

WHAT TEENS WANT FROM THEIR SCHOOLS:

A National Survey of High School Student Engagement

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Foreword and Executive Summary

BY AMBER M. NORTHERN AND MICHAEL J. PETRILLI

Boredom. We've all experienced it many times. Though we tend to think of it as unpleasant but enduring and harmless tedium, some research now suggests that boredom may be harmful to our health—it is potentially linked to everything from [weight gain](#), to [depression](#), to [physical pain](#)—even to [cheating on one's spouse](#)!

Boredom may exist in elementary or middle school, but it is endemic to high school. We've all heard American teenagers complain about it. Indeed, it's practically a rite of adolescent passage to profess one's perennial state of ennui—as if no one or nothing is cool enough to sustain the interest of a sixteen-year-old. Such complaints are even more frequent now that the typical adolescent has the equivalent of a super computer in his or her pocket and can use it not only to access the wonders of the web but also to keep up with the latest developments, chat with buddies, and exchange jokes, pictures, and more, all instantaneously.

What educators need to take seriously is the distinction between typical teenage whining and signs that students are actually disengaging from their formal education. Such disengagement is a portent of trouble, and not just because student engagement is closely linked to academic achievement.¹ Among high school students who consider dropping out, half cite lack of engagement with the school as a primary reason, and 42 percent report that they don't see value in the schoolwork they are asked to do.²

Teachers, of course, play a central role in engaging students in learning. A [recent study](#) showed that when students have a more engaging teacher, their attendance increases and their chances of completing high school improve. The authors found that “engaging teachers are approximately as influential on high school completion as teachers who are highly effective at improving students' test performance.” That's a very important thing to know.

Yet teachers aren't the only sources of increased—or diminished—student engagement. Other factors include the subject matter itself, particular instructional strategies, extracurricular activities and sports, peer groups, and a student's intrinsic motivation to learn.

We wondered how much these various elements of the overall high school experience matter when it comes to engaging students. Common sense says not every student will be motivated to learn in the same

ways. In a 2009 report, The New Teachers Project (TNTP) showed that teachers are not interchangeable “[widgets](#).” Neither are kids. We wondered, then, if there was a way to characterize and quantify such differences for various types of students.

As luck would have it, in 2014, the American Federation of Children’s (AFC) Board Chair was pondering similar questions. The Chair happened to be Betsy DeVos (yes, that one). She and two of AFC’s senior staff, Executive Director Greg Brock and National Policy Director Whitney Marcavage, invited us to the AFC offices one afternoon to examine the problem of student disengagement in high school. All of us agreed that today’s large, one-size-fits-all comprehensive high schools—reminiscent of what [James B. Conant proposed in 1959](#) and what [Powell, Farrar, and Cohen deplored in 1985](#)—were ill-serving far too many young people. Informed and encouraged by what she had seen at her husband’s aviation-focused charter school, future Secretary of Education DeVos wondered if specialized schools could better match students with approaches to learning that aligned with the elements that most engaged them. She suggested that we go straight to the source and ask students themselves what elements of high school did or didn’t engage them.

Which is exactly what we did, once we had recruited the necessary help. First, we turned to experts in polling youth. John Geraci, President and Founder of Crux Research, has ample experience in surveying young people, particularly with regard to their use of digital media. He’s also an experienced market researcher (formerly with Harris Interactive). John recruited his colleagues Maureen Palmerini and Pat Cirillo to help with the study—and Fordham’s research manager Victoria McDougald agreed to help on the writing side as well. Next, we turned to authorities on student engagement and fortunately found that both Hunter Gelbach, Associate Professor at the University of California, Santa Barbara, and Ze Wang, Associate Professor at the University of Missouri, were game to advise the project. Even better, each had previously developed valid measures of student engagement that we were able to use in our survey.

While there are many ways to explore student engagement, the Crux team used standard methods of market research to identify student “segments” and the characteristics that their members have in common. Specifically, we sought to determine whether American high schoolers could be placed into distinguishable groups that share common sets of behaviors, perceptions, and emotions that define what “being engaged in school” means to them. (Fordham conducted a similar [study](#) with American parents in 2013, wherein we undertook to differentiate their schooling preferences.)

We surveyed a nationally representative sample of more than two thousand students in grades 10–12, exploring such topics as participants’ backgrounds and characteristics, school and classroom experiences, and overall educational preferences. We also embedded questions from the engagement instruments that our expert advisers had developed.

After calculating individuals' scores on each set of items (or factors), we placed students into groups based on which factor they scored the highest. In this way, we identified their dominant, or primary, mode of engagement. Crux also convened several focus groups to hear more about what engaged students in school; this qualitative information provided much-needed context for the survey results.

Here are the highlights of what we learned:

Most high school students report being intrinsically motivated to learn. The vast majority (83 percent to 95 percent) report being motivated to apply themselves in school by thinking deeply, listening carefully, and completing assignments. In the student engagement literature, this is known as “cognitive engagement” and includes mostly internal behaviors such as asking yourself questions, figuring out where you went wrong, and going back over things that you don't understand. It's encouraging that most students report doing these things in school, for it's unlikely that educators will maximize student potential if they don't tap into pupils' intrinsic motivation to learn.

In addition, many students report that teachers are central to their sense of connectedness and engagement in school; that they highly value time with and connecting to peers; and that they enjoy lessons and projects involving technology.

Beyond these welcome commonalities, however, **we identified six subgroups of students with varying engagement profiles.** Each group comprises 15 percent to 19 percent of the total pupil (sample) population.

1. Subject Lovers (19 percent) are more likely to be male, white, attend schools in urban areas, and place in the top quarter, even the top 5 percent, of their class. These students generally enjoy school and feel engaged when they perceive what they're learning to be useful, interesting, and relevant to their daily lives. Compared to their peers, they are more likely to report that academic classes and clubs are their *favorite thing* about school; to gravitate towards AP, math, science, and technology classes; and are least likely to report being bored in class. They are motivated by learning new and challenging things, and many expect to go on to attend four-year colleges.

2. Emotionals also comprise nearly one-fifth of high school students (18 percent). They're equally likely to be male or female, but are skewed toward white, urban students and tend to be a high-poverty group (based on self-report). These students convey many positive emotions when in the classroom, such as being excited about, proud of, and interested in their school work. While they are not the top academic performers, Emotionals nonetheless often report not wanting to stop working at the end of class. They also indicate a greater need for connection at the school level and therefore tend to prefer smaller schools with fewer students who all know each other, not large institutions that might sacrifice intimacy for more

course and extracurricular options. The seeming contradiction between their positive emotions in the classroom and their discontent with the larger school is evidenced by the fact that they are *least* likely to agree that they follow school rules; furthermore, nearly one-third have considered dropping out of high school. These emotionally fragile students appear to be in danger of falling through the cracks.

3. Hand Raisers also comprise nearly one-fifth of high school students (17 percent). They are disproportionately likely to attend public rather than private schools, are less likely to come from high-poverty backgrounds, and are more likely to be female. Hand Raisers are engaged, work hard, and participate while in class, but don't do much outside it. They do fairly well academically and are generally satisfied with their school, but don't report spending much time on homework or in extracurricular activities. Hand Raisers are “in the moment” students who apply themselves during the school day, but appear uninterested in the other things that school has to offer them. They are the *least likely* of all groups to feel that too much emphasis is placed on standardized test scores—and are the least likely to consider dropping out of school.

4. Social Butterflies comprise 16 percent of high school students. They are slightly more likely to be non-white and suburban. Social Butterflies are much likelier than their peers to report feeling like they belong at school, that they matter to others, and that they are generally understood and respected. They tend to enjoy the social aspects of school, such as watching or taking part in sports and catching up with peers during breaks. The majority of them say that one of their “favorite things” at school is “hanging out with friends” or “lunch time.” Compared to others, the Social Butterflies are more likely to say that they are “happy with the level of school pride that exists in my school.” Of those who report connecting with an adult at school, Social Butterflies are more likely to say that that individual is a coach. Because they're apt to value social interactions with peers and adults at school over academics, it is perhaps unsurprising that they tend to be average performers academically.

5. Teacher Responders comprise 15 percent of high school students. They are slightly more likely to be female and white and not from high-poverty households. Above all, these students value close relationships with teachers and other adults in their schools, and thrive when they feel that adults are invested in them academically and personally. They forge tight bonds with their teachers and benefit from strong teacher/student relationships that help them cultivate a connection to the subject. It is important that their teachers be interested in both their academic and personal lives, and that they are respected, even remembered, by those teachers. These students value choice in both courses and instructors. Just 7 percent of Teacher Responders report getting bored in class because the teacher is not interesting, and only 6 percent say they don't get enough interaction with teachers. In fact, Teacher Responders are among the most satisfied students, highly likely to report that they would choose their current school even if they could go elsewhere.

6. Deep Thinkers also comprise 15 percent of high school students. These students are more likely to be female and attend district schools; half are non-white. Though most high school students report being cognitively engaged, Deep Thinkers score *even higher* on our measures of cognitive engagement. Unlike students in the other groups, however, this group has no *other* primary engagement mode. Deep Thinkers listen carefully, like to figure things out on their own, think deeply when they take tests, and complete their assignments. They do well in scholastics, but not as well as one might expect from a group that is intrinsically motivated. That, and the fact that they are not engaged via other channels—such as deep connections with teachers or the subject matter—may help explain why they are also the group that’s *least likely* to give their current school an “A” grade. Surprisingly, about one-third of Deep Thinkers have considered dropping out of high school.

Interestingly, outside of the sometimes subtle differences noted above, how a student engages in school is not strongly associated with his or her gender, race, current school type, or socio-economic background; in other words, students of all backgrounds fall within each of these engagement types.



What does this all mean? We see three takeaways.

First, the vast majority of American high school students say they are trying hard and want to do their best in school. Somewhat counterintuitively, our results indicate that most high school students want to work hard in class and figure out things on their own if possible. They ask themselves questions, check their book or other materials when things don’t make sense, and try to pay attention to things they’re supposed to remember. Teachers should support and maximize this hard-wired desire on students’ part to think and reason autonomously—and policy types should be encouraged to see that even if we’re not satisfied with current levels of achievement, students seem to be willing to do better. It’s also heartening that the desire to learn and do well cuts across all types of students.

Second, distinct groups of students are primarily engaged in school through different levers. For some, the relationship with the teacher is key; for others, it is the subject matter or the social aspects of schooling. For still others, the level of engagement varies based on the extent that their emotional needs can be met in the classroom—or the extent that they actively participate in class. Tailoring schooling and instruction to such needs, preferences, and tendencies has the potential to pay dividends in greater engagement—and ultimately in achievement gains. Which leads us to takeaway three.

Third, engagement and choice go hand in hand. We’ve heard it a million times: a one-size-fits-all education system all but guarantees that some students will be left out—and eventually left behind. Both

engagement and choice take many forms. In this case, choice does not have to be *among* schools (though more of that would surely help). It can also be among teachers, among courses, among delivery options, among instructional strategies, among programs, and among schools-within-schools.

Looking over the varied ways in which students are engaged—or not—we see plenty of need for such variety, but also plenty of opportunity.

For students inclined toward social engagement, for example, collaborative assignments (pairs or small groups) and other group projects might be helpful. So would time built into each school day for extracurricular activities, sports, and social clubs to allow students to interact and develop close relationships with peers and teachers outside of class. That small charter schools or programs in career and technical education sometimes struggle to provide such opportunities could be a stumbling block for Social Butterflies.

For those who thrive on teacher rapport, a “flipped” high school might be beneficial, where students watch and participate in videotaped lessons from home and then apply what they’ve learned in class, where the teacher is available to help them individually with their questions. And for those who plug into class but tend to check out afterward, an extended school day or year might be a good fit, providing increased opportunities for learning and instruction.

In the end, we suspect that many of these opportunities could be advantageous for all students no matter how they are primarily engaged.

The bottom line is this: to address the needs of students who are engaged in multiple ways, the supply side needs to *offer* choices at multiple levels that are genuinely different, not just multiple versions of essentially the same thing. That’s in contrast to the usual cry that everything that “works” must be “scaled.” What we’re recommending is a kind of customizing. That’s because student engagement and student choice—in all of their assorted forms—are truly two sides of the same coin. In other words, Betsy DeVos—now Secretary DeVos—was right: One-size-fits-all high schools can’t possibly engage all students effectively.

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Introduction

Improving students' engagement—or involvement in and enthusiasm for school—has long been the focus of many school reform efforts, and for good reason: Half of high school students who consider dropping out cite lack of such engagement with the school as a primary reason, and 42 percent report that they didn't see value in the schoolwork they were asked to do.³ While it's clear that student engagement and academic achievement are closely linked,⁴ many engagement strategies assume that all students are similarly motivated to do their best. Some of these strategies therefore focus on more quality interactions between teacher and student; hands-on, problem-based learning; the “relevant” application of content to real-life scenarios; and various uses of technology meant to make learning more enjoyable or “connected.”

Yet students aren't widgets, and it's unlikely that they'll all respond well to a single best model of schooling. Ask any parent with more than one child and you'll hear that their kids are just so *different* in how they respond to school (and practically everything else).

This study attempts to characterize and quantify such differences by examining what motivates high school students to engage in school. While there are many ways to explore student engagement, analysts used proven methods of market research to identify student “segments” and the characteristics that their members have in common (see *Why segment students into groups?*, page 13). Specifically, we sought to determine whether American high schoolers could be grouped into distinguishable segments that share common sets of behaviors, perceptions, and emotions that define what “being engaged in school” means to them. (Fordham conducted a similar [study](#) with American parents in 2013, which endeavored to differentiate their schooling preferences.)

We surveyed over two thousand students in grades 10–12 in a nationally representative survey. The questionnaire explored a variety of topics, including participants' backgrounds and characteristics, their school and classroom experiences, and their overall educational preferences—all in pursuit of answering this overarching question: How do high school students differ in how they are motivated (or not) to learn?

What Do We Know About Student Engagement?

Robust research literature links higher levels of school and classroom engagement to improved academic outcomes for students and shows that disengagement often leads to students struggling academically, withdrawing socially, or dropping out of school entirely.^{5,6} Yet engaging students in school is challenging for educators at all levels, and becomes even more so as students age—studies show student engagement

peaks during elementary school and decreases through middle and early high school before flatlining (presumably after some of the most disengaged students have dropped out).⁷ Fortunately, factors such as teacher support, positive classroom climate, academic rigor, interactive learning opportunities, positive relationships with peers, and students' positive feelings of self-efficacy and autonomy are positively correlated with high student engagement in classrooms.⁸ Unfortunately, the best methods for achieving these ends are much less clear.

Leading scholars categorize student engagement into one of three dimensions: behavioral (referring to a student's class participation and involvement in academic, social, or extracurricular activities), cognitive (a student's level of mental effort and overall investment in learning), and affective (positive emotions or a student's identification with his school, sense of belonging, and overall school connectedness).^{9,10}

Building on this work, researchers from the University of Missouri in 2014 developed the Classroom Engagement Inventory (CEI), and corroborated these three dimensions of engagement. Researchers Wang, Bergin, and Bergin also identified two additional dimensions: compliance-related engagement (or obedience to classroom norms) as a distinct sub-dimension of behavioral engagement; and a fifth dimension, disengagement (a "negative feelings" factor representing overall "lack of effort, lack of attention, and mental withdrawal").¹¹

Given how fundamental engagement is to improving academic outcomes for students, other organizations and researchers have developed tools and frameworks for conceptualizing it. For example, the widely used Tripod student survey, developed by Harvard's Ronald Ferguson, measures three common engagement indicators (behavioral engagement, emotional engagement, and "motivational mindset").¹² Another open-source tool, the Panorama Student Survey, measures student perceptions of classroom and school experiences.¹³ Designed by Hunter Gehlbach (UC Santa Barbara) and a team of researchers from Harvard's Graduate School of Education, Panorama includes a set of questions that address student engagement specifically (among other topics) and can be used by individual teachers and districts to inform efforts to improve school and classroom climate.

This study builds upon prior work by exploring both classroom and school-level aspects of engagement at the high school level. But no study, to our knowledge, has attempted to segment high school students based on how they respond differently to these aspects. To do so, we conducted a comprehensive search of the student engagement literature to identify reliable measures that capture the various dimensions of student engagement.

The work of Wang, Bergin, and Bergin, along with that of the Panorama team, were most instructive. Each respective team had validated a set of “scales” (a group of survey questions shown to consistently measure the same construct) that, put together, provided a robust, distinct, and comprehensive portrait of engagement (see *Appendix A* for more on these scales and the survey instrument).¹⁴

Our final student survey includes the five distinct dimensions of classroom engagement identified by Wang, Bergin, and Bergin as well as three additional engagement-related scales drawn from Panorama’s survey (teacher-student relationships, sense of school belonging, and valuing of school and subject matter). Complete survey results are available online at the Thomas B. Fordham Institute’s website: <https://edexcellence.net/publications/what-teens-want-from-their-schools>.

WHY SEGMENT STUDENTS INTO GROUPS?

Segmentation is commonly used by marketers to help design products that specific consumer groups will want to buy. It is an analytic technique that divides an overall market into distinct sub-groups with distinctive characteristics and needs, and allows marketers to adjust their product design and promotional efforts to better address the needs of each sub-group.

While segmentation is commonly associated with marketing, it can be a useful approach in social science as well. For example, in this study, we ask: Can high school students be grouped into distinguishable segments based on what engages or motivates them

in school? After analyzing survey results, we found that while nearly all students share several engagement preferences, beyond those commonalities, they are predominantly engaged in quite different ways.

By definition, a one-size-fits-all model of education fails to consider sub-group needs, preferences, and priorities. Splitting students into smaller groups based on what motivates them to learn can help educators design strategies that will maximize the potential of each sub-group. It may also help policymakers and entrepreneurs identify new school models that appeal to—and do well at serving—particular groups of students.

Methods Overview

In collaboration with the Fordham Institute, Crux Research developed and conducted a nationally representative online market research survey of 2,006 public and private school students in the United States (grades 10–12) between April 12 and June 12, 2016.

Quantitative data were collected using a national online panel (Survey Sampling Inc.). Quotas were established to ensure that the resulting sample closely matched the nation’s high school age population for grade level, gender, race/ethnicity, and region. Data were balanced to reflect existing populations of students attending traditional public districts, public charters, public magnets, and private schools, as well as homeschool students and students attending fulltime online schools.¹⁵ (An oversample of 153 charter students was included to provide a sufficient sample size to use as a basis of comparison.) Students were also asked to identify their school by name and zip code. When the respondent’s school was identifiable, publicly available information about the school was appended to the data set.¹⁶

As indicated, the survey used existing items from the Classroom Engagement Inventory (CEI)¹⁷ and the Panorama Student Survey.¹⁸ In total, thirty-nine items from these questionnaires were included.¹⁹ We used an exploratory factor analysis approach to analyze the item responses. This statistical technique identifies the underlying relationships between variables (i.e., which of the items “hang together” to form a construct). The factor analysis resulted in six underlying factors, or constructs, of student engagement:²⁰

- 1. Cognitive/Intrinsic Engagement:** measures students’ level of mental effort and intrinsic desire to work hard and do well in school.
- 2. Teacher-Student Relationships:** assesses whether students value developing strong connections with their teachers, in terms of both their academic and personal lives.
- 3. Affective Engagement:** measures students’ positive emotions in school—whether they enjoy class and to what extent they feel interested and engaged at school.
- 4. Valuing (School and Subject Matter):** measures how interesting and useful students perceive material they’re learning to be, both inside and beyond school.
- 5. Sense of Belonging:** gauges how much students feel valued and like they matter to other students and peers at their school.
- 6. In-Class Participation²¹:** measures students’ level of in-class attentiveness (or lack thereof), assessing to what degree students feel distracted, bored, or let their mind wander in class.

