

A young man with short brown hair, wearing a red baseball cap and a teal t-shirt, is shown in profile, looking towards the left. He is wearing a dark backpack and holding a stack of books. The background is a blurred outdoor setting with warm, golden light. A large orange triangle is in the top right corner.

Student Motivation and Learning

Teacher and Teen
Perspectives

This study
produced with
support from



EdWeek
Research Center™

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Editorial Projects in Education (EPE) is a nonprofit, tax-exempt organization based in Bethesda, Md. Its primary mission is to help raise the level of awareness and understanding among professionals and the public of important issues in American education. EPE covers local, state, national, and international news, and issues from preschool through the 12th grade. Editorial Projects in Education publishes Education Week, America's newspaper of record for precollegiate education, EdWeek *Market Brief*, and the Top School Jobs employment resource. It also produces periodic special reports on issues ranging from technology to textbooks, as well as books of special interest to educators.

The EdWeek Research Center conducts surveys, collects data, and performs analyses that appear in Education Week and EdWeek Market Brief. The center also conducts independent research studies for external clients including for-profit and nonprofit organizations.

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The [Lemelson Foundation](#) supports Education Week's coverage of problem solving and student motivation. Through its work, the Foundation seeks to increase access to Invention Education and entrepreneurship programs to cultivate the next generation of impact inventors, and strengthen the supporting environment needed for invention-based businesses to thrive.

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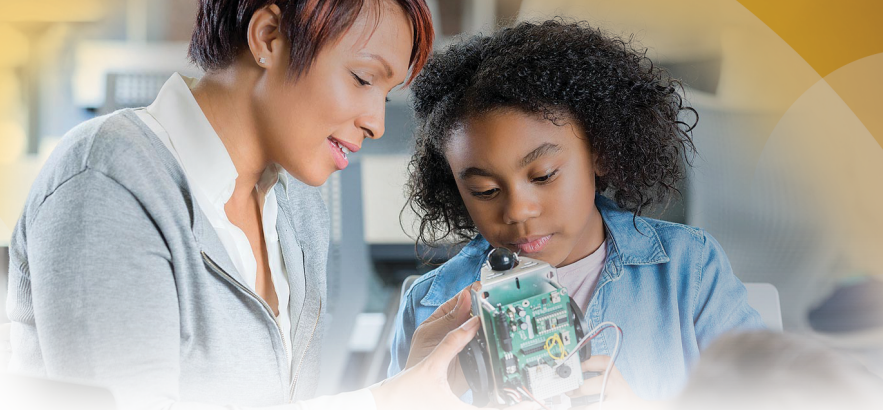
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Executive Summary



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Teachers play a crucial role in understanding what motivates students and identifying barriers to learning. The EdWeek Research Center surveyed middle and high school teachers as well as teenage students to learn more about their perspectives on motivation levels, learning barriers, and the impact of technology on classroom engagement. The survey research focused on challenges and opportunities in science, technology, engineering, and mathematics (STEM), as well as English/language arts (ELA).

Survey results reveal areas in which the perspectives of educators are aligned with those of students but also highlight important gaps.

- When asked about student motivation levels, students and teachers didn't see eye to eye. Only 10 percent of teachers believed students were very motivated in STEM classes, while 59 percent of students reported being very motivated. The gap was similar in English/language arts (7 percent vs. 59 percent).
- Teachers and students hold opposite views on the impact of cellphones in learning. Teachers overwhelmingly viewed cellphone use as harmful to

learning, with 94 percent reporting negative impacts in STEM classes. By contrast, students most commonly said cellphones had no effect (49 percent) or positive effects (38 percent) on their learning.

- Survey findings also highlight differing perspectives with respect to learning barriers. Teachers most commonly cited digital distractions (78 percent in STEM, 79 percent in ELA), while students pointed to lack of interest in topics taught (22 percent in STEM, 30 percent in ELA) and grade-related anxiety as their primary concerns. When asked about a range of potential challenges, students were often less likely than teachers to see them as barriers to learning.

Additional findings reveal that teachers were more likely than students to say that peer pressure has a negative effect on student motivation in STEM and ELA but less likely to say that family members encourage students to take advanced courses in those subjects.

These widespread perception gaps suggest that bridging the divide between educator and student perspectives could lead to more effective instructional strategies and improved classroom engagement.

