No / Little Impact (3)</th>
<th>Modest Driver of Economic Integration (4)</th>
<th>Key Driver of Economic Integration (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

Q31 Does your school offer summer programs? (e.g., leadership camp, summer school)

▼ No (1) ... Yes (2)

Display This Question:
If Does your school offer summer programs? (e.g., leadership camp, summer school) = Yes

Q32 Are the summer programs that your school offers...

<table>
<thead>
<tr>
<th>High Quality? (1)</th>
<th>Yes (1)</th>
<th>No (2)</th>
<th>Don’t Know or N/A (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Access / Free Cost? (2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A long-term (5+ year) offering? (3)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Display This Question:
If Does your school offer summer programs? (e.g., leadership camp, summer school) = Yes
Q40 Overall, do the summer programs have a significant impact on whether students make friends across socio-economic background?

<table>
<thead>
<tr>
<th>Summer programs are a...</th>
<th>Key Driver of Economic Stratification (1)</th>
<th>Modest Driver of Economic Stratification (2)</th>
<th>No / Little Impact (3)</th>
<th>Modest Driver of Economic Integration (4)</th>
<th>Key Driver of Economic Integration (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

End of Block: Extracurricular Activities

Start of Block: Curricular Activities

Q33 This section will focus on curricular activities that your school offers for students, and to what extent these activities encourage friendships across socio-economic groups.

Q15 Does your school offer different academic tracks for students? (e.g., AP, IB, etc.)

▼ No (1) ... Yes (2)

Display This Question:
If Does your school offer different academic tracks for students? (e.g., AP, IB, etc.) = Yes

Q16 Are the different academic tracks that your school offers...

<table>
<thead>
<tr>
<th></th>
<th>Yes (1)</th>
<th>No (2)</th>
<th>Don’t Know or N/A (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Quality? (1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open Access? (2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A long-term (5+ year) offering? (3)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Display This Question:
If Does your school offer different academic tracks for students? (e.g., AP, IB, etc.) = Yes
Q47 Overall, do the academic track options have an impact on whether students make friends across socio-economic backgrounds?

<table>
<thead>
<tr>
<th>Academic track options are a...</th>
<th>Key Driver of Economic Stratification (1)</th>
<th>Modest Driver of Economic Stratification (2)</th>
<th>No / Little Impact (3)</th>
<th>Modest Driver of Economic Integration (4)</th>
<th>Key Driver of Economic Integration (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q48 Does your school assign group projects in random and diverse groups?

▼ No (1) ... Yes (2)

Display This Question:
If Does your school assign group projects in random and diverse groups? = Yes

Q49 Are the group projects that your school assigns...

<table>
<thead>
<tr>
<th>Yes (1)</th>
<th>No (2)</th>
<th>Don’t Know or N/A (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Quality? (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open Access / Randomly Assigned? (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A long-term (5+ year) offering? (3)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Display This Question:
If Does your school assign group projects in random and diverse groups? = Yes
Q50 Overall, do the group projects have an impact on whether students make friends across socio-economic backgrounds?

<table>
<thead>
<tr>
<th>Group projects are a... (1)</th>
<th>Key Driver of Economic Stratification (1)</th>
<th>Modest Driver of Economic Stratification (2)</th>
<th>No / Little Impact (3)</th>
<th>Modest Driver of Economic Integration (4)</th>
<th>Key Driver of Economic Integration (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q57 Does your school offer field trips for students?

▼ No (1) ... Yes (2)

Display This Question:
If Does your school offer field trips for students? = Yes

Q58 Are the field trips that your school offers...

<table>
<thead>
<tr>
<th></th>
<th>Yes (1)</th>
<th>No (2)</th>
<th>Don't Know or N/A (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Quality? (1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open Access / Randomly Assigned? (2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A long-term (5+ year) offering? (3)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Display This Question:
If Does your school offer field trips for students? = Yes
Q59 Overall, do **field trips** have an impact on whether students make friends across socio-economic backgrounds?

<table>
<thead>
<tr>
<th>Field trips are a...</th>
<th>Key Driver of Economic Stratification (1)</th>
<th>Modest Driver of Economic Stratification (2)</th>
<th>No / Little Impact (3)</th>
<th>Modest Driver of Economic Integration (4)</th>
<th>Key Driver of Economic Integration (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

End of Block: Curricular Activities

Start of Block: Non-Curricular Activities

Q42 This section will focus on **non-curricular activities** that your school offers for students, and to what extent these activities encourage friendships across socio-economic groups.

Q61 Does your school require **uniforms** for students?

▼ No (1) ... Yes (2)

Q19 Does your school offer **transportation options** for students? (e.g., school buses)

▼ No (1) ... Yes (2)

*Display This Question:*

If Does your school offer transportation options for students? (e.g., school buses) = Yes
Q20 Are the **transportation options** that your school offers...