After calculating each student's score on each factor, we placed students into groups based on which factor they scored the highest. In this way, we're identifying their dominant or primary mode of engagement—not their *only* mode (see *Appendix A* and *Differences*, page 17). Names for each group are intended to capture the key characteristics of each factor above. We then created profiles for each group using various demographic, behavioral, and attitudinal measures gathered in the survey.

After administering the survey and analyzing preliminary results, we convened four student focus groups in the Washington, D.C. metropolitan area. We recruited a total of thirty high school juniors and seniors to participate, based in part on their responses to a small battery of engagement questions as well as their range of racial/ethnic backgrounds, school types, and household incomes. Qualitative information gleaned from these focus groups provided helpful context for the quantitative survey findings and helped characterize students' engagement preferences.

Results

We found several important common threads in how students are engaged, but also a number of unique engagement preferences. We start with the similarities, then turn to the differences.

Commonalities

We identified several commonalities across all students. In particular, one of the constructs relative to cognitive engagement applied to the vast majority of students. The survey items that comprise this construct are shown in Table 1.

TABLE

Nearly all students report being cognitively engaged.

	% of all students who report they do each of the following daily or weekly
I go back over things I don't understand	84%
If I make a mistake, I try to figure out where I went wrong	86%
I ask myself some questions as I go along to make sure the work makes sense to me	80%
If I'm not sure about things, I check my book or use other materials like charts	84%
I think deeply when I take quizzes in this class	83%
I try to figure out the hard parts on my own	81%
I pay attention to the things I am supposed to remember	91%
I listen very carefully	91%
I search for information from different places and think about how to put it together	74%
I judge the quality of my ideas or work during class activities	74%
I complete my assignments	95%

This construct taps into students' universal and intrinsic desire to learn and be a good student. It includes mostly internal behaviors—asking yourself questions, figuring out where you went wrong, going back over things that you don't understand—and it's encouraging that most students report doing these things in school. Given most high schoolers' propensity to report these behaviors, it is unlikely that educators will maximize student potential overall if they can't tap into each students' intrinsic motivation to learn.

What other commonalities did we find? Teachers are central to many students feeling connected in school. About one-third of students (33 percent) report that a teacher is the adult in their school with whom they really connect.

Similarly, in our focus groups, students expressed a preference for teachers who are genuinely excited about their subject area and who also provide emotional support.

““ *The engaging factor in school for me is definitely the teachers. My teachers come up with interesting and exciting ways to get us involved in a certain subject—because the content is obviously not always amazing to learn about and each student has different ways of learning and different things they like.* ””

– Maggie, Private (Religious) School

““ *Teachers just help you a lot. If you get in trouble, they talk to the administrators for you. A lot of people make bonds with their teachers so that even when you graduate from high school, you still connect with them.* ””

– Autumn, Charter School

In addition to the important role that teachers play in connecting with and engaging students, other commonalities include:

- Most students report enjoying lessons and projects involving technology (61 percent find such projects and lessons to be extremely or very interesting), and believe that computers and other technology are used effectively in their schools (80 percent).
- The vast majority of students value time with their peers (92 percent of all students); of those, over half (59 percent) state that getting to hang out with their friends is one of their favorite things about school.

Differences

Beyond these commonalities, particular engagement preferences also emerged. As noted previously, we identified six sub-groups of students who scored much higher on a set of related engagement items than on others. Respondents were placed into sub-groups based on which set was most dominant for them. (All differences cited in the report are statistically significant; see *Appendix A* for more.)²²

Meet the Six Engagement Types

As shown in Figure 1, American high school students may be classified into one of six engagement types based on how they tend to engage in school. The types can also be mapped onto the three dimensions by which scholars have traditionally characterized student engagement (behavioral, cognitive, emotional). The classifications and the percentage of high schoolers comprising each group are as follows:

- Subject Lovers: 19 percent
- Social Butterflies: 16 percent
- Emotionals: 18 percent
- Hand Raisers: 17 percent
- Deep Thinkers: 15 percent
- Teacher Responders: 15 percent
- Deep Thinkers: 15 percent

FIGURE

1 High school students are fairly evenly distributed across engagement types.

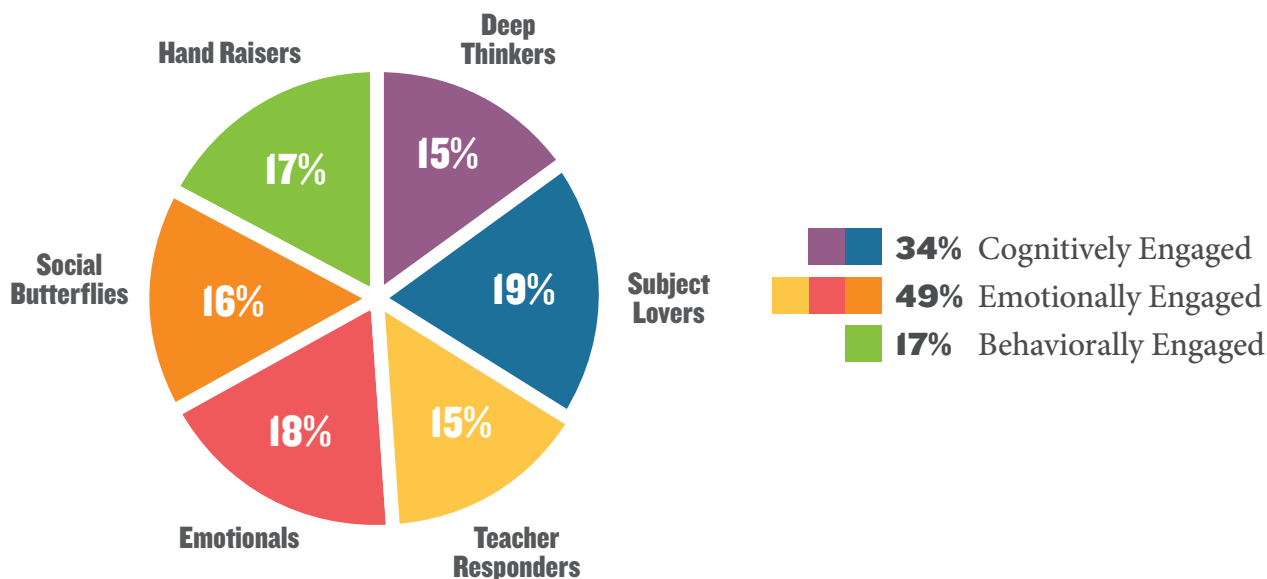
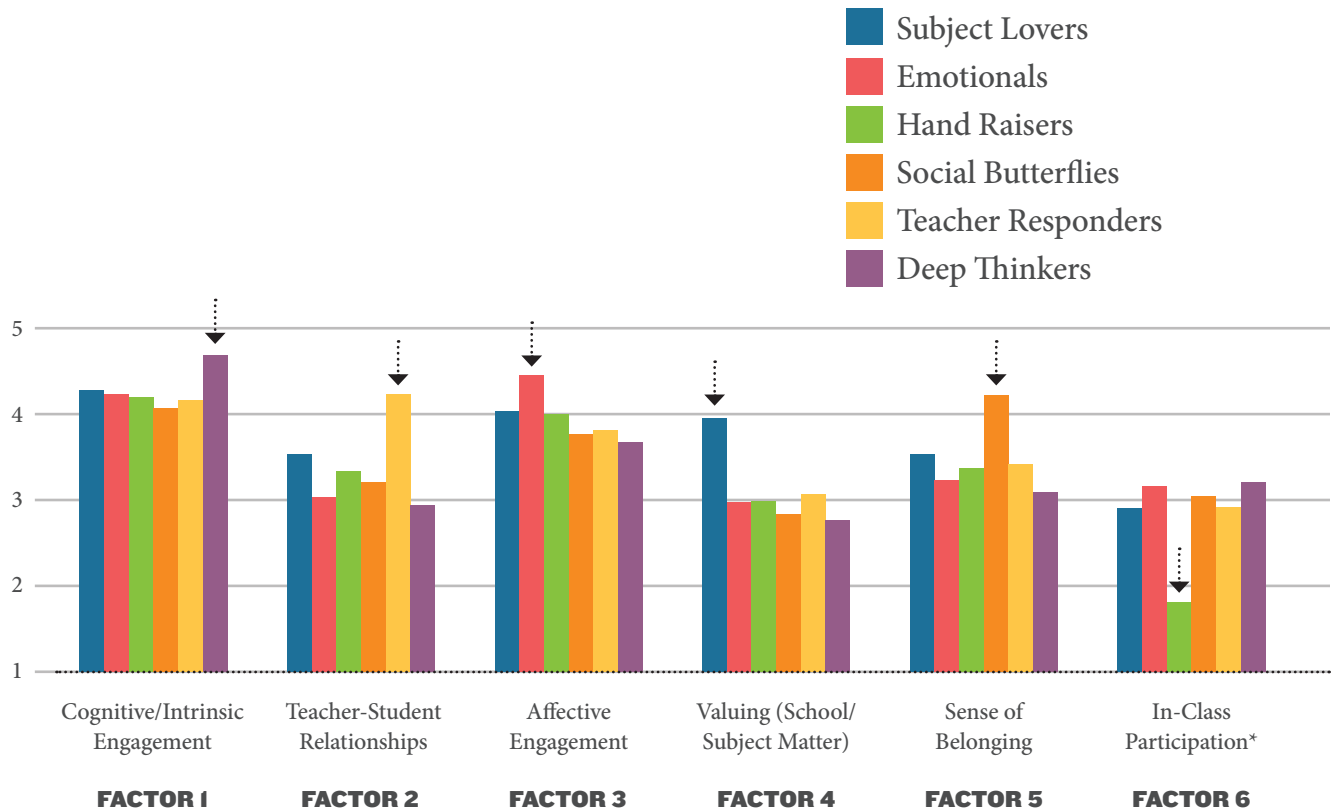


Figure 2 depicts average student responses (out of a five-point response scale) for each of the six student engagement types. Note that cognitive/intrinsic engagement (Factor 1) is a central aspect of engagement for most students (see *Commonalities*, page 16). Beyond that, however, distinct groups of students value different types of engagement more highly than others (Factors 2–6).²³

FIGURE
2

Scaled factor scores by segment and construct



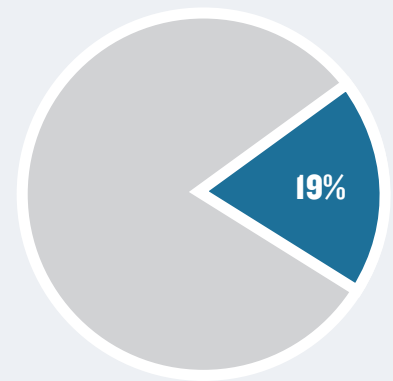
* These items had negative coefficients, meaning that students reported doing these activities infrequently (e.g., “zoning out,” letting my mind wander, pretending like I’m working). The segment here responded even more negatively than most.

Subject Lovers



OVERVIEW OF STUDENT TYPE

Subject Lovers (19 percent of students) are more likely to be male, white, attend schools in urban areas, and place in the top quarter, even the top 5 percent, of their class. These students generally enjoy school and feel engaged when they perceive what they're learning to be useful, interesting, and relevant to their daily lives. Compared to their peers, they are more likely to report that academic classes and clubs are their favorite thing about school; to gravitate towards AP, math, science, and technology classes; and are least likely to report being bored in class. They are motivated by learning new and challenging things, and many expect to go on to attend four-year colleges.



Subject Lovers are students who perceive school subjects as useful, interesting, and applicable to daily life and who think that it's important to do well in their classes (see Table 2 for items on which they score high). They comprise nearly one-fifth of all high school students (19 percent).

TABLE

2

Subject Lovers perceive school subjects as useful, interesting, and applicable to daily life.

How useful do you think [REFERENCE SUBJECT] will be to you in the future?

How much do you see yourself as a/an [REFERENCE SUBJECT] person?

How often do you use ideas from [REFERENCE SUBJECT] class in your daily life?

How interesting do you find the things you learn in [REFERENCE SUBJECT] class?

How important is it to you to do well in [REFERENCE SUBJECT] class?

Note: Response scales vary for each item (e.g., “Not at all useful” to “Extremely useful”). Overall, respondents in this group are more likely to respond with the positive end of the scales, such as “Extremely useful,” compared to their peers.

Subject Lovers are more likely to be male, white, attend schools in urban areas, and in the top quarter (even the top 5 percent) of their class.²⁴ They generally *like* their school; nearly half of these academically minded star students award “As” to their current school. They are also more likely to say math or science is their favorite subject, compared to their peers.

Subject Lovers tend to say that their favorite things about school are academic courses and clubs (Table 3) and they're least likely to get bored in class (Table 4).

TABLE

3

Subject Lovers are most likely to say that their favorite things about school are academic courses and clubs.

Indicate how you feel about each of the following activities at your school/
place of learning:
% Indicating “one of my favorite things”

	Subject Lovers	Emotionals	Hand Raisers	Social Butterflies	Teacher Responders	Deep Thinkers
Academic courses	35%	15%	16%	15%	18%	12%
Clubs	27%	13%	12%	15%	16%	15%

TABLE

4

Subject Lovers are least likely to get bored in class.

Which of the following are reasons why you get bored in [SUBJECT] class?

	Subject Lovers	Emotionals	Hand Raisers	Social Butterflies	Teacher Responders	Deep Thinkers
I don't get bored in [SUBJECT]	40%	22%	37%	22%	30%	18%

Nearly half of the Subject Lovers report that the teacher who knows them best would describe them as “someone who is mostly motivated by learning new and challenging things.” They are also more likely to have taken (or expect to take) AP courses than students who favor other engagement styles (Figure 3) and to expect to attend a four-year college after graduating from high school (Figure 4).

FIGURE 3

Subject Lovers are more likely to have taken (or expect to take) AP courses.

Which of the following have you done or do you expect to do before you graduate from high school?

% Indicating “advanced placement (AP) courses”

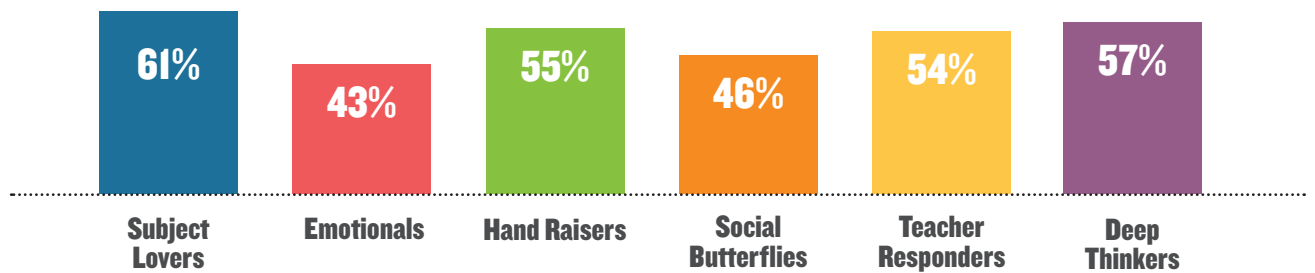
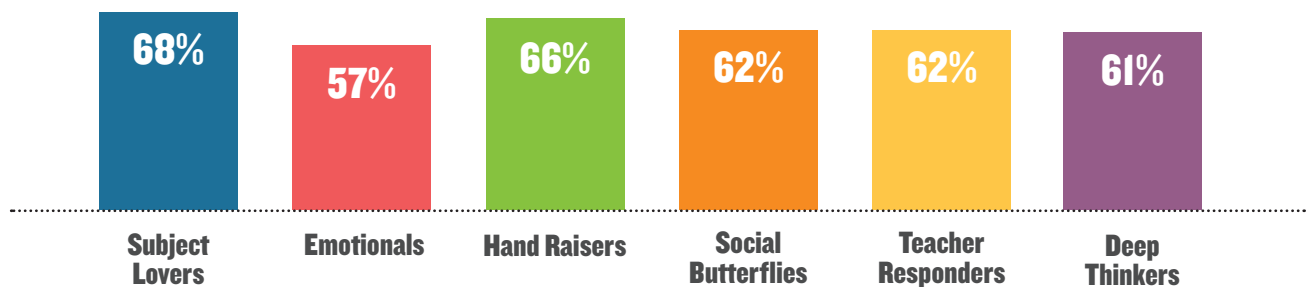


FIGURE 4

Subject Lovers report being more likely to attend a four-year college after graduating high school.

Which statement below best describes what you plan to be doing the fall after you graduate from high school?

% Indicating “attending a four-year college or university”

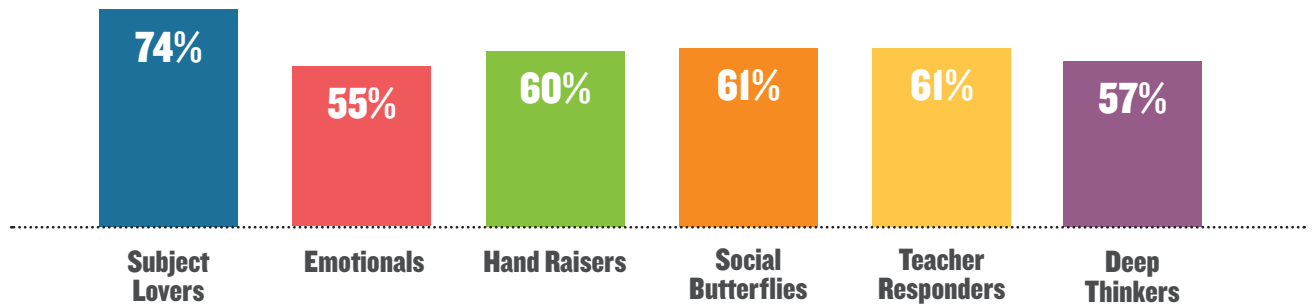


Beyond the classroom, Subject Lovers are likely to participate in clubs, sports, and internships. They report being well served by current school options, but would likely thrive in any academic setting. They are also likelier to report that projects and lessons involving technology are “extremely interesting” or “very interesting” (Figure 5).

FIGURE
5

Most Subject Lovers regard projects and lessons involving technology to be extremely or very interesting.

How interesting do you find the following types of academic activities at your school? Projects and lessons involving technology
% Indicating “very/extremely interesting”



In our focus groups, Subject Lovers spoke frequently about the importance of academic achievement and success. While some mentioned a genuine love of learning and thirst for knowledge, others commented on the value of knowing how to “play the game” by building their high school résumés. They felt that certain academic and extracurricular credentials would best bolster their college applications. Some also mentioned a preoccupation with their GPAs (they were not shy about requesting “re-dos” on assignments or asking for extra credit, for example). Though Subject Lovers are focused on acceptance into top colleges and universities, they also generally like and enjoy high school.

Subject Lovers also stressed the role of the teacher as crucial for their sense of engagement. They appreciate a teacher who is personable and can make content relatable, but appear most responsive when educators are passionate and knowledgeable about the subjects that they teach. To these young scholars, the energy and enthusiasm of a motivated teacher is contagious. They react well to classroom interaction and exercises that elicit participation with their peers—though some are weary of team projects where they feel they get stuck with the heavy lifting. They have little patience with classmates who don’t want to learn or seemingly get passed along with little effort.