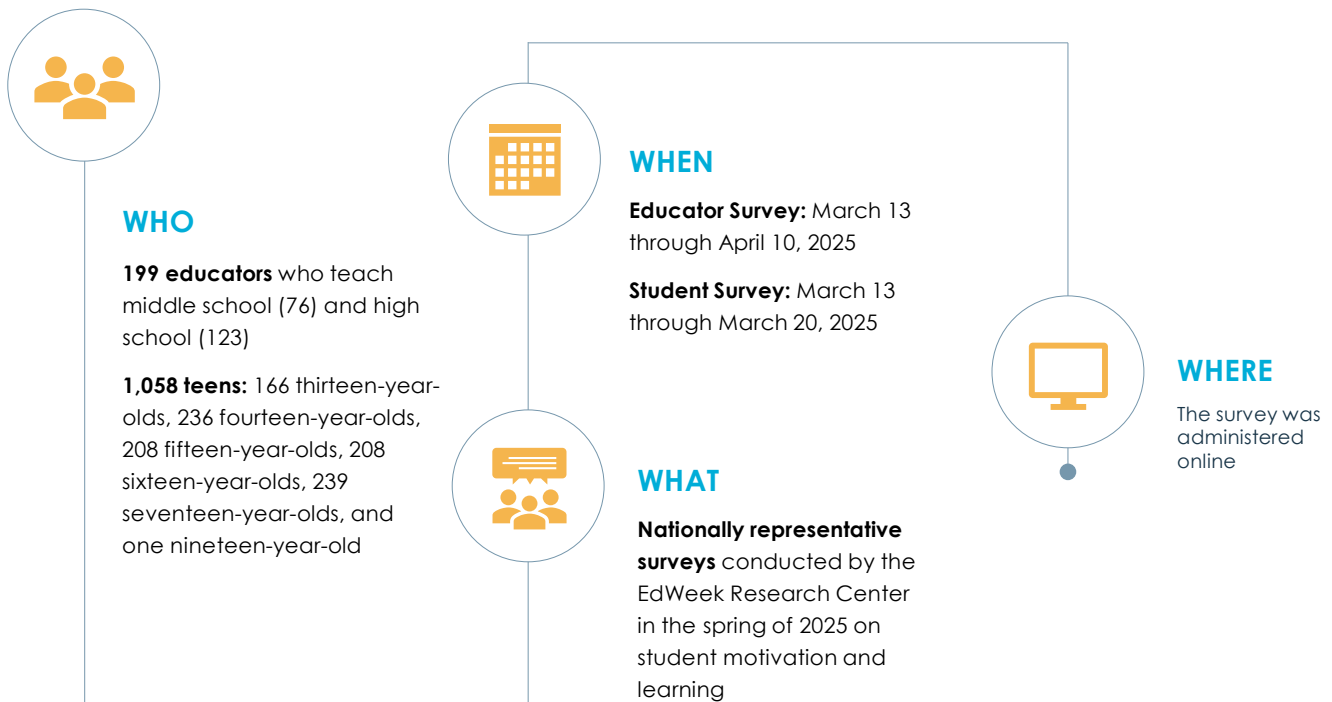
Introduction

This EdWeek Research Center report presents survey findings on student motivation in STEM and English/language arts, contrasting the perspectives of middle and high school teachers with those of teenage students. Survey results reveal significant gaps between educator and student perspectives, with teachers and students often viewing classroom dynamics through fundamentally different lenses. For instance, while teachers cited digital distractions—such as social media—as the primary barriers to learning, students pointed to a lack of interest in the topics they were studying and worries about failing or getting bad grades—revealing a fundamental disconnect in how each group perceives classroom challenges.

Research Limitations

When interpreting findings from these surveys, it's important to note that teachers are responding based on their perceptions of students as a group across their classes, while students are reporting on their individual experiences and perspectives. This difference in reference points may contribute to some of the gaps observed between educator and student responses.

ABOUT THE SURVEY



Respondent Demographics

This analysis examines and compares survey responses from 199 educators who teach English/language arts and/or STEM classes in middle school (76) and high school (123) to results from middle and high school-aged students.

The student survey included 1,058 teens: 166 13-year-olds, 236 14-year-olds, 208 15-year-olds, 208 16-year-olds, 239 17-year-olds, and one 19-year-old.

Grade Level

The majority of students were enrolled in high school grades 9-12. The distribution was fairly even across high

school grades: 19 percent in ninth grade, 20 percent in tenth grade, 18 percent in eleventh grade, and 16 percent in twelfth grade.

Middle school students comprised 26 percent of the sample, with 17 percent in eighth grade, 8 percent in seventh grade, and 1 percent in sixth grade.