<table>
<thead>
<tr>
<th></th>
<th>Yes (1)</th>
<th>No (2)</th>
<th>Don’t Know or N/A (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Quality? (1)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Open Access / Free Cost? (2)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>A long-term (5+ year) offering? (3)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

**Display This Question:**

*If Does your school offer transportation options for students? (e.g., school buses) = Yes*

Q43 Overall, do the **transportation options** have an impact on whether students make friends across socio-economic backgrounds?

<table>
<thead>
<tr>
<th></th>
<th>Key Driver of Economic Stratification (1)</th>
<th>Modest Driver of Economic Stratification (2)</th>
<th>No / Little Impact (3)</th>
<th>Modest Driver of Economic Integration (4)</th>
<th>Key Driver of Economic Integration (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transit options are a... (1)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Q44 Overall, do **parents’ expectations of the types of friends that students make** have an impact on whether students make friends across socio-economic backgrounds?

<table>
<thead>
<tr>
<th></th>
<th>Key Driver of Economic Stratification (1)</th>
<th>Modest Driver of Economic Stratification (2)</th>
<th>No / Little Impact (3)</th>
<th>Modest Driver of Economic Integration (4)</th>
<th>Key Driver of Economic Integration (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents’ expectations are a... (1)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Q60 Overall, do **students in leadership roles** impact whether students make friends across socio-economic backgrounds?

<table>
<thead>
<tr>
<th></th>
<th>Key Driver of Economic Stratification (1)</th>
<th>Modest Driver of Economic Stratification (2)</th>
<th>No / Little Impact (3)</th>
<th>Modest Driver of Economic Integration (4)</th>
<th>Key Driver of Economic Integration (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students in leadership roles are a... (1)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Q47 Overall, does the way your school manages and offers **lunch breaks** have an impact on whether students make friends across socio-economic backgrounds?

<table>
<thead>
<tr>
<th></th>
<th>Key Driver of Economic Stratification (1)</th>
<th>Modest Driver of Economic Stratification (2)</th>
<th>No / Little Impact (3)</th>
<th>Modest Driver of Economic Integration (4)</th>
<th>Key Driver of Economic Integration (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our school’s lunch break is a... (1)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Q48 Please include any details or other thoughts to expand on your responses to the **non-curricular** section:

________________________________________________________________
________________________________________________________________

End of Block: Non-Curricular Activities

Start of Block: Final Block

Q43 Approximately, how **economically diverse** is your school? (With 10 as most diverse and 0 as least diverse)

<table>
<thead>
<tr>
<th>Economic Diversity ()</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

________________________________________________________________
________________________________________________________________
Q44 Approximately, how economically stratified is your school? (With 10 as most stratified, meaning that affluent students only hang out with affluent students; and 0 as least stratified, meaning that friendship groups are highly mixed by socio-economic status).

<table>
<thead>
<tr>
<th>Economic Stratification ()</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

Q46 Approximately, what percent of your students receive free and reduced lunch?

<table>
<thead>
<tr>
<th>% of students receiving free &amp; reduced lunch ()</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

Q42 Thank you for answering questions about the activities and programs that your school offers. Recent research and findings from Opportunity Insights have demonstrated that social networks are the biggest predictors of whether low-SES kids will experience economic mobility in their lifetimes.

The purpose of this survey and the questions you have answered is to determine what schools can do in order to encourage friendships across economic difference, in hopes of generating more economic mobility.

Q45 Do you have any additional thoughts on your school's culture, offerings, or infrastructure and how it impact whether friend groups are mixed across socio-economic dimensions?

Please feel free to include clarifying notes about any early responses as well.

________________________________________________________________________

End of Block: Final Block
### Exhibit H: Demographics of Participating High Schools

<table>
<thead>
<tr>
<th>Engagement</th>
<th>State</th>
<th>School Type</th>
<th>Size</th>
<th>% White</th>
<th>% Free &amp; Reduced Lunch</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Interview Iowa Private 1,379 79% -</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Interview Colorado Public 2,154 79% 13%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Interview Indiana Public 3,384 73% 17%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Interview Kansas Private 1,169 71% -</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Interview Indiana Private 1,075 85% -</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Interview Illinois Public 1,905 84% 12%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Interview Colorado Public 1,181 83% 7%</td>
<td></td>
<td></td>
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<td>8</td>
<td>Interview Oklahoma Public 1,050 68% 20%</td>
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<td>9</td>
<td>Interview California Public 2,987 63% 21%</td>
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<tr>
<td>10</td>
<td>Survey Response Florida Private 617 75% -</td>
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<tr>
<td>11</td>
<td>Survey Response Illinois Public 4,000 73% 14%</td>
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<tr>
<td>12</td>
<td>Survey Response Utah Public 3,021 84% 14%</td>
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<tr>
<td>13</td>
<td>Survey Response Oklahoma Public 2,556 70% 17%</td>
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<tr>
<td>14</td>
<td>Survey Response Utah Public 1,228 77% 16%</td>
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<tr>
<td>15</td>
<td>Survey Response Colorado Public 1,327 79% 24%</td>
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<tr>
<td>16</td>
<td>Survey Response Massachusetts Public 837 81% 30%</td>
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<tr>
<td>17</td>
<td>Survey Response Pennsylvania Public 1,171 74% 12%</td>
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<td>18</td>
<td>Survey Response Iowa Public 1,503 78% 29%</td>
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<td>19</td>
<td>Survey Response New Jersey Public 686 81% 1%</td>
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<tr>
<td>20</td>
<td>Survey Response Colorado Public 2,003 82% 9%</td>
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<tr>
<td>21</td>
<td>Survey Response Illinois Public 2,953 66% 19%</td>
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<tr>
<td>22</td>
<td>Survey Response Michigan Public 1,266 84% 16%</td>
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<td></td>
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<tr>
<td>Survey Response</td>
<td>State</td>
<td>Type</td>
<td>Count</td>
<td>%</td>
<td>%</td>
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<tr>
<td>-----------------</td>
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</tr>
<tr>
<td></td>
<td>Georgia</td>
<td>Public</td>
<td>3,056</td>
<td>60%</td>
<td>4%</td>
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<tr>
<td></td>
<td>Wisconsin</td>
<td>Public</td>
<td>1,148</td>
<td>88%</td>
<td>16%</td>
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</tbody>
</table>
Exhibit I: Quantitative Survey Response from High School Administrators and Counselors on Drivers