IN THEIR OWN WORDS: SUBJECT LOVERS

“ Usually my grades come easy...I got As in mostly all my classes except AP Chem and the fact that I have to actually work—put a lot of effort into it, it challenges me and it makes that my favorite class. It’s preparing me for more when I take AP classes next year. ”

–Raia, Charter School

“ I love the content... my teacher is engaged and she’s energetic. She keeps us moving and it’s very quick paced. It goes by fast and it challenges me. But I can keep up. ”

– Maggie, Private (Religious) School

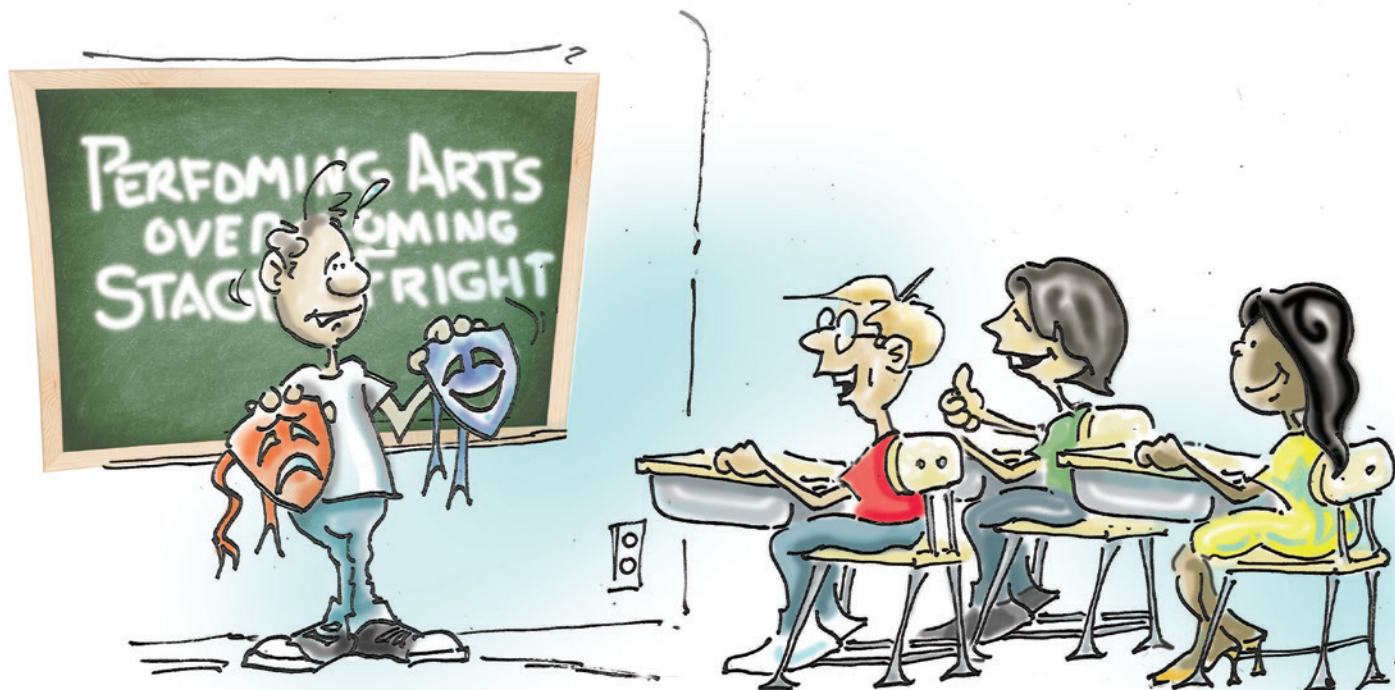
“ A strict teacher stops the whole class just to make an argument with a student about having their phone out. It’s so frustrating because you go off topic and are taking this class time to yell when you should be just teaching us. They just don’t want to learn. Let them do what they want to. You can take a person’s phone and continue with the class. You shouldn’t make a big deal because it changes the other students’ morale. The rest of the class wants to learn, so just teach us! ”

– Sydney, Public School

“ Some students are getting passed through school and that makes me feel like nobody is being motivated to do their best. The teachers are allowing it, ‘Here’s some work. I don’t care if you get it wrong or right, you all get 30 out of 30. I guess I’ll see you at graduation.’ It’s unfair. It’s terrible because I’m graduating and some seniors aren’t putting in the work I’m doing but they’re still going to walk across that stage...They’re not getting what they need to go to college and to get a job. Professors will say, ‘OK, what did you learn in high school?’ All they can really say is that they copied some notes and walked across the stage. It’s sad because it’s a disservice. ”

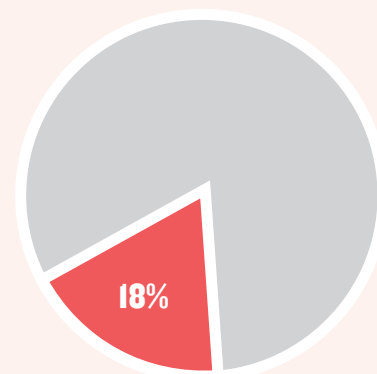
– Deja, Public School

Emotionals



OVERVIEW OF STUDENT TYPE

Emotionals comprise nearly a fifth of high school students (18 percent). They're equally likely to be male or female, but are skewed towards white, urban students and tend to be a high-poverty group (based on self-report). These students convey many positive emotions when in the classroom, such as being excited about, proud of, and interested in their school work. While they are not the top academic performers, Emotionals nonetheless often report not wanting to stop working at the end of class. They also indicate a greater need for connection at the school level and therefore tend to prefer smaller schools with fewer students who all know each other, not large institutions that might sacrifice intimacy for more course and extracurricular options.



Emotionals are enthusiastic students who report feeling excited, happy, proud, and interested in their classes. They have fun in class and don't want to stop working at the end of the period. They comprise nearly one-fifth of all high school students (18 percent). Table 5 lists the survey items on which Emotionals respond positively.

TABLE
5

Emotionals report feeling excited, happy, proud and interested in their classes.

I feel excited
I feel amused (smile, laugh, have fun)
I feel happy
I feel proud
I feel interested
I do not want to stop working at the end of class

Note: Response scale is “Each Day of Class,” “Weekly,” “Monthly,” “Hardly Ever,” and “Never.” Respondents in this group are more likely to report engaging in these activities each day of class or weekly compared to their peers.



Emotionals are equally likely to be male or female, but are skewed toward white, urban students and tend to be a high-poverty group (based on self-report).²⁵ Academically, they perform slightly lower than other students surveyed (again based on self-reported class rank and GPA) and fewer plan to attend a four-year college or university after they graduate (Figure 6).

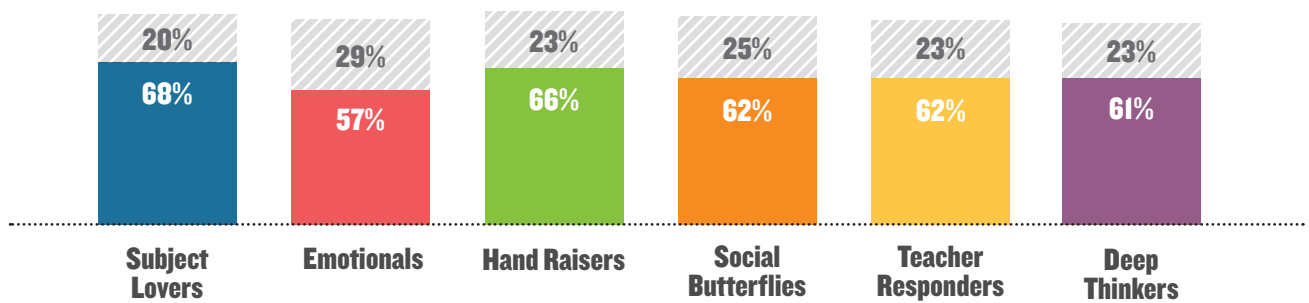
FIGURE

6

Slightly fewer Emotionals report that they plan to attend a four-year college after graduation; more plan to attend a two-year college or trade/technical school.

Which statement below best describes what you plan to be doing the fall after you graduate from high school?

-  *Attending a two-year college or trade/technical school*
-  *Attending a four-year college/university*





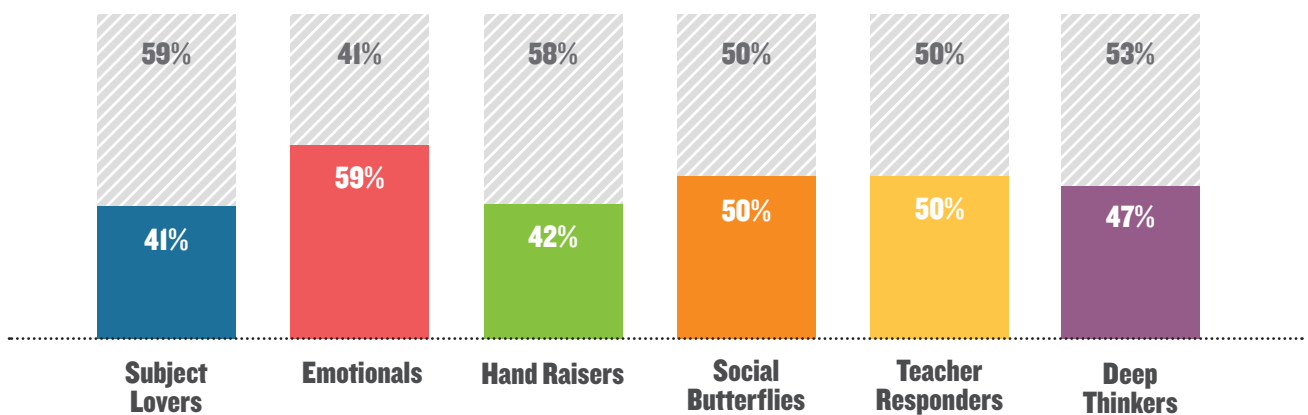
In addition to reporting positive emotions when in the classroom, the group also expresses a strong need for connection at the school level. If given a choice, the majority would prefer to attend a smaller school with fewer students who all know each other—and presumably where they’d receive even more individual support and attention from teachers (Figure 7).

FIGURE
7

Fifty-nine percent of Emotionals would attend a smaller school, if given the choice.

If given a choice, what type of high school would you prefer to go to?

-  Large school, where all students don't know each other, but there are more options for course/opportunities/activities
-  Small school, where all the students know each other, but there are fewer options for course/opportunities/activities



The seeming contradiction between their positive emotions in the classroom and their discontent with the larger school appears to be a pattern. They are *least* likely to agree that they follow school rules (Figure 8) and *most* likely to report not feeling safe in school (Figure 9).

FIGURE
8

Emotionals are least likely to agree that they follow school rules.

Indicate how much you agree or disagree with the following statements:
I tend to follow the rules at my school/place of learning.
% Indicating “strongly agree/agree”

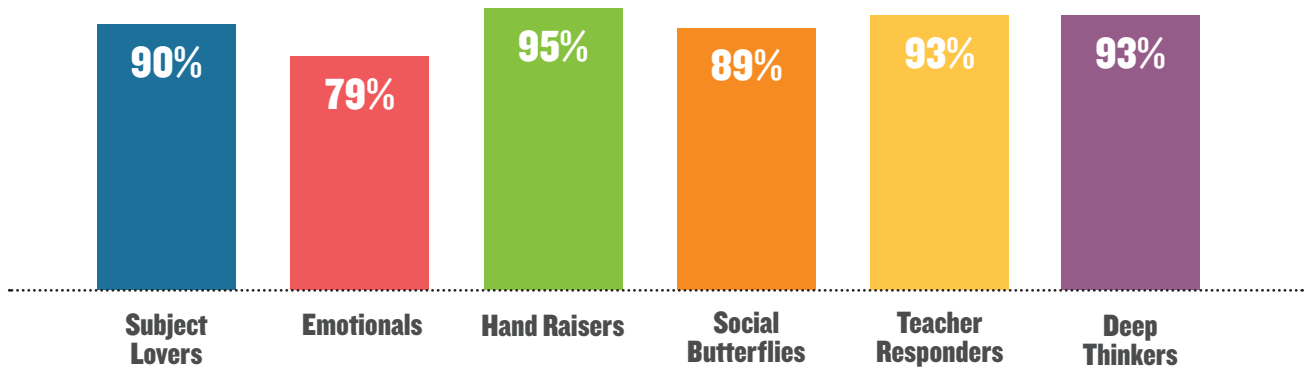
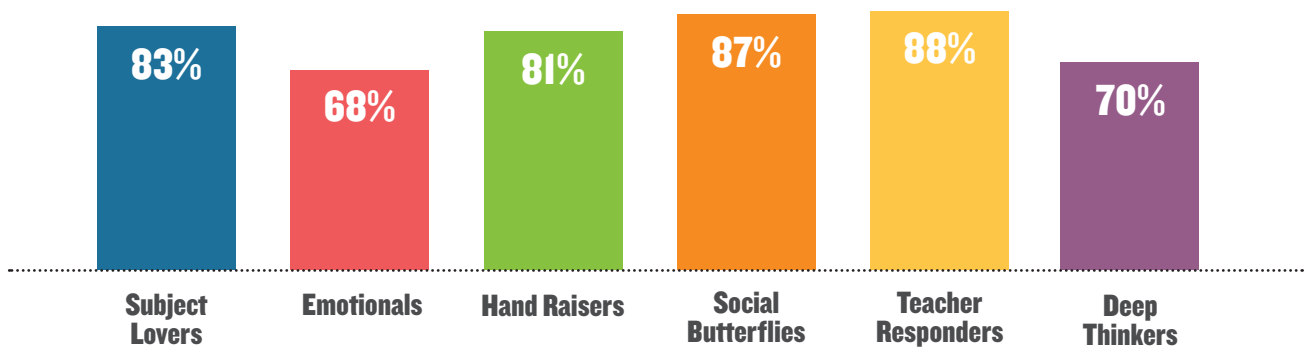


FIGURE
9

Fewer Emotionals report feeling safe in school.

Indicate how much you agree or disagree with the following statements:
I feel safe while in my school/place of learning.
% Indicating “strongly agree/agree”



One might surmise that these students are emotionally fragile: while they appear to get the support they need in the more intimate classroom setting, the larger school setting leaves them cold. They need supports that seem to be missing at the school level but available in the classroom.

Not having this emotional connection with the school itself could impact Emotionals negatively in other ways, particularly since they exhibit several at-risk behaviors. Specifically, they report not doing as well as other groups academically (in terms of both class rank and GPA), and compared to other groups, they are less motivated academically. They may well be in danger of falling through the cracks.

Focus group participants from this group mentioned the importance of having fun in class, of having friends, and of proactive school staff in helping vulnerable students like themselves.

IN THEIR OWN WORDS: EMOTIONALS

“Honestly the reason why I love the Junior Reserve Officer Training Corps (JROTC) is because the teacher talks to us, he gets what we are trying to think and tries to connect it. He corrects me, but I don't feel dumb.... He brings joy to the class, he makes everyone laugh, he's the reason everybody wants to be in this class. If every class I had was like that, I'd be happy. It's entertaining, educational, and fun.”

- Juan, Private (Religious) School

“It's terrible. I hate everybody [at my school]. Just terrible. I don't even have friends that go there. Most of my friends go to other schools. Teachers are bad. Security is annoying.”

- Nick, Public School

“In public school, when you need help to pass a grade, they stay quiet until you go to them and say, 'I need help.' In private school when you're failing, they say, 'Come to the guidance counselor so we can talk.' Surprising for me. They helped me out a lot.”

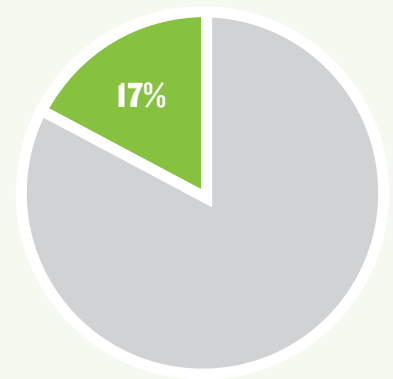
- Jose, Private (Religious) School

Hand Raisers



OVERVIEW OF STUDENT TYPE

Hand Raisers comprise nearly a fifth of high school students (17 percent). They are disproportionately likely to attend public rather than private schools, are less likely to come from high poverty backgrounds, and are more likely to be female. Hand Raisers are engaged, work hard, and participate while in class, but don't do much outside it. They do fairly well academically and are generally satisfied with their school, but don't report spending much time on homework or in extracurricular activities. They are the least likely of all groups to feel that too much emphasis is placed on standardized test scores—and are the least likely to consider dropping out of school.



Hand Raisers comprise nearly one-fifth of all high school students (17 percent). They learn best through class participation and in-class activities; the classroom is the learning “hot spot” for them (Table 6). Hand Raisers are “in the moment” students who work hard while in class, but don’t do much beyond it. Specifically, they responded that they “hardly ever” or “never” do things like “zone out” or let their minds wander.

TABLE

6

Hand Raisers are unlikely to say that they “pretend” to work, “zone out,” or let their minds wander in class.

I just pretend like I’m working

I am “zoned out,” not really thinking or doing class work

I let my mind wander

Note: These items had negative coefficients, meaning that students reported doing these activities infrequently. Response scale is “Each Day of Class,” “Weekly,” “Monthly,” “Hardly Ever,” and “Never.” Respondents in this group are more likely to report engaging in these activities “Hardly Ever” or “Never,” compared to their peers.

Hand Raisers are disproportionately likely to attend public schools and less likely to come from high-poverty backgrounds. They are more likely to be female and do fairly well academically. Overall, they are largely happy with school.

These are students who are engaged in the classroom, pay attention, and participate while there. But they do little outside class. Students in this group spend an average amount of time on homework, and tend not to get engaged with extracurricular activities (Table 7).

TABLE

7

Hand Raisers are less likely to report that clubs and school events are favorite activities at school.

Indicate how you feel about each of the following activities at your school/place of learning:

% Indicating “one of my favorite things”

	Subject Lovers	Emotionals	Hand Raisers	Social Butterflies	Teacher Responders	Deep Thinkers
Clubs	27%	16%	12%	15%	16%	15%
School events and assemblies	32%	23%	19%	30%	23%	13%

Hand Raisers are also the *least likely* of all groups to feel that too much emphasis is placed on standardized test scores (Figure 10), perhaps somewhat unsurprising, given that these students consistently apply themselves in the classroom.

FIGURE

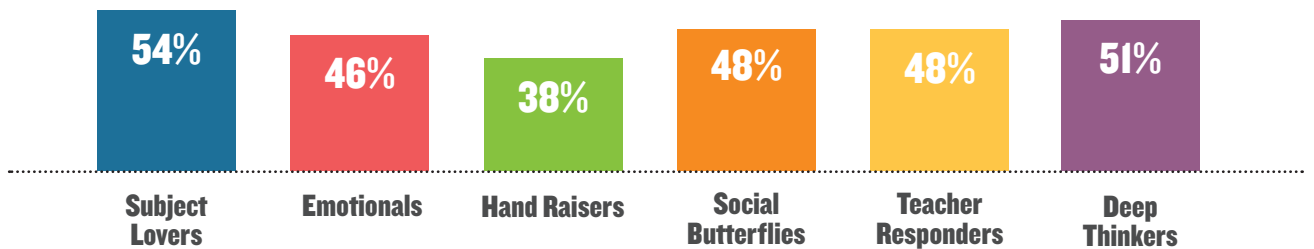
10

Hand Raisers are the least likely to report that their school places too much focus on preparing students for standardized tests.

Indicate how much you agree or disagree with the following statements:

My school/place of learning has too much focus on preparing students for standardized tests.

% Indicating “strongly agree/agree”



In focus groups, Hand Raisers tended to talk about engagement and active participation in class. They focused on what was going on “right here and now” when in the confines of the classroom, giving it their all. Yet they didn’t radiate school pride or seem to care much about it, and they did not appear to cultivate deep personal relationships with teachers and staff. It was as if, once home, they unplugged from school life, turning off their school brains. They were *not* disengaged, in that they didn’t care about school or did not do their homework. Rather, they seemed to thrive in the moment when in class. Some also mentioned that they won’t really miss school when they graduate.