School Type

Nearly three-quarters of students (74 percent) attended traditional public schools, with 17 percent in private schools, 5 percent in charter schools, and 4 percent homeschooled.

Figure 1

How old are you?



Figure 2

What grade are you in?

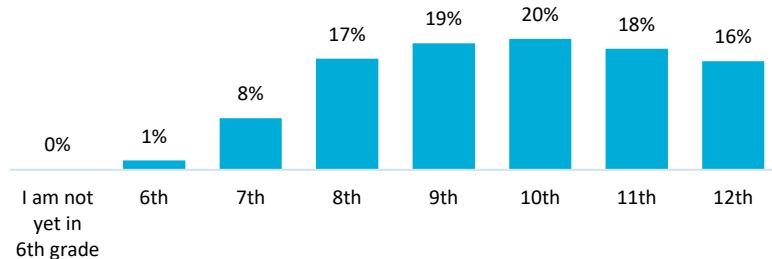
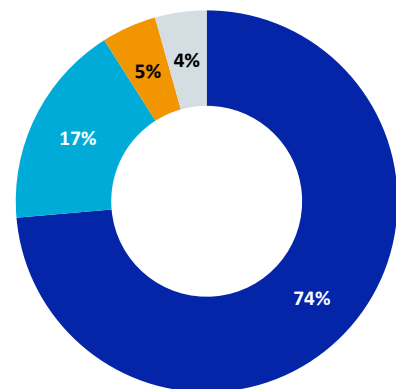


Figure 3

Where do you go to school?



- Public school
- Private school
- Charter school
- I am home schooled

Note: Percentages may not add up to 100 due to rounding. Results show responses from students ages 13-19.

Views on Student Motivation

Survey results reveal substantial gaps between how students view their engagement and how teachers perceive student motivation.

In STEM classes, 59 percent of students reported being very motivated while only 10 percent of teachers believed students have that level of motivation. The gap in perception was nearly identical in English/language arts (59 percent vs. 7 percent).

Roughly two out of five teachers described students as somewhat or very unmotivated in STEM and in English/language arts but only one out of ten students self-reported the same lack of motivation.

Figure 4

How motivated are you [most of your current students] to do your [their] best in math-, science-, engineering- and/or technology classes?

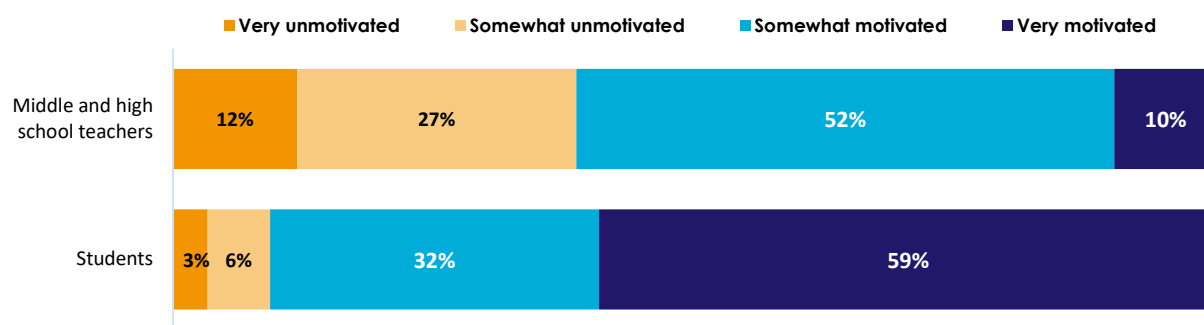
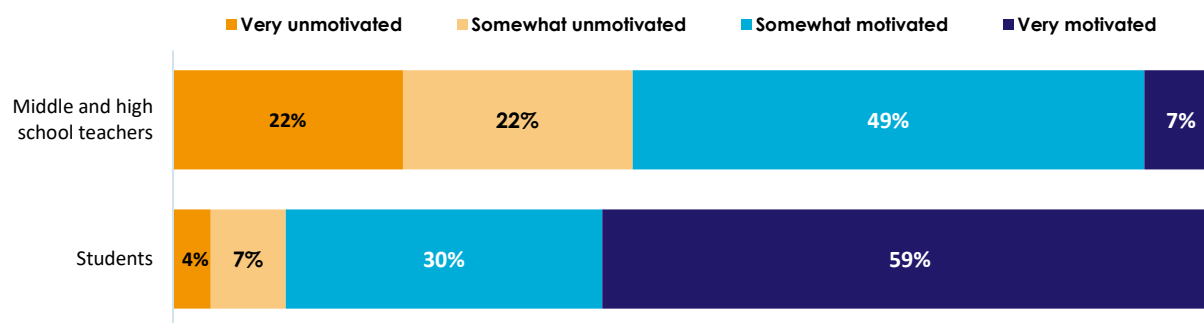


Figure 5

How motivated are you [most of your current students] to do your [their] best in your English/language arts classes?