**Offering, Access, and Quality: Curricular**

<table>
<thead>
<tr>
<th>Different Academic Tracks (e.g., AP, IB)</th>
<th>Randomized Group Projects</th>
<th>Field Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does your school offer...?</td>
<td>Does your school offer...?</td>
<td>Does your school offer...?</td>
</tr>
<tr>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>100%</td>
<td>73%</td>
<td>91%</td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>High quality?</th>
<th>Open Access / Free?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>100%</td>
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</table>

Source: Quantitative Survey Response from High School Administrators and Counselors on Drivers, N=55

**Offering, Access, and Quality: Extra-Curricular**

<table>
<thead>
<tr>
<th>After-school Academic Clubs</th>
<th>After-School Art or Music Clubs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does your school offer...?</td>
<td>Does your school offer...?</td>
</tr>
<tr>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>High quality?</th>
<th>Open Access / Free?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td>50%</td>
</tr>
<tr>
<td>100%</td>
<td>10%</td>
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<tr>
<td>100%</td>
<td></td>
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</table>

Source: Quantitative Survey Response from High School Administrators and Counselors on Drivers, N=55
Offering, Access, and Quality: Extra-Curricular

After-school Sports Programs

<table>
<thead>
<tr>
<th>Does your school offer...?</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>High quality?</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Open Access / Free?</td>
<td>High</td>
<td>Low</td>
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</table>

Summer Programs

<table>
<thead>
<tr>
<th>Does your school offer...?</th>
<th>High</th>
<th>Low</th>
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</thead>
<tbody>
<tr>
<td>High quality?</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Open Access / Free?</td>
<td>High</td>
<td>Low</td>
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</tbody>
</table>

Source: Quantitative Survey Response from High School Administrators and Counselors on Drivers, N=15

Offering, Access, and Quality: Non-Curricular

Uniforms

<table>
<thead>
<tr>
<th>Does your school require...?</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>High quality?</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Open Access / Free?</td>
<td>High</td>
<td>Low</td>
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</tbody>
</table>

Transportation

<table>
<thead>
<tr>
<th>Does your school offer...?</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>High quality?</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Open Access / Free?</td>
<td>High</td>
<td>Low</td>
</tr>
</tbody>
</table>

Source: Quantitative Survey Response from High School Administrators and Counselors on Drivers, N=15
Impact on Social Integration/Stratification: Curricular

Impact on Social Integration/Stratification: Extra-Curricular
Impact on Social Integration/Stratification: Extra-Curricular

Impact on Social Integration/Stratification: Non-Curricular
Impact on Social Integration/Stratification: Non-Curricular

Parent’s Expectations

<table>
<thead>
<tr>
<th>High Friendling Bias</th>
<th>Low Friendling Bias</th>
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</thead>
<tbody>
<tr>
<td><img src="#" alt="Key Driver of Economic Integration" /></td>
<td><img src="#" alt="Modest Driver of Economic Integration" /></td>
</tr>
<tr>
<td><img src="#" alt="No / Little Impact" /></td>
<td><img src="#" alt="Key Driver of Economic Stratification" /></td>
</tr>
</tbody>
</table>

Preliminary Inefficient Data

Uniforms

<table>
<thead>
<tr>
<th>High Friendling Bias</th>
<th>Low Friendling Bias</th>
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</thead>
<tbody>
<tr>
<td><img src="#" alt="No" /></td>
<td><img src="#" alt="Yes" /></td>
</tr>
</tbody>
</table>

Source: Quantitative Survey Response from High School Administration and Counselors on Drivers, N=55

New survey data analysis
3 Ibid.


28 Ibid.


30 Ibid.


33 Ibid.

34 Ibid.


37 Deumier, Morgan. 2016. “Mentoring for Integration, ‘If I Can Do It, so Can You.’” *Malmö University: Faculty of Culture and Society*.