IN THEIR OWN WORDS: HAND RAISERS

“ We had some pretty interesting discussions in a bunch of my classes which I got really into... but I don’t really talk to my teachers once I get out of the classroom. ”

– Michael, Private (Religious) School

“ I think teachers should use class time to answer questions and to make sure everyone is on board and on the same page. I think it definitely helps me to feel more positive about going to school when I know I’m not going to fall behind. ”

– Kyle, Public School

“ I do well in class answering questions and getting things done. We had some pretty interesting discussions in a bunch of my classes which I got really into. ”

– Reece, Private (Religious) School

“ I don’t really participate in any extra stuff in my school. I won’t miss my connection with my teachers after high school because I don’t really talk to them once I get out of their classroom. ”

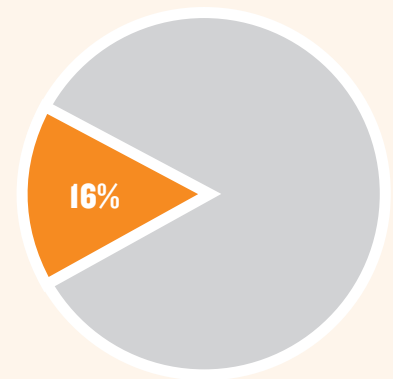
– Robert, Public School

Social Butterflies



OVERVIEW OF STUDENT TYPE

Social Butterflies comprise 16 percent of high school students. They are slightly more likely to be non-white and suburban. Social Butterflies are much likelier than their peers to report feeling like they belong at school, that they matter to others, and that they are generally understood and respected. They tend to enjoy the social aspects of school such as watching or taking part in sports and catching up with peers. The majority of them say that one of their “favorite things” at school is “hanging out with friends” or “lunch time.” They are also more likely to say that they are “happy with the level of school pride that exists in my school.” Because they’re apt to value social interactions with peers and adults at school over academics, it is perhaps unsurprising that they tend to be average performers academically.



Social Butterflies comprise 16 percent of all high school students. They tend to be engaged via relationships with other students and adults at their schools. They report feeling like they belong at school, that they matter to others, and that they're generally understood and respected (Table 8).

TABLE

8

Social Butterflies feel valued and like they belong at school.

Overall, how much do you feel like you belong at your school/place of learning?
How much do you feel you matter to others at your school/place of learning?
How much respect do students in your school show you?
How well do people at your school/place of learning understand you as a person?

Note: Response scales vary for each item (e.g., “Do not belong at all” to “Completely belong”). Overall, respondents are more likely to respond with the positive end of the scales, such as “Completely belong,” compared to their peers.

Social Butterflies are slightly more likely to be non-white suburban students, and tend to fall in the middle of the academic curve.

As shown in Table 9, high percentages of Social Butterflies say one of their “favorite things” at school is “hanging out with friends” (78 percent) and “lunch time” (50 percent). They most enjoy social aspects of school such as watching or taking part in sports and catching up with peers during breaks. Compared to others, Social Butterflies are likely to say that they are “happy with the level of school pride that exists in my school” (Figure 11). Of those who report connecting with an adult at school, Social Butterflies are more likely to say that individual is a coach (Figure 12). These students feel like they belong and matter to their peers and adults in their school.

TABLE
9

High percentages of Social Butterflies say hanging out with friends and lunch time are favorite school activities.

Indicate how you feel about each of the following activities at your school/place of learning:

% Indicating “one of my favorite things”

	Subject Lovers	Emotionals	Hand Raisers	Social Butterflies	Teacher Responders	Deep Thinkers
Hanging out with friends	57%	47%	59%	78%	59%	56%
Lunch time	36%	41%	32%	50%	37%	37%
Sports and/or watching games	36%	23%	27%	43%	27%	27%
School events and assemblies	32%	25%	19%	30%	23%	13%

FIGURE
11

Eighty-two percent of Social Butterflies say they are happy with the level of school pride at their school.

Indicate how much you agree or disagree with the following statements:

I am happy with the level of school pride that exists in my school/place of learning.

% Indicating “strongly agree/agree”

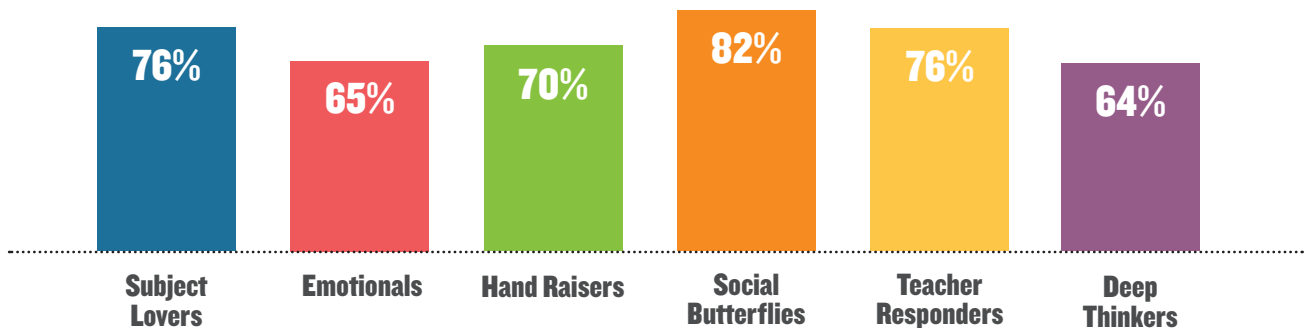
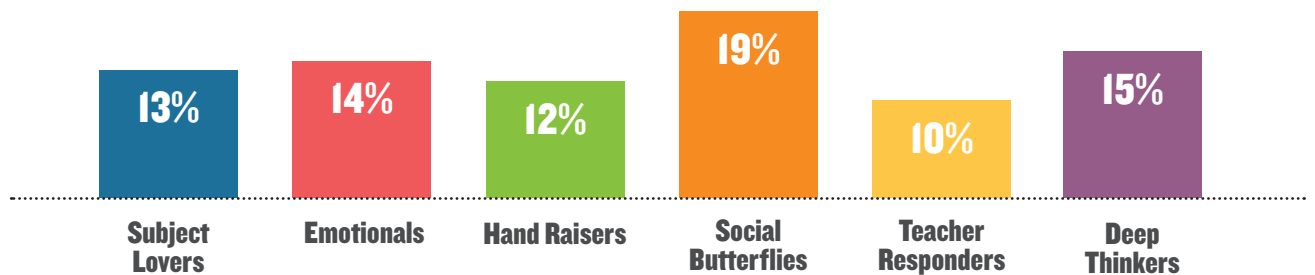


FIGURE
12

Of those students who report “really connecting” with an adult at school, a higher percentage of Social Butterflies report that this individual is a coach.

Is this adult in your school you really connect with:
% Indicating “a coach” (among those who connect with a adult)



Focus group interviews underscored how much these students depend on interactions and relationships with their peers and adults within their school. They are often very conscious of social status, cliques, and the hierarchical order of the school.

IN THEIR OWN WORDS: SOCIAL BUTTERFLIES

“ If you’re likeable, personable, people know you and easily like you, and then you’ll probably be with the popular kids. [Being popular] just really depends on who your friends are and definitely sports is a ticket into that. ”

– Leonardo, Private (Religious) School

“ When I first came to high school I was trying to fit in. Trying to act cool and at the time it was people with sagging pants, a lot of people were cursing and they were considered the cool kids... But then as I got more aware of things, I realized that I don’t need to act like that. I started just being myself and I found the right friend groups. I’ve been offered the right opportunities in high school because of it. ”

– Peter, Public School

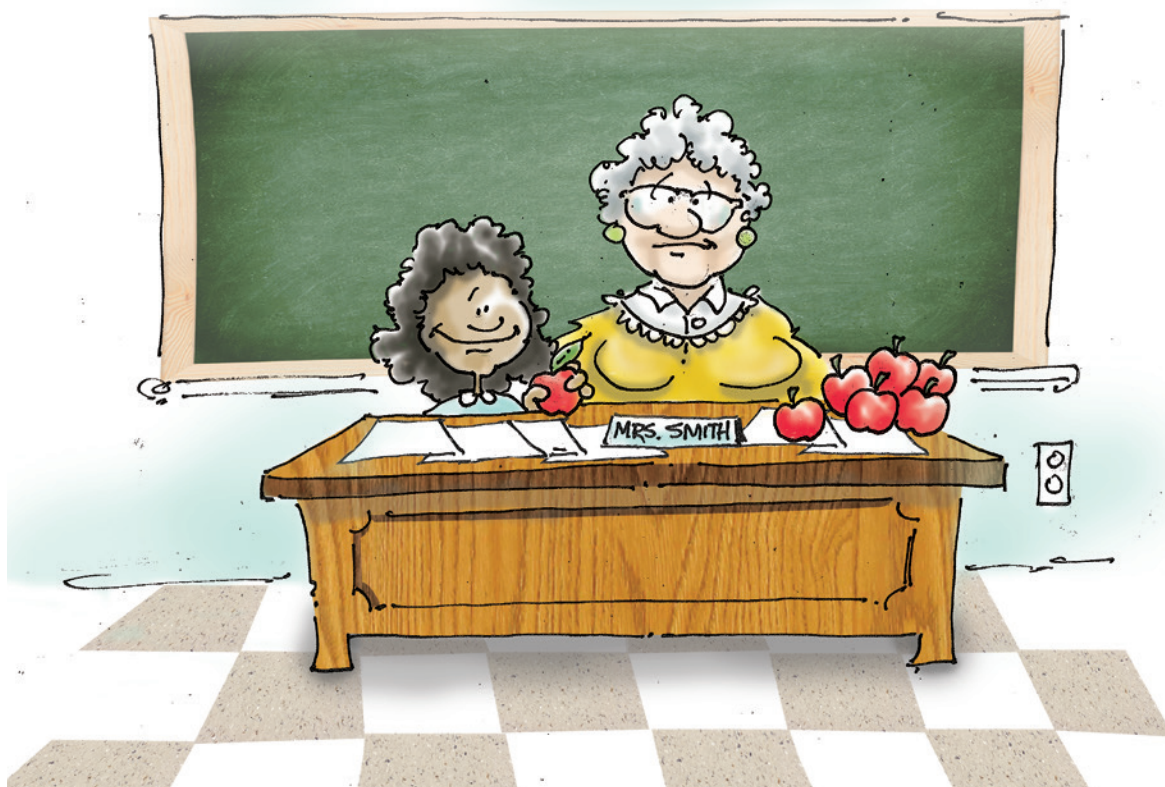
“ I know at a lot of schools, students don't go to their guidance counselors but at my school, I actually built a great relationship with my guidance counselor from last year. I really like talking to him. I talk to him about anything. I will just go just to go talk to him about something stupid. He helps to try to keep me on top of what my assignments are. ”

– **Darian, Magnet School**

“ My two favorite teachers just keep it so real with us. We're actually connecting with the teacher and connecting with what they're saying. I feel like that's a really good way of learning and that sticks. I like when our teachers will have us get in groups. We'll have a big class discussion about it and we'll connect it to different things going on today. We're learning from each other. ”

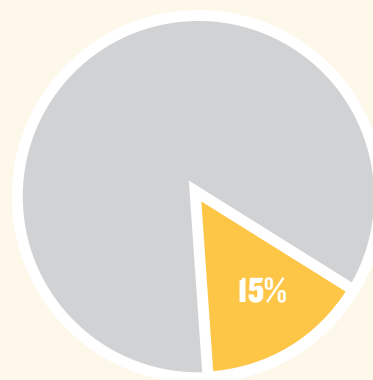
– **Peter, Public School**

Teacher Responders



OVERVIEW OF STUDENT TYPE

Teacher Responders comprise 15 percent of high school students. They are slightly more likely to be female and white and not from high poverty households. Above all, these students value close relationships with teachers and other adults in their schools, and thrive when they feel that adults are invested in them academically and personally. It is important that their teachers be interested in both their academic and personal lives, and that they are respected, even remembered by those teachers. These students value choice in both courses and instructors. In fact, Teacher Responders are among the most satisfied students, highly likely to report that they would indeed choose their current school even if they could go elsewhere.



Teacher Responders are students who value strong connections with teachers and other adults in their schools and likely do best when these connections are nurtured and developed. They comprise 15 percent of all students. They forge tight bonds with their teachers and benefit from strong teacher/student relationships that help them cultivate a connection to the subject. It is important that their teachers are interested in both their academic and personal lives, and that they are respected, even remembered. Table 10 lists the survey items on which Teacher Responders answer affirmatively.

TABLE

10

Teacher Responders want their teachers to be interested in both their academic and personal lives.

If you walked into/came to class upset, how concerned would your [REFERENCE SUBJECT] teacher be?

When your [REFERENCE SUBJECT] teacher asks you how you are doing, how often do you feel that your teacher is really interested in your answer?

How excited would you be to have your [REFERENCE SUBJECT] teacher again?

If you came back to visit class three years from now, how excited would your [REFERENCE SUBJECT] teacher be to see you?

How respectful is your [REFERENCE SUBJECT] teacher toward you?

Note: Response scales vary for each item (e.g., “Not at all concerned” to “Extremely concerned,” or “Almost never” to “Almost always”). Overall, respondents in this group are more likely to respond with the positive end of the scales, such as “Extremely concerned” or “Almost always,” compared to their peers.

These students are slightly more likely to be female and white, but are evenly dispersed among suburban, urban, and rural areas. They are unlikely to be from high poverty households. Academically, they are typical; they do no better or worse than the student body as a whole.

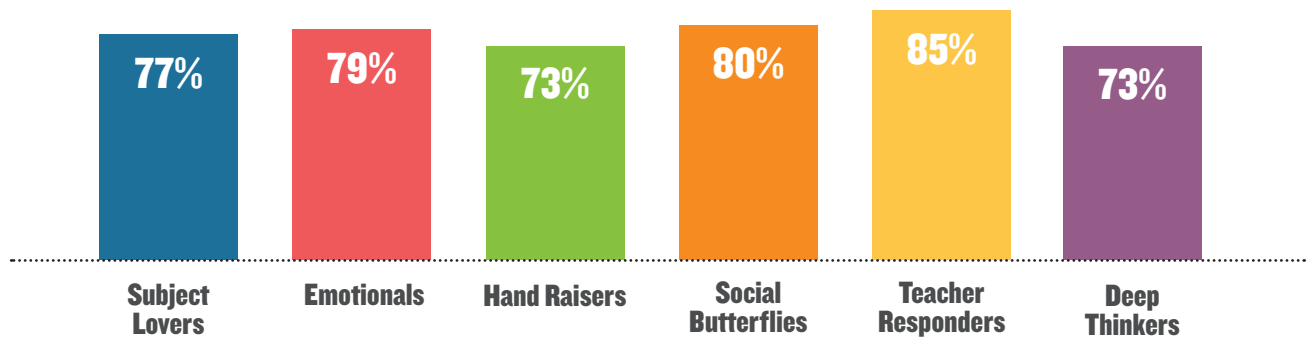
Teacher Responders are slightly more likely to attend charter schools, tend to be happy in school (45 percent rate their satisfaction with school as an “A”), and have a positive attitude. They value choice in schools, subjects, and teachers. Not surprisingly, more of them indicate that there’s an adult in school with whom they really connect and that this individual is a teacher (Figure 13).

FIGURE

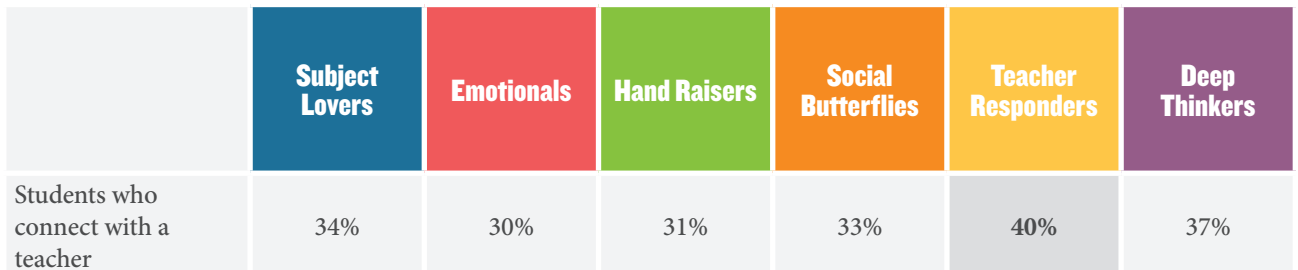
13

Teacher Responders are more likely to connect with an adult in their school and that adult is most likely a teacher.

Is there an adult in your school/place of learning with whom you really connect?
 % Yes



Is this adult in your school you really connect with:
 % Indicating “a teacher”



Teacher Responders are clearly engaged by teachers: Just 7 percent report getting bored in class because the teacher is not interesting. Furthermore, just 6 percent say they don’t get enough interaction with teachers. In fact, Teacher Responders are among the most satisfied students and are highly likely to report that they would choose their current school even if they had the choice to go elsewhere (78 percent).

In focus groups, Teacher Responders often describe themselves as having “people skills.” Their bonds with teachers can extend beyond the classroom walls to social media and life outside high school. On the other hand, if they don’t connect with their teachers, it gives them license to check out.

IN THEIR OWN WORDS: TEACHER RESPONDERS

“ We switch classes every month so we take three classes at a time. Usually it’s a bad day when we switch—it’s like having a bunch of first days at school which really sucks. But last time it was good because I switched into the class with one of the best teachers in the school. It’s good to understand a lot of stuff because the teacher is really good. ”

– Nandi, Private School

“ I make personal connections with every one of my teachers alike. They’re not only my teacher. They’re my friend. ”

– Autumn, Charter School

“ [Teachers] love not just teaching, but the subject that they teach. They’re really knowledgeable about it. That’s the best kind of teacher you can have. ”

– Orlandis, Private School

“ Teachers just help you a lot.... A lot of people make bonds with their teachers so that even when you graduate from high school, you still connect with them. ”

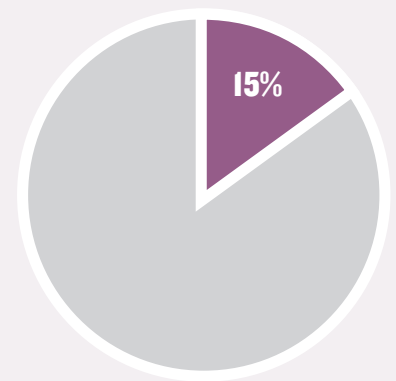
– Gary, Charter School

Deep Thinkers



OVERVIEW OF STUDENT TYPE

Deep Thinkers comprise 15 percent of high school students. These students are more likely to be female and attend district schools; half are non-white. Though most high school students report being cognitively engaged, Deep Thinkers score even higher on our measures of cognitive engagement. Unlike students in the other groups, however, this group has no other primary engagement mode. Deep Thinkers listen carefully, like to figure things out on their own, think deeply when they take tests, and complete their assignments. They do well in scholastics, but not as well as one might expect from a group that is intrinsically motivated. Surprisingly, about a third of Deep Thinkers have considered dropping out of high school.



Deep Thinkers are students who tend to be cognitively engaged. Recall that most high school students report being cognitively engaged. In other words, the vast majority of students report high agreement with the items that comprise this factor. Yet, even though most students score high on these items as a whole, one particular group scores *even higher* on them. So, unlike students in other segments, this group has no *other* primary engagement mode (see Figure 2 and *Commonalities*, page 16).

Deep Thinkers comprise 15 percent of all high school students. They are introspective students who listen carefully and complete their assignments. They tend to focus their energies inward, trying to figure out difficult concepts on their own. Table 11 lists the survey items on which Deep Thinkers respond positively—the same items that underlie engagement for most students.

TABLE



Deep Thinkers like to figure out things on their own.