Note: Percentages may not add up to 100 due to rounding. Results show responses from students ages 13-19 and teachers who teach ELA and/or STEM classes.

Student Voice and Teacher Feedback

Students and teachers differed in the degree to which they think teachers actively seek and incorporate student input about factors that would increase motivation in STEM but were more aligned on efforts to seek feedback about ELA.

In STEM classes, 57 percent of students reported that teachers had asked for their feedback on motivation and incorporated it into classroom activities. However, only 39 percent of teachers said

they had taken those steps.

Thirty-one percent of students indicated teachers had never asked for their input, while 50 percent of STEM teachers reported they hadn't requested student feedback.

The gap was smaller in English/language arts classes, where student and teacher responses were more closely aligned. Fifty-three percent of students said teachers had asked for and used their feedback compared to 56 percent of teachers reporting use of this approach.

Figure 6

This school year, have the teachers in your math-, science-, engineering- and/or technology-related classes [you] asked you [your students] what would help motivate you [them] to work harder and learn more in classes?

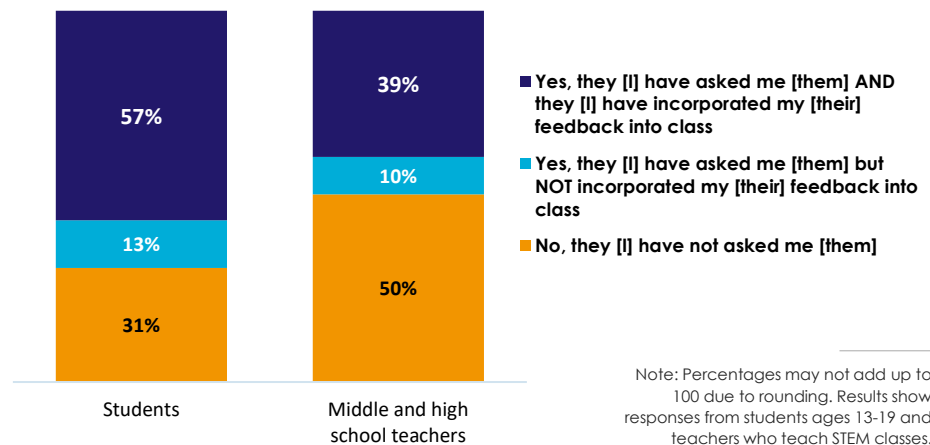
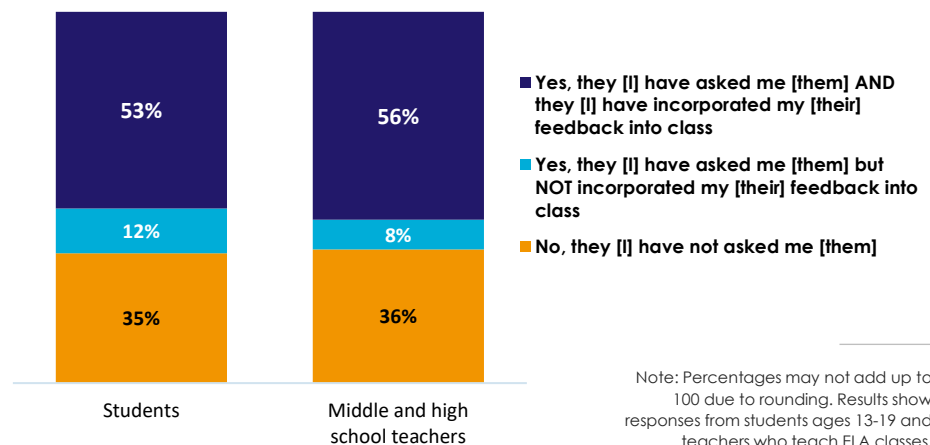


Figure 7

Have the teachers in your English/language arts classes [you] asked you [your students] what would help motivate you [them] to work harder and learn more in classes?



What Motivates Students

When identifying what would have a major impact on student motivation, teachers and students showed both alignment and notable differences in their priorities across both subject areas.