I go back over things I don't understand
If I make a mistake, I try to figure out where I went wrong
I ask myself some questions as I go along to make sure the work makes sense to me
If I'm not sure about things, I check my book or use other materials like charts
I think deeply when I take quizzes in this class
I try to figure out the hard parts on my own
I pay attention to the things I am supposed to remember
I listen very carefully
I search for information from different places and think about how to put it together
I judge the quality of my ideas or work during class activities
I complete my assignments

Note: Response scale is “Each Day of Class,” “Weekly,” “Monthly,” “Hardly Ever,” and “Never.” Respondents in this group are more likely to report engaging in these activities “each day of class” or “weekly,” compared to their peers.

These students are more likely to be female, attend public district schools, and have above-average GPAs (B+). Half are white and half are non-white. They are unlikely to be either the *very top* students or academically at risk. Deep Thinkers do well in school, but not as well academically as one might expect from a group that is intrinsically motivated. That, and the fact that they are not engaged via other channels such as a deep connection with teachers or the subject matter, may help explain why they are the group that is the most unhappy with their school.

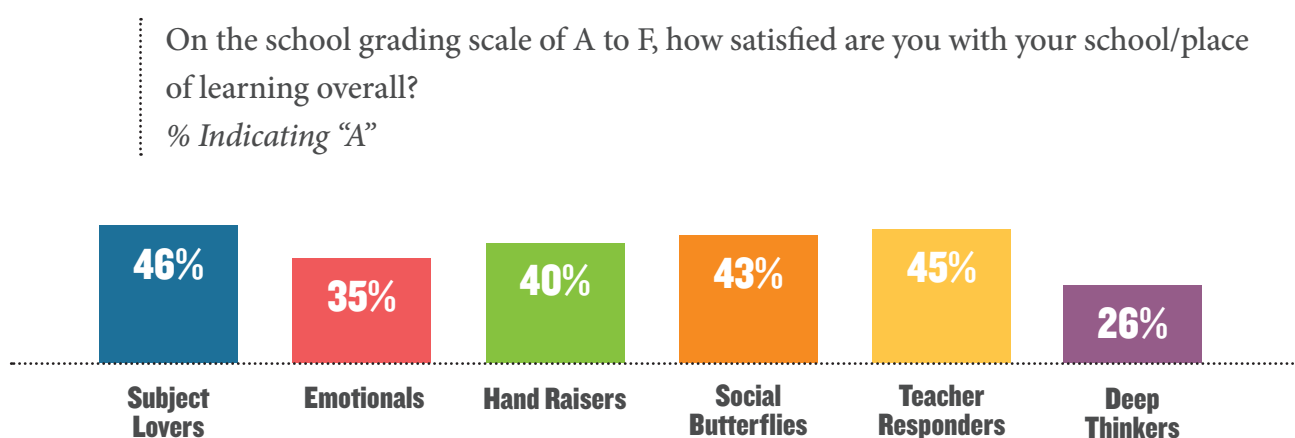
Indeed, students exhibiting this type of engagement are the *least likely* to give their school an “A” grade. (Figure 14). They are more likely than other students to say they get bored in class because the material isn’t interesting to them (43 percent versus 36 percent). They are also the group least likely to say they would choose to attend their current school if given a choice (66 percent).

Deep Thinkers also don’t build strong connections with their peers or teachers, perhaps preferring to go quietly about their business unnoticed.

FIGURE

14

Only about one-quarter of Deep Thinkers give their current school an “A” rating.



In focus groups, Deep Thinkers say they wish that schools would de-emphasize grades, standardized test scores, and GPAs because they don’t think these measures are an accurate portrayal of their knowledge or a fair scorecard of who they are. They also report being dissatisfied with their teachers and the structure of the school day (such as starting too early or having block scheduling).

IN THEIR OWN WORDS: DEEP THINKERS

“ Personally, I like to do my work alone, at my own pace. I want some time to myself to make sure I understand the answer before I have to discuss it with others. I think some people just like to hear themselves speak all the time. It’s like they need to talk it through out loud to understand things, but that’s not for me. ”

- Makayla, Private (Religious) School

“ I think there’s a problem with the way that we are evaluated. I don’t think that GPA and the grades that we get in our courses are reflective of how well we actually learned the material. ”

- Noah, Public School

“ I get really bored and I can’t sit in a class for 90 minutes just listening to my teacher talking and constantly working. So in our activities, by doing something related to the work, but doing something like an actual game... [that] helps with understanding. ”

- Megan, Charter School

How Do Engagement Types Differ in Other Ways?

In this section, we explore differences between engagement types by gender, race/ethnicity, socio-economic background, student performance, school location, and school type.

Gender, Race/Ethnicity, Socio-Economic Background

First and somewhat surprisingly, a student's demographics and the type of school she attends predict little about her engagement preferences. Put another way, how a student engages in school is not strongly associated with race, current school type, or socio-economic background.²⁶ Students of all genders, races, and socio-economic backgrounds fall within each group such that none is overwhelmingly associated with certain groups of students.

That said, we did observe some subtle (and statistically significant) demographic differences.²⁷ As shown in Table 12, Deep Thinkers and Hand Raisers, for example, skew slightly female and Subject Lovers skew male and white.

TABLE

12

Deep Thinkers and Hand Raisers are slightly more likely to be female. Subject Lovers are slightly more likely to be male and white.

	Subject Lovers	Emotionals	Hand Raisers	Social Butterflies	Teacher Responders	Deep Thinkers
Female	45%	49%	57%	47%	52%	54%
Non-white	45%	50%	47%	53%	47%	50%

Another difference relates to urbanicity. Urban schools are most likely to have students among the higher-achieving (Subject Lovers) and lower-achieving (Emotionals) classifications. Suburban schools are most likely to have students who are Hand Raisers, who generally tend to be engaged and participate in the classroom. Overall, between 35 percent and 46 percent of each segment attends schools where more than half of the students are poor—i.e., receive free or reduced-price lunch (Table 13).

TABLE 13

Urban schools include more students in the higher-achieving (Subject Lovers) and lower-achieving (Emotionals) groups. Suburban schools have more Hand Raisers.

	Subject Lovers	Emotionals	Hand Raisers	Social Butterflies	Teacher Responders	Deep Thinkers
Urban	48%	43%	31%	36%	30%	38%
Suburban	29%	36%	43%	39%	39%	34%
Rural	22%	20%	26%	22%	29%	25%
Percent at schools with >50% free or reduced-price lunch	45%	46%	39%	35%	36%	44%

School Type

Table 14 shows how each engagement tendency is currently distributed within specific school types (see *Appendix B* for additional results by school type). Interestingly, the six types are approximately equally distributed within the nation’s district public schools, and *all* school types are likely to have a significant portion of students from each engagement group. However, charter schools have relatively high proportions of Emotionals, while public magnet schools have a higher proportion of Deep Thinkers. Private schools are more likely to have higher proportions of Subject Lovers (somewhat odd since the latter also tend to attend schools with higher percentages of low-income students).²⁸

TABLE
14

Attendance at public, private, and charter schools by engagement type.

	Public Districts (n=1,506)	Public Charters (n=143)	Public Magnets (n=145)	Private, Non-Religious (n=80)	Private, Religious (n=81)
% Subject Lovers	18%	17%	17%	29%	27%
% Emotionals	18%	22%	19%	19%	11%
% Hand Raisers	18%	14%	12%	8%	14%
% Social Butterflies	16%	18%	17%	19%	21%
% Teacher Responders	14%	19%	15%	17%	20%
% Deep Thinkers	15%	10%	20%	8%	8%

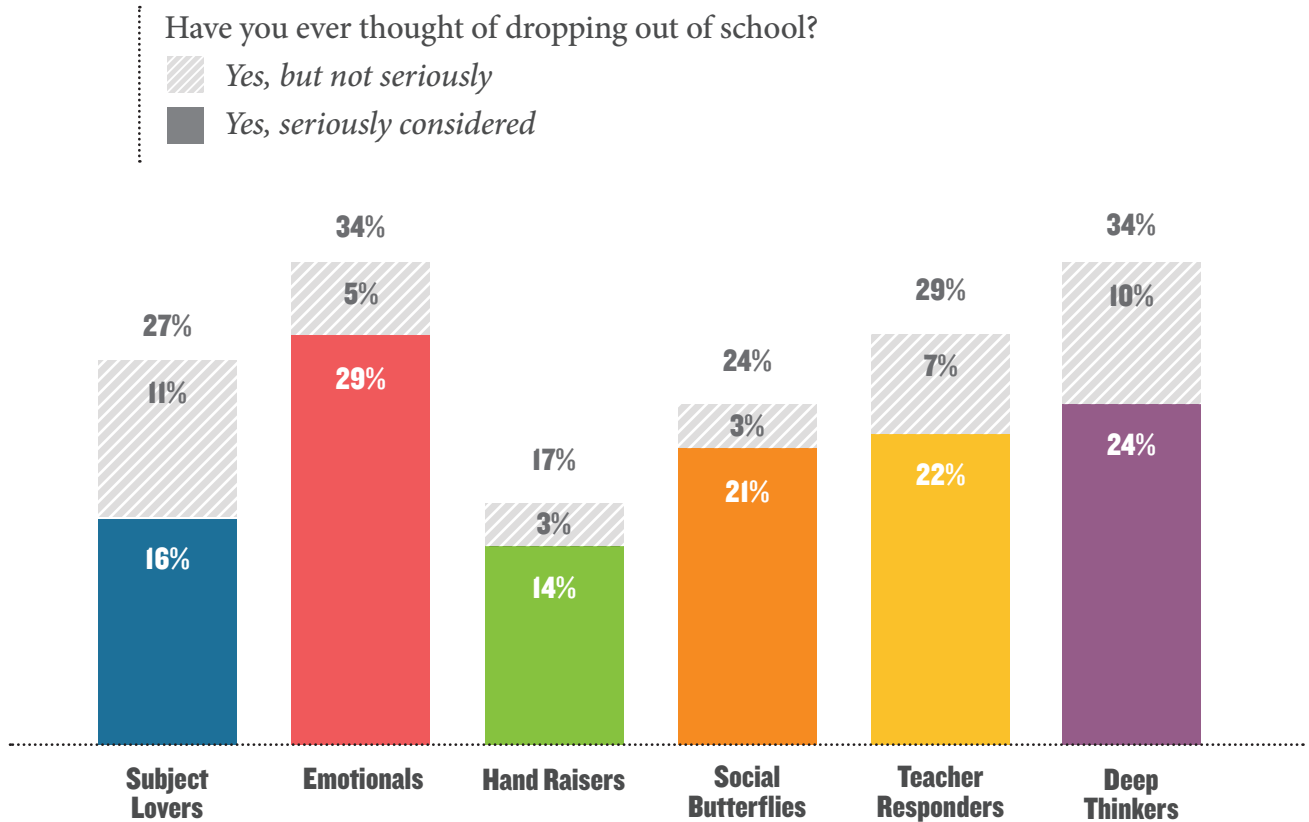
Two Groups in Crisis

Data consistently point to students in two groups that are particularly at risk not only of being disengaged, but of dropping out.

Figure 15 shows that no one group of students is immune to considering dropping out, whether seriously or not. Hand Raisers had the lowest percentage of students considering dropping out overall (17 percent). But fully one-third (34 percent) of both the Deep Thinkers and Emotionals have considered dropping out of school.

FIGURE
15

About one-third of both Deep Thinkers and Emotionals have considered dropping out.



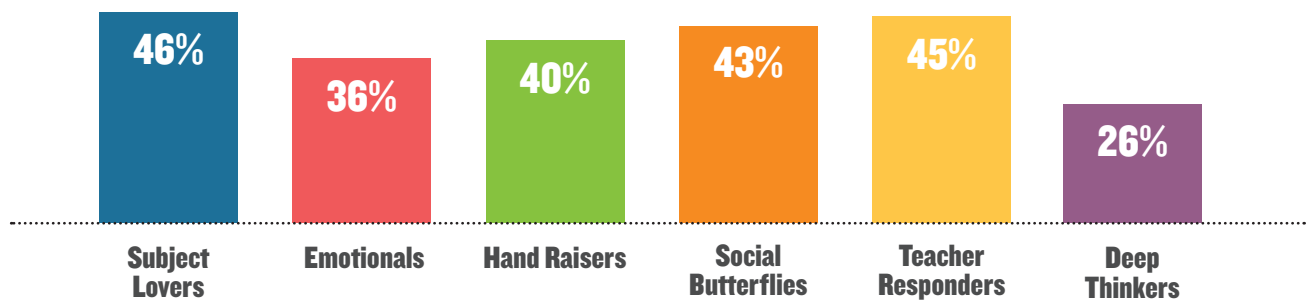
It should come as no surprise that the two groups most at risk of quitting school are the least satisfied with school. While no engagement type had a majority of students rating their satisfaction with their school an “A,” just 26 percent of Deep Thinkers and 36 percent of Emotionals gave their school top marks (Figure 16). Similarly, relatively fewer Deep Thinkers and Emotionals would choose to attend their current school if another nearby school were an option.

FIGURE
16

Deep Thinkers and Emotionals grade their satisfaction with their school overall lower than other groups.

On the school grading scale of A to F, how satisfied are you with your school/place of learning overall?

% Indicating "A"



Students in these classifications also report lower levels of academic performance and GPAs. Specifically, 16 percent of Emotionals report that their performance is “probably in the lower half of the class” (Figure 17). And higher percentages of Deep Thinkers and Emotionals report having a C grade point average (Figure 18). Finally, only about one-third of Emotionals say the adult who knows them best at school would describe them as mostly motivated by learning new things (Figure 19).

FIGURE
17

Sixteen percent of Emotionals report that their performance is “probably in the lower half of the class.”

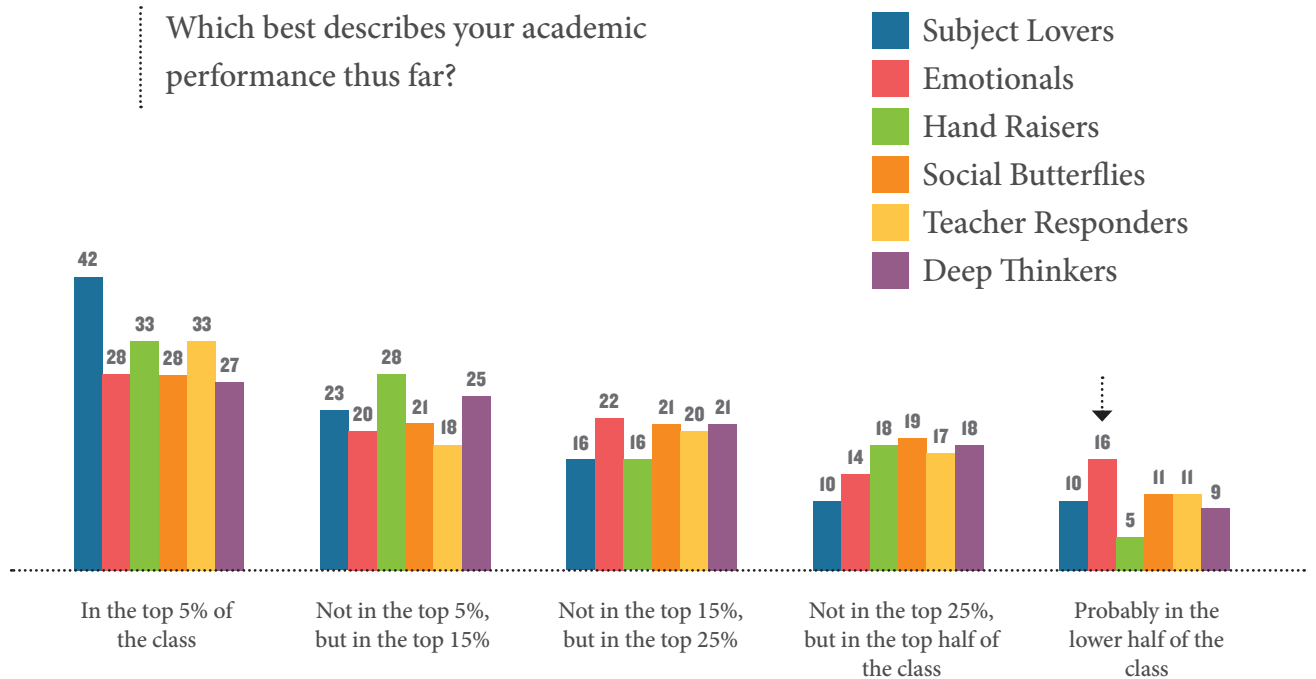
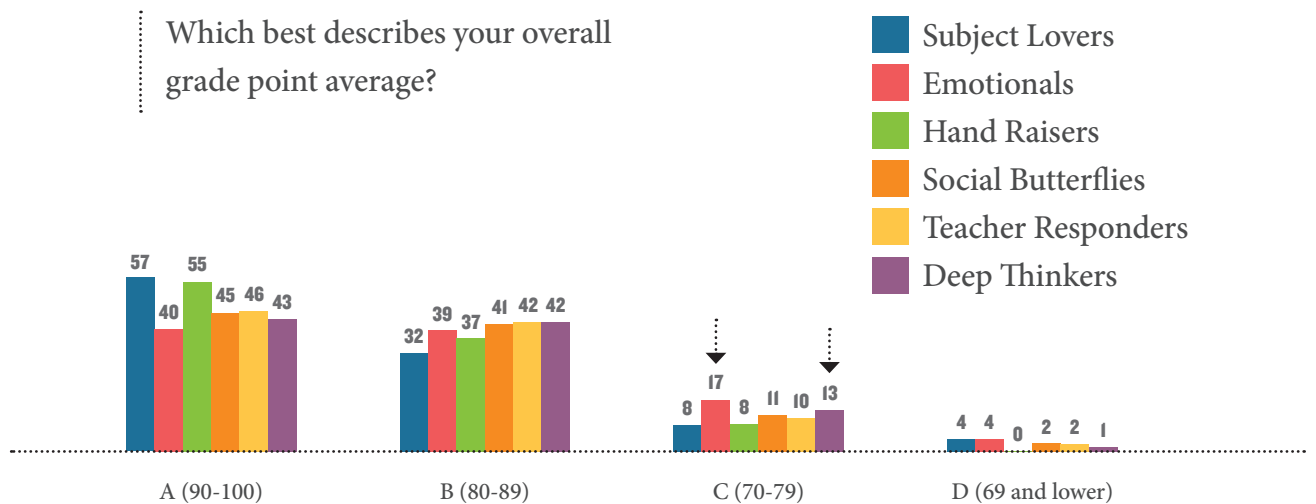


FIGURE
18

Higher percentages of Deep Thinkers and Emotionals report having a C grade point average.



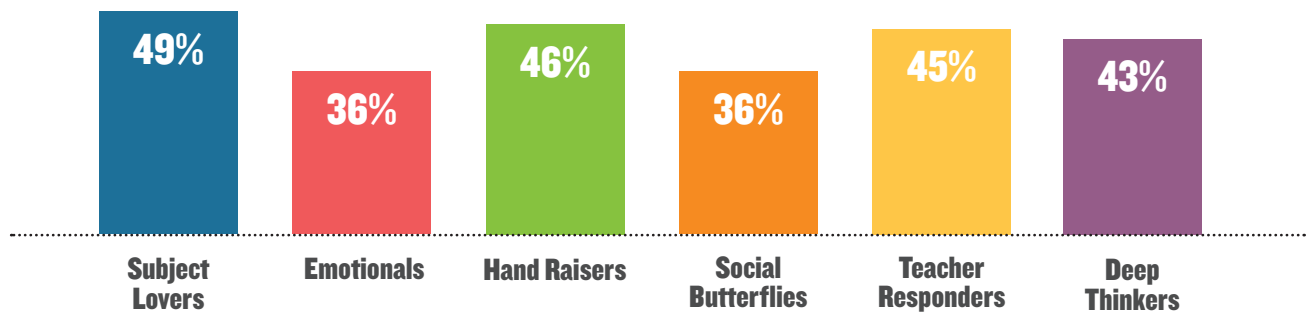
FIGURE

19

Only about one-third of Emotionals (and Social Butterflies) say the adult who knows them best at school would describe them as “mostly motivated by learning new and challenging things.”

Think about the teacher/adult who knows you best. If we asked this teacher/adult to describe you, would he/she say you:

% Indicating “are someone who is mostly motivated by learning new and challenging things”



Implications

Somewhat surprisingly, our results indicate that most high school students want to try hard in class and figure out things on their own, if possible. They ask themselves questions, check their book or other materials when things don't make sense, and try to pay attention to things they're supposed to remember. This desire to learn and do well cuts across all types of students—so teachers should support and maximize this hard-wired desire to think and reason autonomously.

Beyond this, however, students can also be classified by the manner in which they are primarily engaged. For some students, the relationship with the teacher is key; for others, it is the subject matter or the social aspects of schooling. For still others, the level of engagement varies based on the extent that their emotional needs can be met in the classroom—or the extent that they actively participate in class. Tailoring schooling and instruction to these distinct tendencies has the potential to pay dividends in greater engagement and in student achievement gains.

Common sense suggests, then, that one type of school cannot be expected to optimally engage all types of students—nor will one instructional model, strategy, curriculum, or pedagogy. Some will likely appeal to particular students more than others. Given this complexity—and the exploratory nature of this research—we're cautious in suggesting recommendations for school operators and local officials. Educators know that no single approach is likely to work for all students and they routinely try to consider the individual needs of each pupil.

Since teachers are sure to encounter students who represent *every one* of the engagement profiles in their classes, the next section explores potentially useful recommendations for the various types (gleaned from both the survey and focus groups). It bears repeating that while many of these recommendations could be advantageous for all students, those that are geared to particular segments have the potential to benefit students with corresponding engagement preferences even more—though we encourage additional investigation and research in this area. We also suggest actual schools or models where students with those preferences might thrive.

Subject Lovers

This group of students values learning for the sake of learning, but also values the recognition and opportunities that their good grades provide them. Some feel pressured to build their résumés for college and beyond. Teachers may more easily spark a love for their subject matter with these students and are

important role models for them. They are capable of moving along independently and do not like it when the pace of instruction lags or they are otherwise held back.

Teachers might consider using a problem-based or inquiry-based learning approach since Subject Lovers like to see connections drawn between school and the real world. They might also like being connected with internships in the community for the same reason. Since they are more likely to say that math and science are their favorite subjects, Subject Lovers might benefit from advanced placement or dual-enrollment courses, where they can be taught by college faculty and perhaps gain exposure to actual mathematicians or scientists. They love to learn and enjoy academics so they might also appreciate independently reading books that pertain to a variety of academic subjects, but especially science and math.

SCHOOLS OR TECHNIQUES THAT MIGHT SERVE THE NEEDS OF SUBJECT LOVERS:

- A college-preparatory environment where students are granted access to rigorous college-level coursework in order to prepare them for college (such as the [LEAP](#), AP, and International Baccalaureate programs).
- A school with rigorous academics that requires students to complete internships in the community (such as [High Tech High](#)).

“ A class is interesting because of the combination of being a good subject and how enthusiastic the teacher is about that subject. You can tell she loves it by the amount of energy she gives it in class and that makes us want to learn it. So it’s like I want to engage because she loves what she’s teaching. ”

– Raia, Charter School

“ [Teachers] love not just teaching, but the subject that they teach. They’re really knowledgeable about it. That’s the best kind of teacher you can have. ”

– Sydney, Public School

Emotionals

Because these students appear to be at risk, they would likely benefit from a positive rapport with their teachers and other adults in the school. But because of their academic needs, additional remediation and tutoring are also vital. They desire an emotional connection to school, so the adults in the school likely need to take an interest in both their academic life *and* life outside of the classroom.

Given the motivation and initiative typically required to succeed in online courses, virtual learning is unlikely to be the best option for them. They need hands-on teachers, coaches, and mentors inside and outside of school to support their emotional and academic growth. Conversations in our focus groups revealed that “tough love” might work with these students, who crave the adult attention and guidance they lack.

Since they need academic and social mentors, school-university tutoring or other programs where college students mentor or tutor high school students might be beneficial. Exposure to community partnerships and internships might be a good opportunity for some Emotionals to begin to see the relevance of an education. Counseling, both by school staff and perhaps by others, could help them feel more connected to school. Small schools would likely optimize the likelihood that they would receive the attention they need.

SCHOOLS OR TECHNIQUES THAT MIGHT SERVE THE NEEDS OF EMOTIONALS:

- A smaller school with a “work-study program” that matches students with mentors in the workplace, exposes students to professional work environments, and helps improve students’ overall sense of direction (such as Don Bosco Cristo Rey’s [Corporate Work Study Program](#)).
- A school focused on college readiness that teaches students key knowledge and skills needed to successfully transition to college, such as time management and study skills, and that offers exposure to college-level courses (for example, [P-TECH schools](#)).

“ I think that connecting with a teacher is different from learning from a teacher because I feel like it helps you learn better, basically because you get to know that person on a different level, know how they think and it’s just not just surface learning. It’s digging deeper. ”

– Sorcha, Charter School

Hand Raisers

Because these students are engaged in the classroom but not much outside it, they might benefit from attempts to make learning relevant for them outside of class. Further, since the classroom is where they're most engaged (versus other parts of school like extracurricular and social activities), schools might maximize classroom time, perhaps through block schedules (e.g., ninety-minute versus forty-five-minute periods), an extended school day, or even an extended school year.

These students don't appear to have trouble maintaining their attention or fully participating in class, so teachers might recognize and reward this behavior so as to encourage it classroom-wide. Focus groups reveal that they also value continuous and honest feedback, and deal well with constructive criticism.

SCHOOLS OR TECHNIQUES THAT MIGHT SERVE THE NEEDS OF HAND RAISERS:

- An extended school day or an extended school year that provides increased opportunities for learning and instruction (such as [KIPP Public Charter schools](#) and [Ingenuity Prep](#)).
- A career-oriented school where students develop work-related skills by completing internships, participating in career workshops, and working with a mentor in the field of their choosing (such as [Career Path High](#)). (Also see *Career and Technical Education*.)

“ It is a good day when I am doing well in class, answering questions, and getting things done. ”

– Michael, Private (Religious) School

CAREER AND TECHNICAL EDUCATION

Career and technical education (CTE) courses—which specialize in the skilled trades, applied sciences, modern technologies, and career preparation—are enjoying renewed interest with our focus on college and career readiness. Around one-quarter to one-third of high school students in each group have taken at least one CTE course during high school (Figure 20). Of those students, about two-thirds (65 percent) find them to be more interesting than the other courses they take (Figure 21). Students in private religious and public charter schools are most likely to report that their school does not offer CTE courses (Figure 22).

FIGURE 20

Between about one-quarter and one-third of high school students have taken some CTE courses or are enrolled in a formal CTE program.

Which best describes your experiences with career and technical education (CTE) in high school?
 % Indicating “I have taken some CTE courses, but am not enrolled in a formal CTE program” or “I am enrolled in a formal CTE program”

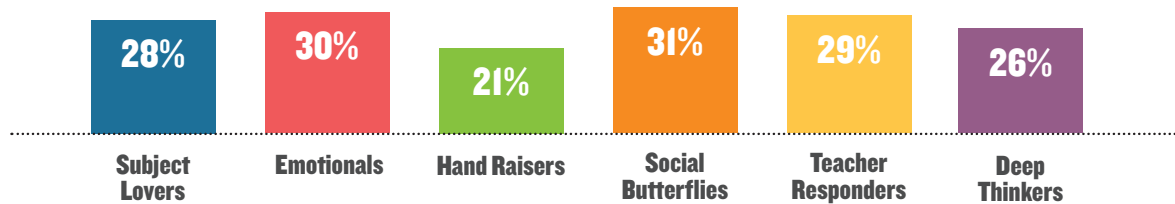
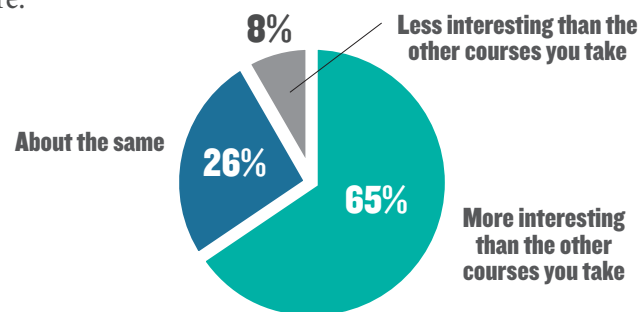


FIGURE 21

Of those who have taken CTE courses, two-thirds find them more interesting than other courses that they take.

Overall, do you find that the career and technical education (CTE) courses you take are:

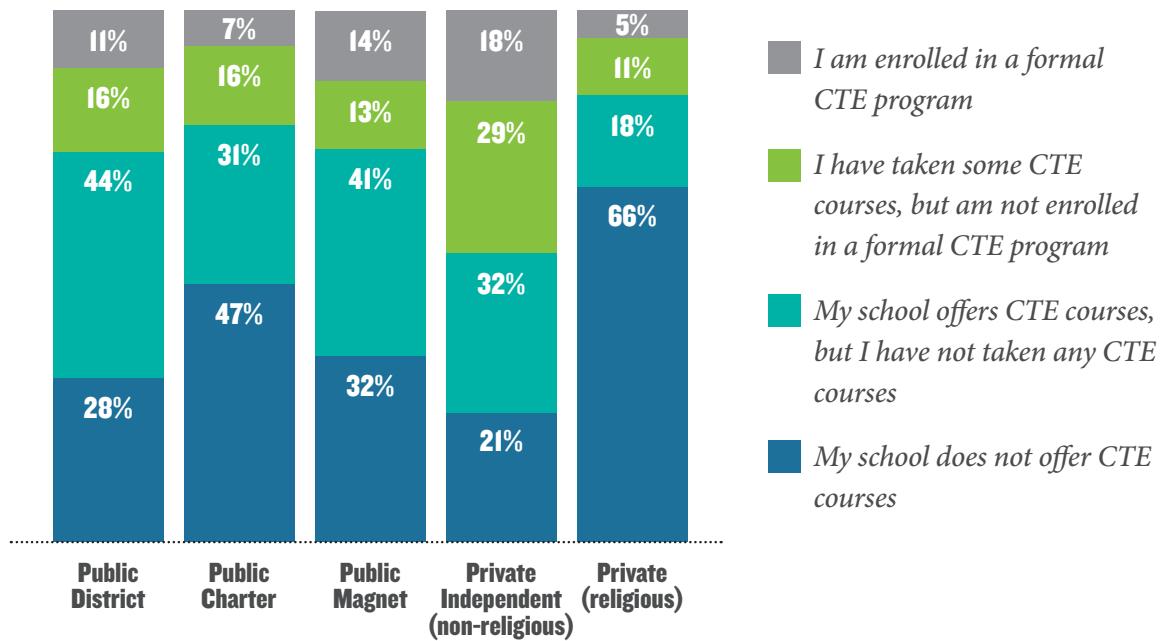


Note: Percentages may not sum to 100 percent due to rounding

FIGURE
22

Students in private religious and public charter schools are most likely to report that their school does not offer CTE courses.

Which best describes your experiences with career and technical education (CTE) in high school?



Note: Percentages may not sum to 100 percent due to rounding

Social Butterflies

Social Butterflies generally report being well served by their current high schools. They prefer energetic and relatable teachers who facilitate group discussions and opinion sharing. Given their bent toward social engagement, these students might benefit from collaborative assignments (pairs or small groups) and other group projects. They might also benefit from teachers who can help them to learn from their fellow students—for example, via group presentations to the class.

Since they appreciate the social aspect of schools, they might gravitate to a school with a wide array of extracurricular sports and clubs. They might also respond to debates and competitive learning games. Schools wishing to court Social Butterflies might do more to cultivate school pride and positive relationships among students and staff.

SCHOOLS OR TECHNIQUES THAT MIGHT SERVE THE NEEDS OF SOCIAL BUTTERFLIES:

- A school primarily focused on collaborative student projects and group work. Students learn through participating in group projects and presentations, rather than lecture-style lessons from the teachers (project-based learning such as [iTech Prep](#) in Vancouver, Washington, and San Francisco-based [Brightworks](#)).
- A school that builds time into each school day for extracurricular activities, sports, and social clubs to allow students to interact and develop close relationships with peers and teachers outside of academic classes (such as [Uncommon](#) Schools).

“ We do group work a lot which is helpful to listen to other people’s opinions. You can bring your own ideas to the table. It’s important to talk to your peers about what you’re learning. ”

– **Madison, Public School**

“ Students need to be more involved, not just coming to school and going home. But being involved in after school clubs or going out of their way in trying to improve things at the school. ”

– **Bryce, Private School**

Teacher Responders

Connections to the teacher and classroom rules are paramount to success with Teacher Responders. They value choice in schools, subjects, and teachers, and try to take classes from teachers they like. Though all students tend to benefit from individual tutoring,²⁹ Teacher Responders might benefit even more from one-on-one learning time, perhaps via individual check-ins with the teacher or after-school tutoring. It is particularly important that they “jibe” with their teachers, so much so that it might make sense for them to change teachers if they do not sense mutual rapport or if the teacher is unable or unwilling to spend sufficient time with them.

Caring and invested teachers appear key to helping Teacher Responders bridge a connection to the subject matter. Because Teacher Responders are not typically bored in school, they are likely more open to a variety of instructional techniques (group work, individual projects, etc.) as long as they connect with the teacher. One wonders if these are also the nation’s future teachers, given their affinity for educators and positive attitude about school in general.

SCHOOLS OR TECHNIQUES THAT MIGHT SERVE THE NEEDS OF TEACHER RESPONDERS:

- A school focused on “personalized learning,” where students work closely with their teachers to tailor assignments and studies to individual interests and skills. Curriculum and instruction are adjusted to individual academic strengths and interests to provide a more meaningful educational experience (such as [Rocketship Education](#)).
- A “flipped” high school where students watch and participate in videotaped lessons and lectures from home and then do the homework in class, where the teacher is available to help them. This model allows students to work at their own pace and increases quality one-on-one time between students and teachers (for example, [Clintondale High School and Fusion Academy](#)).

“ My teacher and I got a bond from the first day she started working there... I’m always in her classroom every day at lunch and even when she’s not there and she has a sub. I have a key to her class so I can just go in there if I feel like it. ”

– Alexis, Public School

“ I just hate math, Algebra 2. My teacher don’t make it no better. She’s real boring. She don’t know any new techniques to teach. We just don’t have fun like I do in all my other classes. She won’t let you talk, she won’t let us pick our own seats like every other teacher do. You can’t work in partners. It’s basically you’re alone in there. ”

- Autumn, Charter School

Deep Thinkers

Deep Thinkers could benefit from plenty of time for independent work, as long as the teacher monitors individual student progress. Teachers might give Deep Thinkers ample time to wrestle with problems on their own, scaffolding learning activities that provide them with enough guidance and external support to succeed independently. Teachers likely need to check in with Deep Thinkers more frequently to see how they are progressing even if the student appears to be doing just fine. Well-run online schools could be an option here, as could dual enrollment on a college campus.

SCHOOLS OR TECHNIQUES THAT MIGHT SERVE THE NEEDS OF DEEP THINKERS:

- A school where students frequently check in with teachers and mentors and where instruction is adapted to meet individual students’ needs (such as [Thrive Public Schools](#)).
- A school with smaller classes focused on “personalized learning,” where instruction is targeted to individual students’ interests and skills, and where students frequently meet with adult mentors and coaches to drive their own learning (such as [Summit Schools](#)).

“ When we do group projects... we end up doing all the work. There should be a monitor, a teacher, to make sure each student is putting in work and not just one student. Setting up the project, somehow each individual should have a task. ”

- Megan, Charter School

Concluding Thoughts

Overall, our study provides evidence for a common sense assertion that, where there are important commonalities, not all high school students are engaged in the same fashion and that a one-size-fits-all education system all but guarantees that some will be left out—and ultimately left behind. In other words, engagement and choice go hand in hand, with both taking on many forms. In this case, choice does not *have to be* among schools (though more of that would surely help), but it can also be among schools-within-schools, among teachers, among courses, among delivery options, among programs (such as those with more focus on extracurriculars, work-study, or dual-enrollment options), and so on. It's clearly a two-way street: to address the needs of students who have varied engagement preferences, the supply side needs to *offer* choices that are genuinely different—not just multiple versions of essentially the same thing.

While the goal for all high school students is academic success and solid preparation for college or career, how educators go about achieving these goals should take into account the unique ways that particular students are engaged in their education. Ignoring this reality may result in increasing numbers of students who are disengaged in school and at risk of dropping out altogether.



Appendix A: Survey Methods

Prior to developing the student survey, analysts from Crux Research and the Fordham Institute conducted a literature review on student engagement and consulted with a number of leading academic researchers who have published in this field. These activities informed our understanding of the three primary dimensions of student engagement (cognitive, emotional, and behavioral) and led us to consider the adaptation of two existing engagement scales in the survey (more below).

A pretest of the draft survey instrument was conducted with six students to ensure understanding of the questions and vet potentially confusing language. Before administering the survey to the full field, we also conducted a quantitative pilot of two hundred students to ensure that the selected scales (below) provided a robust distribution of responses.

The final student questionnaire measured various dimensions of cognitive, emotional, and behavioral engagement. It was administered as an online market research survey. The instrument was piloted in early April 2016 and fielded from April 12 to June 12, 2016. Data were collected using a national online panel (Survey Sampling Inc.). Quotas were established to ensure that the resulting sample matched the high school age population (grades 10–12) for grade level, gender, race/ethnicity, and region. Resulting data were balanced to known population percentages for public, private, charter, homeschooled students, and so on. A total of 2,006 high school sophomores, juniors, and seniors completed the online questionnaire. The mean length for individual survey completion was sixteen minutes.

(Complete survey results are available online at the Thomas B. Fordham Institute’s website: <https://edexcellence.net/publications/what-teens-want-from-their-schools>.)

The questionnaire consisted of many items created by Crux Research and Fordham as well as survey items and scales relating to student engagement from two existing sources:

THE CLASSROOM ENGAGEMENT INVENTORY (CEI)³⁰

We used Wang, Bergin, and Bergin’s twenty-four-item CEI nearly verbatim (same general items and scale). However, recognizing that engagement could potentially vary by subject, we asked respondents to complete the survey relative to a randomly assigned core subject area (such as English, science, math, social studies, and foreign language).

Respondents were asked how frequently they *do* or *feel* the following in class:

Affective Engagement

- I feel excited
- I feel interested
- I feel happy
- I have fun (rephrased in our survey as “I feel amused (smile, laugh, have fun)”)
- I feel proud

Behavioral Engagement – Compliance

- I listen very carefully
- I pay attention to the things I am supposed to remember
- I complete my assignments

Behavioral Engagement – Effortful Class Participation

- I get really involved in class activities*
- I form new questions in my mind as I join in class activities*
- I do not want to stop working at the end of class
- I actively participate in class discussions*
- I work with other students and we learn from each other*

Cognitive Engagement

- If I make a mistake, I try to figure out where I went wrong
- I go back over things I don't understand
- I think deeply when I take quizzes in this class
- I ask myself some questions as I go along to make sure the work makes sense to me
- I search for information from different places and think about how to put it together
- If I'm not sure about things, I check my book or use other materials like charts
- I judge the quality of my ideas or work during class activities
- I try to figure out the hard parts on my own

Disengagement (also called In-Class Participation)

- I am “zoned out,” not really thinking or doing class work
- I let my mind wander
- I just pretend like I’m working

THE PANORAMA SURVEY³¹

We also drew student engagement scales and items from Panorama’s student survey, which measures student perceptions of teaching and learning. The following items were included:

Belonging

- How well do people at your school understand you as a person?
- How connected do you feel to the adults at your school?*
- How much respect do students in your school show you?
- How much do you feel you matter to others at your school?
- Overall, how much do you feel like you belong at your school?