In STEM classes, both groups agreed that effective teaching practices were crucial, with “teachers who explain things, so I [students] understand them” ranking as a top motivator, though teachers rated this factor higher than students (59 percent vs. 49 percent).

The largest gaps emerged around career connections, where teachers were more likely than students (58 percent vs. 34 percent) to believe that examples showing how subject matter can be used in future careers would have an impact on motivation.

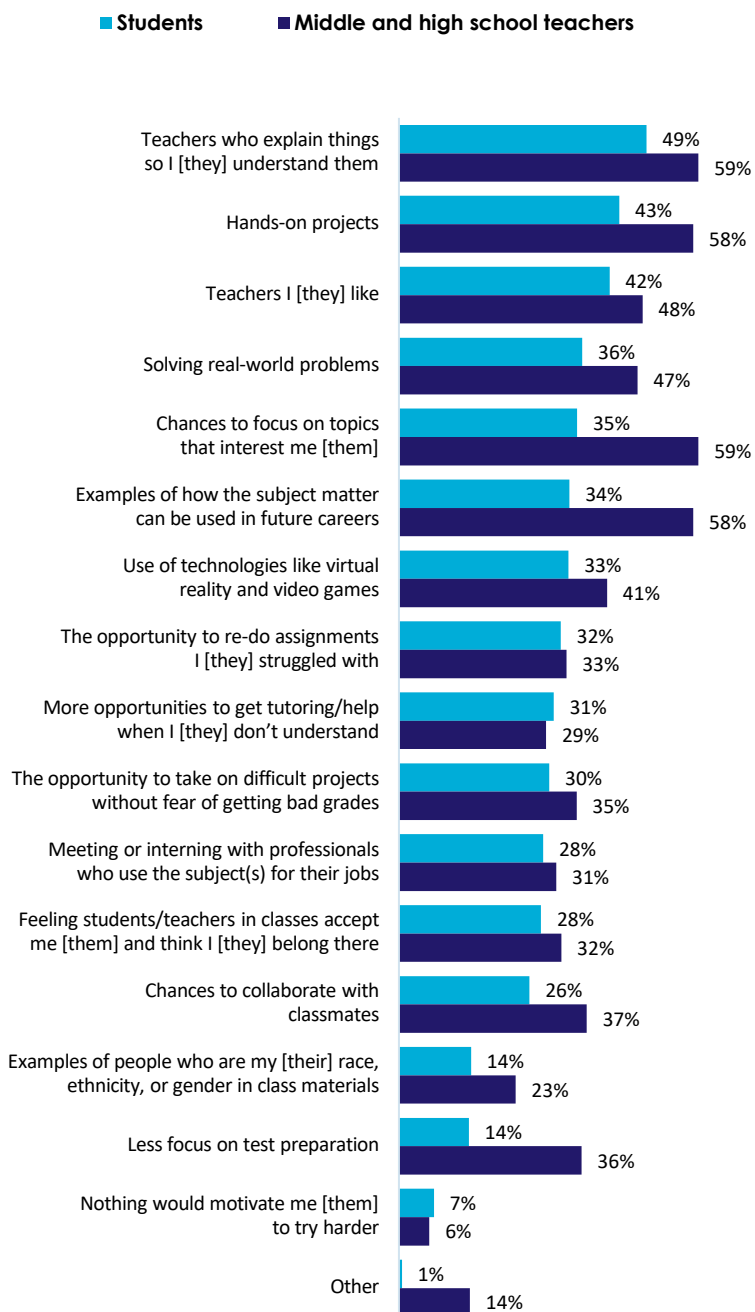
The majority of teachers (59 percent) believed that giving students chances to focus on topics that interest them would motivate students but only 35 percent of students agreed.

Forty-eight percent of teachers said that teachers students like have a strong influence on motivation. A similar share (42 percent) of students cited the importance of this type of connection.

In English/language arts classes, 44 percent of teachers pointed to the role of teachers who can explain things so that students can understand. Half of students highlighted that factor.

Figure 8

What—if anything—would have a MAJOR impact on your [most of your students'] level of motivation in math-, science-, engineering- and/or technology-related classes? Select all that apply.