Teacher-Student Relationships

- How respectful is your teacher towards you?
- If you walked into class upset, how concerned would your teacher be?
- If you came back to visit class three years from now, how excited would your teacher be to see you?
- When your teacher asks you how you are doing, how often do you feel that your teacher is really interested in your answer?
- How excited would you be to have your teacher again?

Valuing

- How interesting do you find the things you learn in class?
- How often do you use ideas from class in your daily life?
- How important is it to you to do well in class?
- How much do you see yourself as a/an [SUBJECT] person?
- How useful do you think [SUBJECT] will be to you in the future?

**These five items were omitted from our final factor analysis due to high cross-loadings (see Table A-01 below for more).*

The study collected thirty-nine measures of student engagement using the above items (plus thirty-five others that asked a variety of other demographic, attitudinal, and contextual questions). The thirty-nine measures were analyzed using factor analysis (FA). The initial factor analysis contained five items with strong cross-loadings on more than one factor. These items were subsequently removed and the factor analysis re-run. The results, shown in Table A-1 below, was a six-factor solution using thirty-four items. Each item loaded strongly on one factor, implying six distinct dimensions to student engagement.

TABLE A-1
Factor Analysis Results

	FACTORS OF ANALYSIS					
	1	2	3	4	5	6
I go back over things I don't understand	0.702	0.066	0.131	0.067	0.130	0.063
If I make a mistake, I try to figure out where I went wrong	0.689	0.105	0.089	0.106	0.099	0.148
I ask myself some questions as I go along to make sure the work makes sense to me	0.654	0.091	0.169	0.138	0.127	-0.030
If I'm not sure about things, I check my book or use other materials like charts	0.645	0.117	0.079	-0.033	0.082	0.046
I think deeply when I take quizzes in this class	0.638	0.073	0.161	0.166	0.108	0.112
I try to figure out the hard parts on my own	0.625	0.012	0.090	0.201	0.026	0.067
I pay attention to the things I am supposed to remember	0.613	0.148	0.132	0.112	0.074	0.341
I listen very carefully	0.608	0.177	0.232	0.098	0.081	0.342
I search for information from different places and think about how to put it together	0.606	0.063	0.297	0.223	0.081	-0.026
I judge the quality of my ideas or work during class activities	0.551	0.155	0.278	0.124	-0.037	-0.054
I complete my assignments	0.546	0.099	0.022	0.021	0.114	0.328
If you walked into/came to class upset, how concerned would your [SUBJECT] teacher be?	0.129	0.813	0.143	0.139	0.217	0.030
When your [SUBJECT] teacher asks you how you are doing, how often do you feel that your teacher is really interested in your answer?	0.156	0.789	0.157	0.187	0.244	0.137
How excited would you be to have your [SUBJECT] teacher again?	0.161	0.767	0.252	0.294	0.152	0.085
If you came back to visit class three years from now, how excited would your [SUBJECT] teacher be to see you?	0.166	0.749	0.185	0.268	0.240	0.047
How respectful is your [SUBJECT] teacher towards you?	0.138	0.701	0.032	0.111	0.193	0.251

**TABLE
A-1**

Factor Analysis Results, Continued

	FACTORS OF ANALYSIS					
	1	2	3	4	5	6
I feel excited	0.261	0.182	0.746	0.238	0.169	0.113
I feel amused (smile, laugh, have fun)	0.167	0.080	0.717	0.088	0.151	0.020
I feel happy	0.274	0.201	0.702	0.131	0.237	0.207
I feel proud	0.373	0.161	0.603	0.180	0.229	0.169
I feel interested	0.368	0.186	0.587	0.292	0.067	0.289
I do not want to stop working at the end of class	0.237	0.201	0.472	0.395	0.058	-0.175
How useful do you think [SUBJECT] will be to you in the future?	0.177	0.168	0.126	0.792	0.182	0.095
How much do you see yourself as a/an [SUBJECT] person?	0.172	0.208	0.240	0.786	0.124	0.091
How often do you use ideas from [SUBJECT] class in your daily life?	0.171	0.302	0.297	0.664	0.152	-0.082
How interesting do you find the things you learn in [SUBJECT] class?	0.198	0.387	0.346	0.602	0.156	0.172
How important is it to you to do well in [SUBJECT] class?	0.348	0.204	-0.014	0.554	0.201	0.359
Overall, how much do you feel like you belong at your school/place of learning?	0.148	0.286	0.153	0.177	0.778	0.133
How much do you feel you matter to others at your school/place of learning?	0.130	0.291	0.176	0.156	0.788	0.031
How much respect do students in your school show you?	0.166	0.243	0.076	0.140	0.770	0.069
How well do people at your school/place of learning understand you as a person?	0.122	0.130	0.244	0.103	0.752	0.086
I just pretend like I'm working	-0.140	-0.052	0.033	0.006	-0.066	-0.810
I am "zoned out," not really thinking or doing class work	-0.176	-0.126	-0.137	-0.070	-0.073	-0.814
I let my mind wander	-0.123	-0.140	-0.191	-0.129	-0.071	-0.753

As mentioned above, we removed five items from the factor analysis due to high cross-loadings.

The factor analysis was conducted as an exploratory factor analysis in SPSS, exploring relationships among all variables in the analysis. Confirmatory factor analysis validated the factor structure and confirmed the final model. The factor analysis treated items as interval (continuous) variables, rather than

ordered categorical variables. However, when the model was re-run with ordered categorical variables, results were similar to the original model. Because the factor analysis was run on the correlation matrix (rather than the covariance matrix), variables are standardized, which means that each observed variable has a variance of one.

We then assigned respondents to groups based on which factor they scored the highest and we created profiles for each group using various demographic, behavioral, and attitudinal measures gathered in the survey. Names for each group are intended to capture key characteristics, primarily based on survey results, and supplemented by focus group findings (see below).

As Table A-2 shows, respondents tend to score highly on one factor (i.e., a set of survey items that “hang together” to form a construct or theme, such as teacher-student relationships), indicating that despite shared commonalities across many students, groups of students with unique engagement preferences also exist.

TABLE A-2 Students tend to score highly on one factor.

	Mean Factor Scores by Engagement Tendencies					
	Subject Lovers	Emotionals	Hand Raisers	Social Butterflies	Teacher Responders	Deep Thinkers
Factor 1: Cognitive/ Intrinsic Engagement	-0.17	-0.11	-0.18	-0.27	-0.16	1.03
Factor 2: Teacher-Student Relationships	-0.07	-0.34	-0.06	-0.30	1.22	-0.34
Factor 3: Affective Engagement	-0.10	1.05	-0.08	-0.28	-0.25	-0.50
Factor 4: Valuing (School and Subject Matter)	1.26	-0.36	-0.13	-0.31	-0.31	-0.36
Factor 5: Sense of Belonging	-0.08	-0.32	-0.16	1.21	-0.29	-0.35
Factor 6: In-Class Participation ³²	-0.16	-0.37	1.13	-0.14	-0.13	-0.37

Note: Regression factor scores are standardized. A mean score of 0 on a factor implies that the importance of the relevant attribute is equal to the average for the sample. A positive mean implies that respondents provided higher than average importance ratings. Similarly, a negative mean implies that respondents provided lower than average importance ratings.

FOCUS GROUPS

Once we completed the quantitative research and initial analysis, we conducted four focus groups in Bethesda, MD from October 25 to October 26, 2016, to test hypotheses and collect qualitative information for each engagement group. The focus groups included high school juniors and seniors attending schools in Virginia, Maryland, and the District of Columbia. Each focus group consisted of students from one or two engagement classifications, and ran approximately two hours. In total, thirty high school juniors and seniors participated. Participants comprised a diverse representation of racial/ethnic backgrounds, school types, and household incomes (Table A-3). Following each focus group, we interviewed four students to ask follow-up questions about their earlier comments and remarks.

TABLE

A-3

Focus Groups Sample

Student type(s)	Description	Gender	Race/Ethnicity	School Type
Subject Lovers	5 juniors, 3 seniors	5 female, 3 male	2 Caucasian, 4 African American, 2 Other	2 District, 1 Charter, 1 Independent, 4 Private (Religious)
Hand Raisers and Teacher Responders*	3 juniors, 5 seniors	3 female, 5 male	2 Caucasian, 4 African American, 1 Hispanic, 1 Other	3 District, 3 Charter, 1 Independent, 1 Private (Religious)
Social Butterflies	5 juniors, 1 seniors	1 female, 5 male	1 Caucasian, 2 African American, 1 Hispanic, 1 Asian, 1 Other	1 District, 1 Magnet, 1 Charter, 1 Independent, 2 Private (Religious)
Emotionals and Deep Thinkers*	4 juniors, 4 seniors	3 female, 5 male	1 Caucasian, 4 African American, 1 Hispanic, 2 Other	2 District, 3 Charter, 1 Independent, 2 Private (Religious)

*These two groups were combined for recruiting purposes.

Appendix B: Additional Results by School Type

FIGURE

B-1

Students in private (religious) schools do the most homework.

How many minutes of homework do you do in a typical school day/evening?
Average number of minutes spent per day/evening doing homework

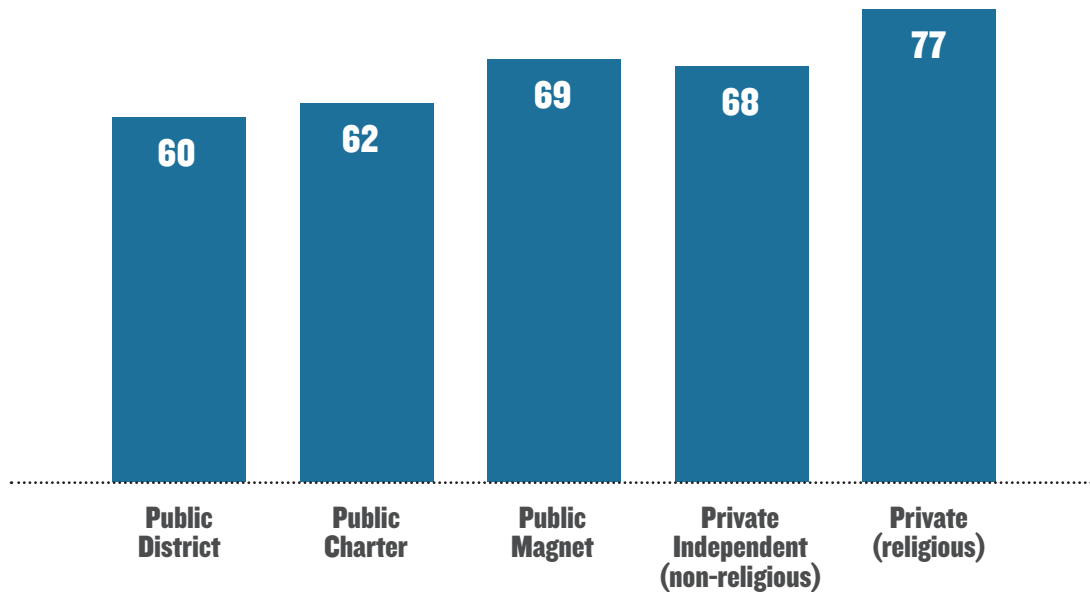
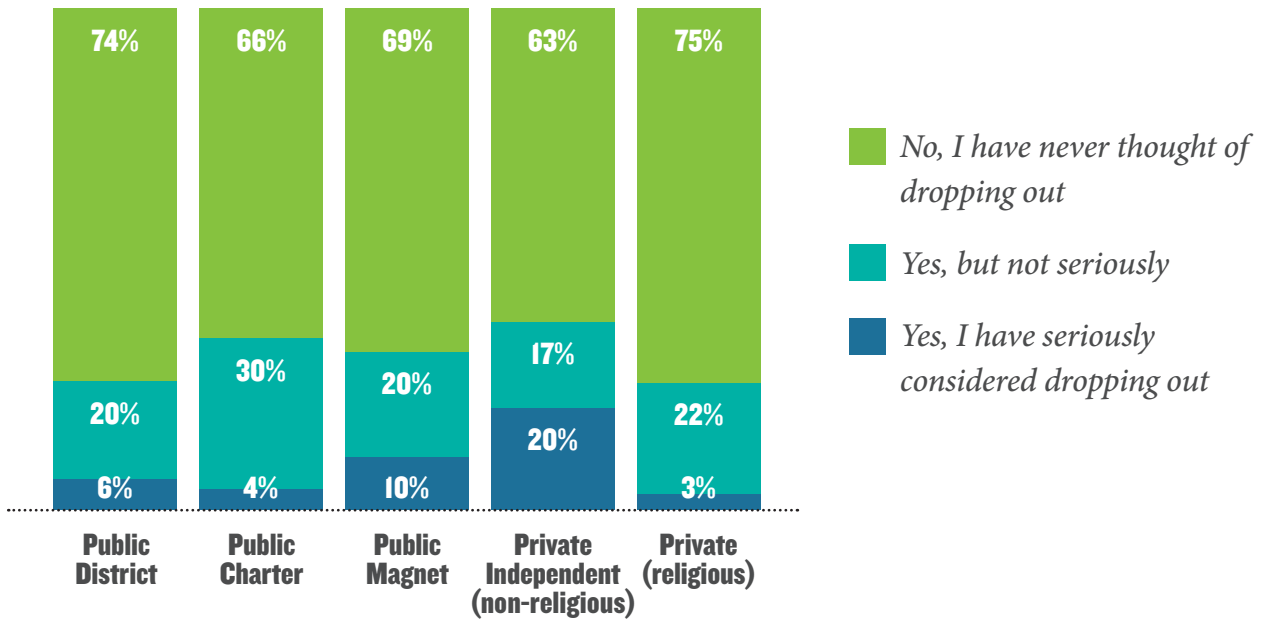


FIGURE
B-2

At least 25 percent of students in all school types have considered dropping out.

Have you ever thought of dropping out of school?



Note: Percentages may not sum to 100 percent due to rounding

FIGURE
B-3

When given a choice, private school students are more likely to choose their current school.

If you could choose any nearby school to go to, would you still choose your current school/place of learning?

% Indicating “Yes, I would still choose my school/place of learning”

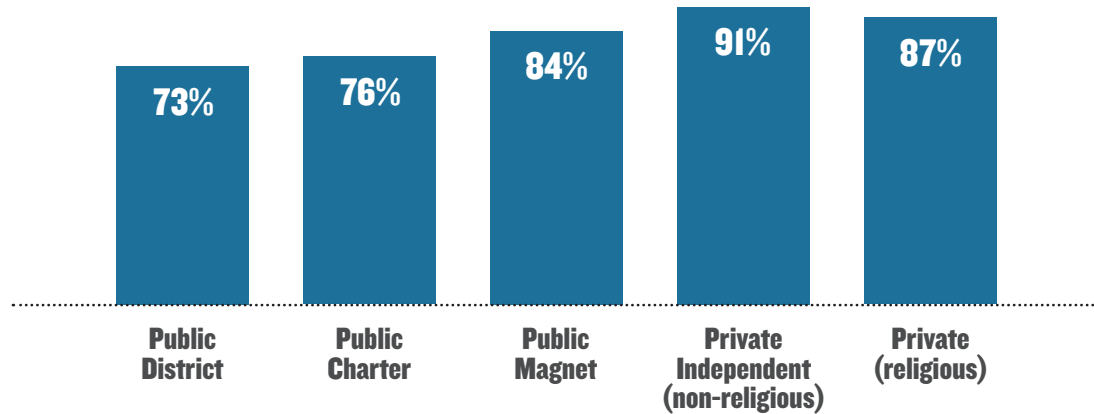
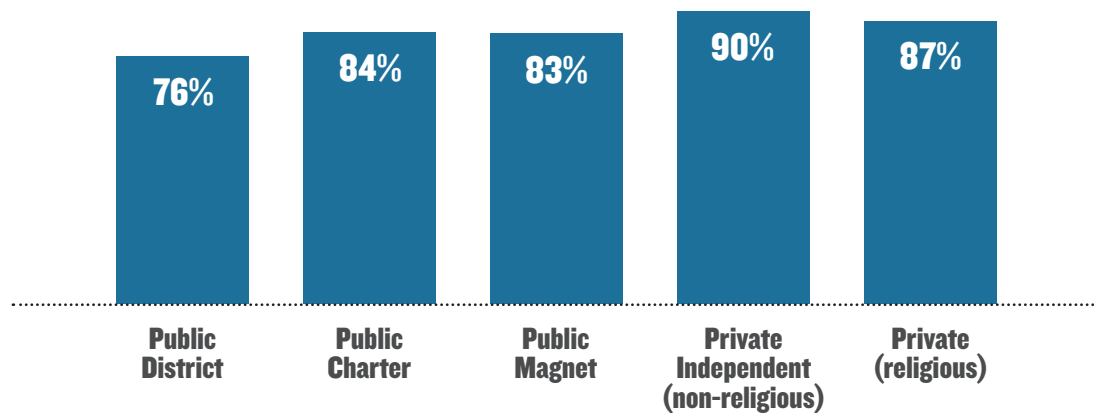


FIGURE
B-4

Public district students are least likely to have a connection with an adult at school.

Is there an adult in your school/place of learning with whom you really connect?

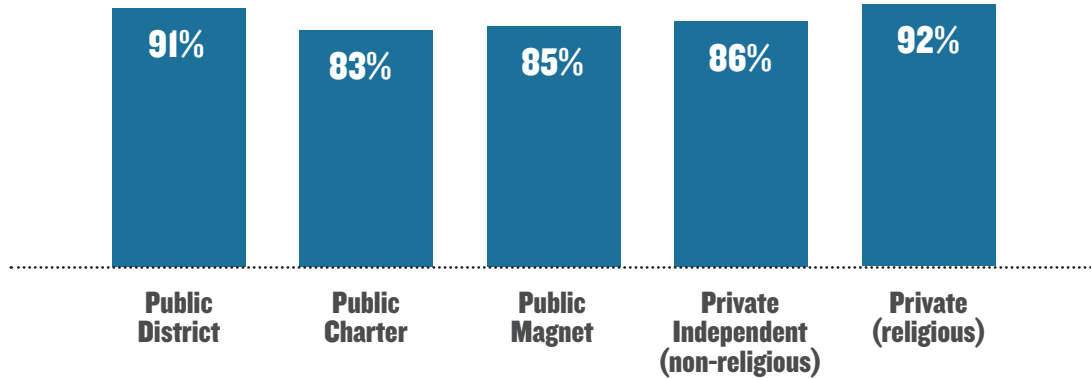
% Yes



**FIGURE
B-5**

Public district and private religious school students are more likely to follow school rules.

Indicate how much you agree or disagree with the following statements:
I tend to follow the rules at my school/place of learning.
% Indicating “strongly agree/agree”



**FIGURE
B-6**

Public charter and magnet students are least likely to say that transportation to school is easy.

Indicate how much you agree or disagree with the following statements:
Transportation to my school/place of learning in the morning is easy for me.
% Indicating “strongly agree/agree”

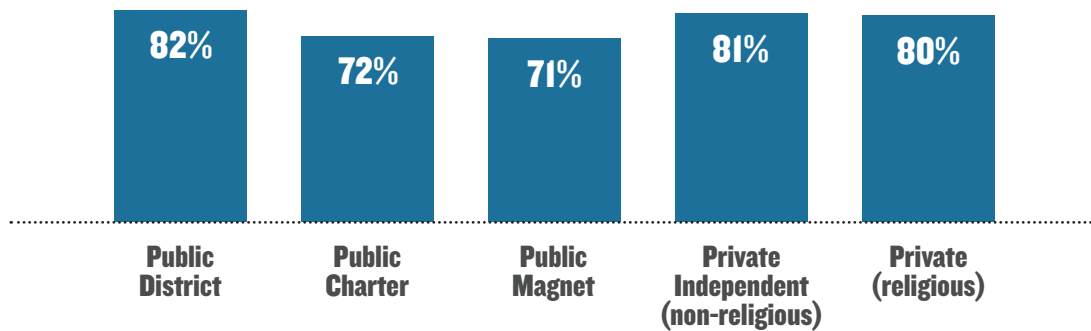


FIGURE
B-7

Compared to private school students, public school students (districts, charters, and magnets) are least likely to feel safe while in school.

Indicate how much you agree or disagree with the following statements:
I feel safe while in my school/place of learning.
% Indicating “strongly agree/agree”

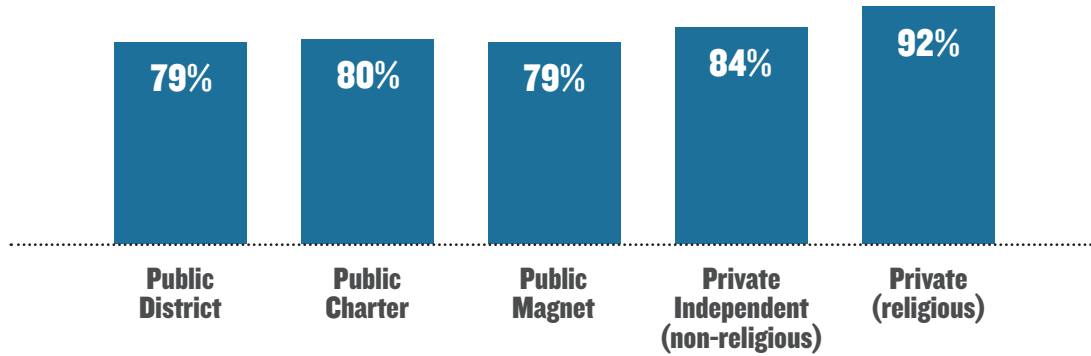


FIGURE
B-8

Private school students are most likely to be happy with the level of school pride.

Indicate how much you agree or disagree with the following statements:
I am happy with the level of school pride that exists in my school/place of learning.
% Indicating “strongly agree/agree”

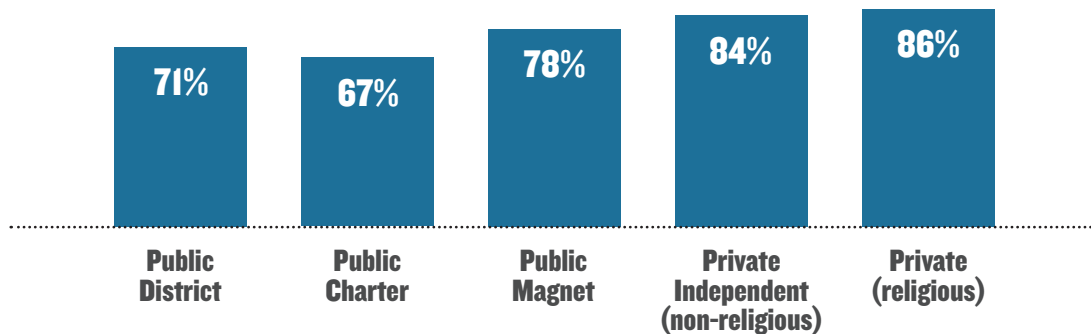


FIGURE
B-9

Students across school types generally agree that their school has enough access to technology.

Indicate how much you agree or disagree with the following statements:
My school/place of learning has enough access to computers and other technology.
% Indicating “strongly agree/agree”

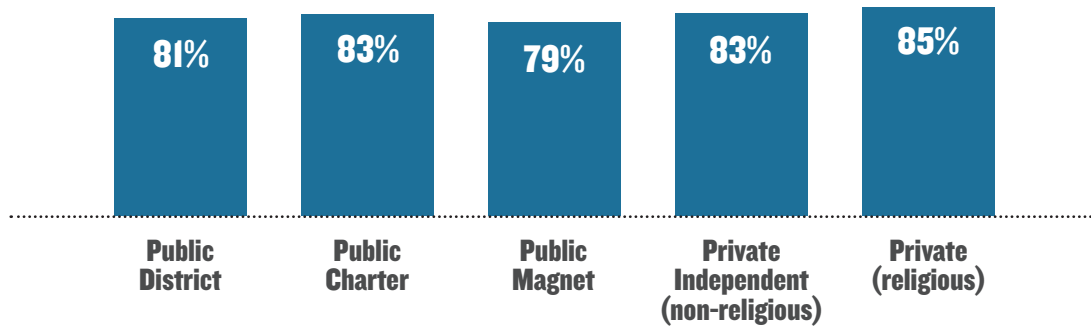


FIGURE
B-10

Public district students are least likely to say their school is the one that their parents want them to go to.

Indicate how much you agree or disagree with the following statements:
This is the school/place of learning my parents most want me to go to.
% Indicating “strongly agree/agree”

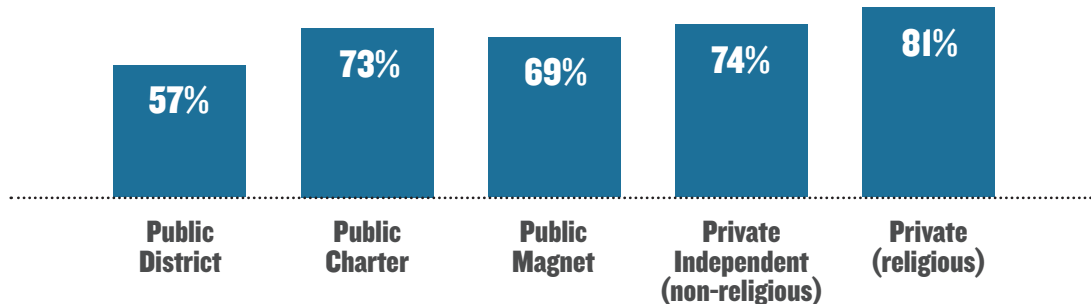


FIGURE
B-11

Private independent and public district school students are more likely to say that their school has too much focus on standardized tests.

Indicate how much you agree or disagree with the following statements:
My school/place of learning has too much focus on preparing students for standardized tests.

% Indicating “strongly agree/agree”

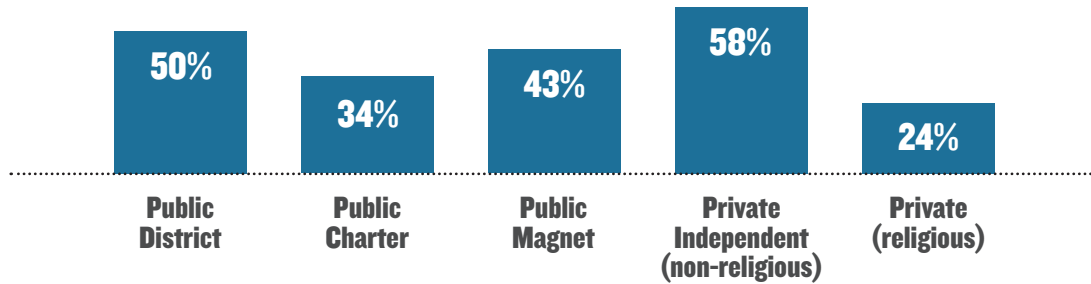


FIGURE
B-12

Public district school students are least likely to agree that class sizes are sufficiently small.

Indicate how much you agree or disagree with the following statements:
Class sizes are sufficiently small at my school/place of learning.

% Indicating “strongly agree/agree”

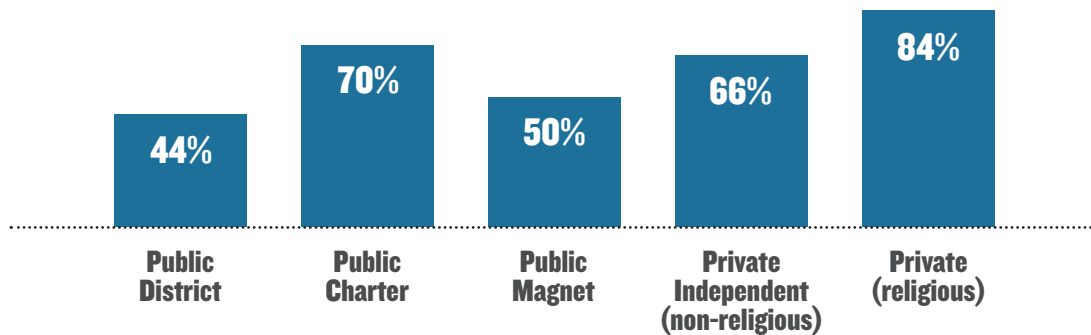
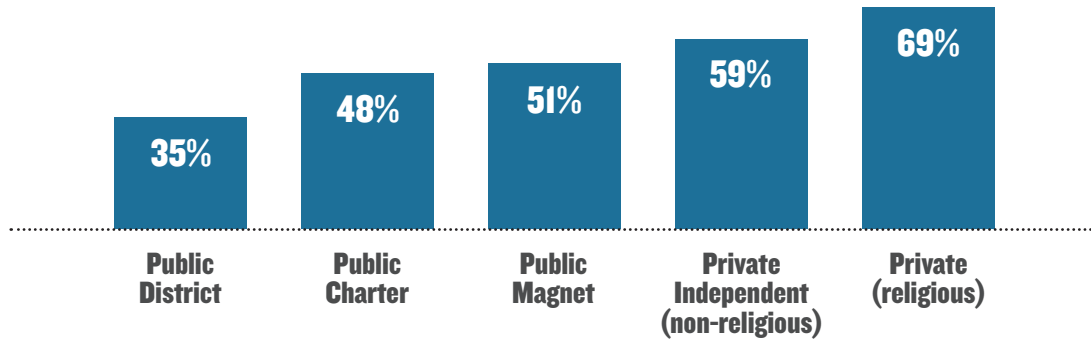


FIGURE
B-13

Students at private religious schools are the most satisfied with their school; students at public district schools are the least satisfied.

On the school grading scale of A to F, how satisfied are you with your school/place of learning overall?

% Indicating "A"



**TABLE
B-1**

Charter students are less likely to feel their school has enough clubs, student government opportunities, sports, and music/arts opportunities.

In your opinion, does your school/place of learning have enough:
% Indicating “yes” to each category

	Public District	Public Charter	Public Magnet	Private Independent (non-religious)	Private (religious)
Clubs for you to take part in	79%	70%	90%	84%	81%
Opportunities to take part in student government	74%	64%	79%	69%	83%
Scholastic sports (school sports teams) for you to take part in	87%	62%	75%	75%	88%
Intramural sports for you to take part in (sports activities outside of normal school time that you participate in with other kids from your school)	73%	51%	65%	68%	70%
Opportunities for you to take part in music or the arts	84%	70%	83%	81%	91%
Elective courses you can choose from	81%	75%	84%	74%	82%
Opportunities to do internships with local businesses or colleges	48%	51%	63%	61%	49%
Guidance counselors or others to help you plan for your next step after high school	81%	85%	80%	84%	86%

Endnotes

- 1 H. Lahaderne, “Attitudinal and Intellectual Correlates of Attention: A Study of Four Sixth-grade Classrooms,” *Journal of Educational Psychology* 59, no. 5 (October 1968), 320–324; J. Cobb, “Relationship of Discrete Classroom Behaviors to Fourth-grade Academic Achievement,” *Journal of Educational Psychology* 63, no. 1 (February 1972), 74–80; L. Hecht, “Measuring Student Behavior During Group Instruction,” *Journal of Educational Research* 71, no. 5 (May–June 1978), 283–290; E. Skinner et al., “What It Takes to Do Well in School and Whether I’ve Got It: A Process Model of Perceived Control and Children’s Engagement and Achievement in School,” *Journal of Educational Psychology* 82, no. 1 (1990), 22–32; J. Finn, *School Engagement and Students at Risk* (Washington, DC: National Center for Education Statistics, 1993); K. Voelkl, “School Warmth, Student Participation, and Achievement,” *Journal of Experimental Education* 63 (1995), 127–138; J. Finn and D. Rock, “Academic Success among Students at Risk for School Failure,” *Journal of Applied Psychology* 82, no. 2 (1997), 221–234; and J. Bridgeland et al., *The Silent Epidemic: Perspectives of High School Dropouts* (Washington, D.C.: Civic Enterprises, LLC, March 2006), <https://docs.gatesfoundation.org/documents/thesilentepidemic3-06final.pdf>.
- 2 Ethan Yazzie-Mintz, “Charting the Path from Engagement to Achievement: A Report on the 2009 High School Survey of Student Engagement” (Bloomington, IN: Indiana University Center for Evaluation and Education Policy, 2010), <http://www.wisconsinpbisnetwork.org/assets/files/2013%20Conference/Session%20Material/HighSchoolSurveyStudentEngagement.pdf>.
- 3 Ibid.
- 4 H. Lahaderne, “Attitudinal and Intellectual Correlates of Attention: A Study of Four Sixth-grade Classrooms,” 320–324; J. Cobb, “Relationship of Discrete Classroom Behaviors to Fourth-grade Academic Achievement,” 74–80; L. Hecht, “Measuring Student Behavior During Group Instruction,” 283–290; E. Skinner et al., “What It Takes to Do Well in School and Whether I’ve Got It: A Process Model of Perceived Control and Children’s Engagement and Achievement in School,” 22–32; J. Finn, *School Engagement and Students at Risk*; K. E. Voelkl, “School Warmth, Student Participation, and Achievement,” 127–138. J. Finn and D. Rock, “Academic Success among Students at Risk for School Failure,” 221–234; J. Bridgeland et al., *The Silent Epidemic: Perspectives of High School Dropouts*.
- 5 Ibid.
- 6 J. Finn et al., “Disruptive and Inattentive-Withdrawn Behavior and Achievement among Fourth Graders,” *Elementary School Journal* 95, no. 5 (May 1995), 421–434; M. Roderick and M. Engel, “The Grasshopper and the Ant: Motivational Responses of Low-Achieving Students to High-Stakes Testing,” *Educational Evaluation and Policy Analysis* 23, no. 3 (Fall 2001), 197–227; I. Archambault et al., “Student Engagement and its Relationship with Early High School Dropout,” *Journal of Adolescence* 32, no. 3 (June 2009), 651–670.
- 7 H. M. Marks, “Student Engagement in Instructional Activity: Patterns in the Elementary, Middle, and High School Years,” *American Educational Research Journal* 37, no. 1 (Spring 2000), 153–184; P. McDermott et al., “The Organization of Student Performance in American Schools: Discipline, Motivation, Verbal Learning, and Nonverbal Learning,” *Journal of Educational Psychology* 93, no. 1 (March 2001), 65–76.
- 8 K. Cooper et al., “Reflectiveness, Adaptivity, and Support: How Teacher Agency Promotes Student Engagement,” *American Journal of Education* 123, no. 1 (November 2016), <http://www.journals.uchicago.edu/doi/abs/10.1086/688168>, 109–136; and T. Nguyen et al., “Understanding student behavioral engagement: Importance of student interaction with peers and teachers,” *Journal of Educational Research* (October 2016), <http://www.tandfonline.com/doi/full/10.1080/00220671.2016.1220359>.

- 9 J. Fredericks et al., “School Engagement: Potential of the Concept, State of the Evidence,” *Review of Educational Research* 74, no. 1 (March 2004); I. Archambault et al., “Student Engagement and its Relationship with Early High School Dropout,” *Journal of Adolescence* 32, no. 3 (June 2009), 651–70; A. Klem and J. Connell, “Relationships Matter: Linking Teacher Support to Student Engagement and Achievement,” *Journal of School Health* 74, no. 7 (September 2004).
- 10 A recent evaluation of student engagement in urban community colleges shows that postsecondary engagement falls into three similar categories: academic or behavioral engagement (such as in-class attentiveness and participation); relational engagement (relationships, respect for, and connectedness to peers); and cognitive engagement (exerting mental effort to learn). See S. Alicea et al., “Observing Classroom Engagement in Community College: A Systematic Approach,” *Educational Evaluation and Policy Analysis* 28, no. 4 (December 2016), 757–782).
- 11 Z. Wang et al., “Measuring Engagement in Fourth to Twelfth Grade Classrooms: The Classroom Engagement Inventory,” *School Psychology Quarterly* 29, no. 4 (December 2014), 517–535.
- 12 Tripod Education, “Frameworks and Survey Models,” <http://tripoded.com/survey-modules/>.
- 13 Panorama Education, “Panorama Student Survey,” <https://www.panoramaed.com/panorama-student-survey>.
- 14 Unlike individual survey questions—which only assess a specific facet of a construct—scales ask respondents multiple questions, thereby facilitating a deeper memory search for relevant information. They also ask about different strands of a construct to better represent *all* (or at least most) aspects of it and ask overall questions to fill in any missing gaps.
- 15 We are unable to report results for these students as subgroups due to the limited number of homeschool and full-time online student respondents.
- 16 This included items such as the proportion of students in the free and reduced-price lunch program, the urban/suburban/rural classification of the school, school enrollment, and other variables. This appended information was provided by Market Data Retrieval (MDR).
- 17 Z. Wang et al., “Measuring Engagement in Fourth to Twelfth Grade Classrooms.”
- 18 Panorama Education, “Panorama Student Survey.”
- 19 The thirty-nine items comprised eight original scales from the two student engagement measures. A *scale* is a set of items with excellent psychometric properties, meaning it consistently and reliably measures the same idea or set of ideas.
- 20 A *construct* is an idea or theory, especially a complex one formed from a number of simpler elements.
- 21 This scale was termed “Disengagement” in Wang et al. It is composed of three items (I am “zoned out,” not really thinking or doing class work; I let my mind wander; and I just pretend like I’m working). In our survey, these items had negative coefficients, meaning that students reported doing these activities infrequently. For clarity, we re-named the scale “In-Class Participation.”
- 22 All differences are significant at $p < 0.05$.
- 23 Scaled scores were created for each of the six factors by computing the average response among the variables with the highest factor loadings on each factor. Scores represent the average response on the five-point response scale across all items.
- 24 More specifically, 41 percent report being in the top 5 percent of their class and 39 percent report being in the top 6 percent to 25 percent of their class.

- 25 Students report that they “have just enough to get by” when asked to describe their family’s overall financial situation; they also report eligibility for free or reduced-price lunch at school.
- 26 The latter is based on respondents’ self-reports of their family’s economic situation as well as school-level information that indicated respondents’ likelihood of attending a school with a high proportion of students enrolled in the federal free and reduced-price lunch program.
- 27 As indicated, all differences mentioned in this report are significant at $p < 0.05$.
- 28 Recall that our measure of poverty is based in part on the student’s attitude toward his or her family’s financial situation and not his or her actual income (which would be nearly impossible to gather from high school students). In other words, responses are influenced by context: students of a higher income could very well think they do not have enough money while students of a lower income could think they do, especially if they appear well off compared to those around them. Some studies also show that it is the attitude toward income that tends to be more predictive of risk behaviors.
- 29 P. Cohen et al., “Educational Outcomes of Tutoring: A Meta-analysis of Findings,” *American Educational Research Journal* 19, no. 2 (Summer 1982), 237–248.
- 30 Z. Wang et al., “Measuring Engagement in Fourth to Twelfth Grade Classrooms.”
- 31 Panorama Education, “Panorama Student Survey.”
- 32 This scale was termed “Disengagement” in Wang et al. It is composed of three items (I am “zoned out,” not really thinking or doing class work; I let my mind wander; and I just pretend like I’m working). In our survey, these items had negative coefficients, meaning that students reported doing these activities infrequently. For clarity, we re-named the scale “In-Class Participation.”