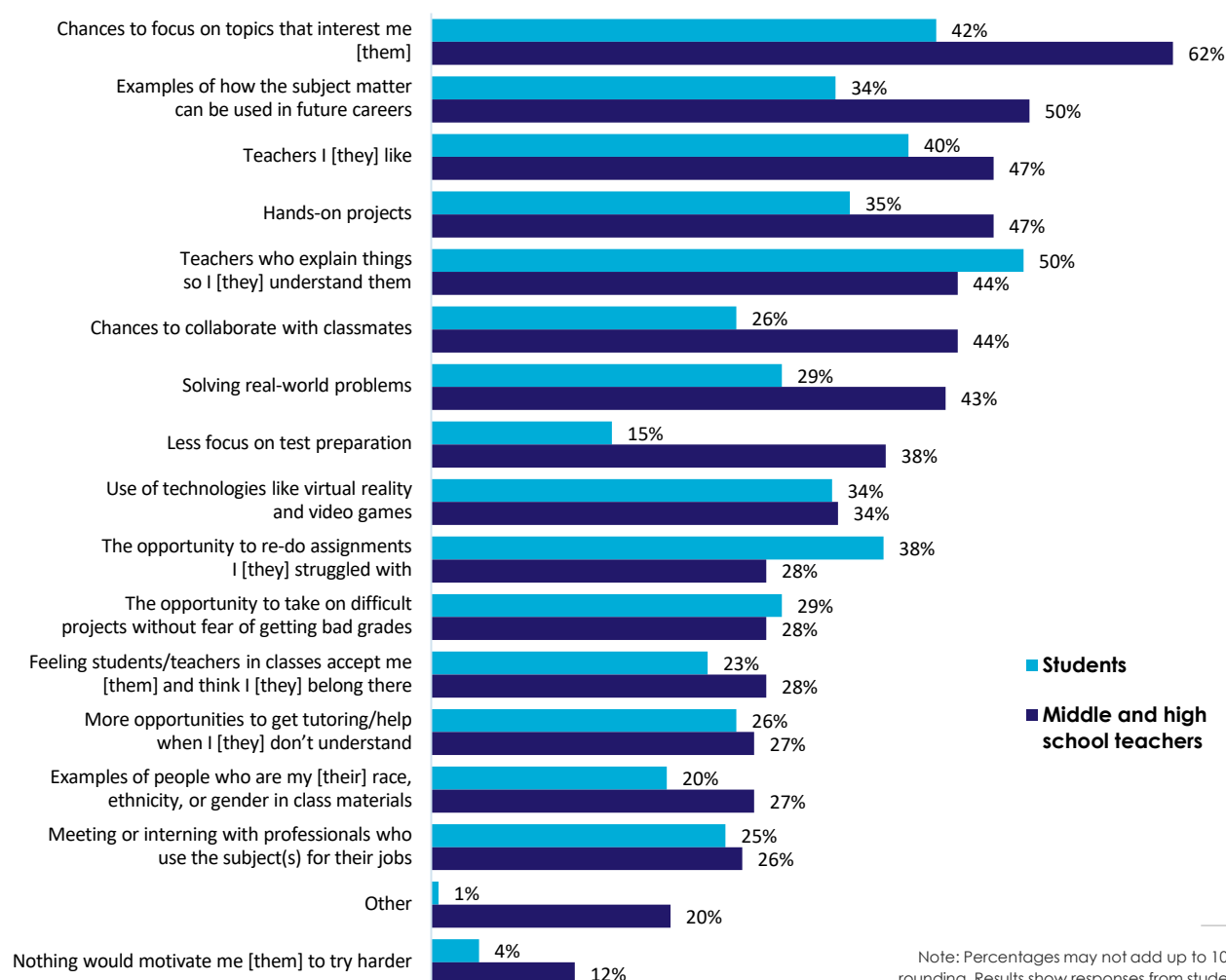
Note: Percentages may not add up to 100 due to rounding. Results show responses from students ages 13-19 and teachers who teach STEM classes.

The biggest gap emerged around topic choice, where teachers believed giving students “chances to focus on topics that interest them” would be highly motivating (62 percent), while only 42 percent of students identified this as a major factor. Similarly, only one-third of students agreed that subject matter aligning with future careers will improve motivation compared to 50 percent of teachers.

Survey findings across both subjects reveal that teachers tend to overestimate the appeal of career connections while students prioritize more immediate classroom factors like connecting with teachers they like and receiving instruction that features clear explanations. While future-oriented approaches that ask students to look at long-term goals may play a role in motivating some students, teachers might reach more students by emphasizing strategies for building strong instructional relationships in the present.

Figure 9

What—if anything—would have a MAJOR impact on your [most of your students'] level of motivation in English/language arts classes? Select all that apply.



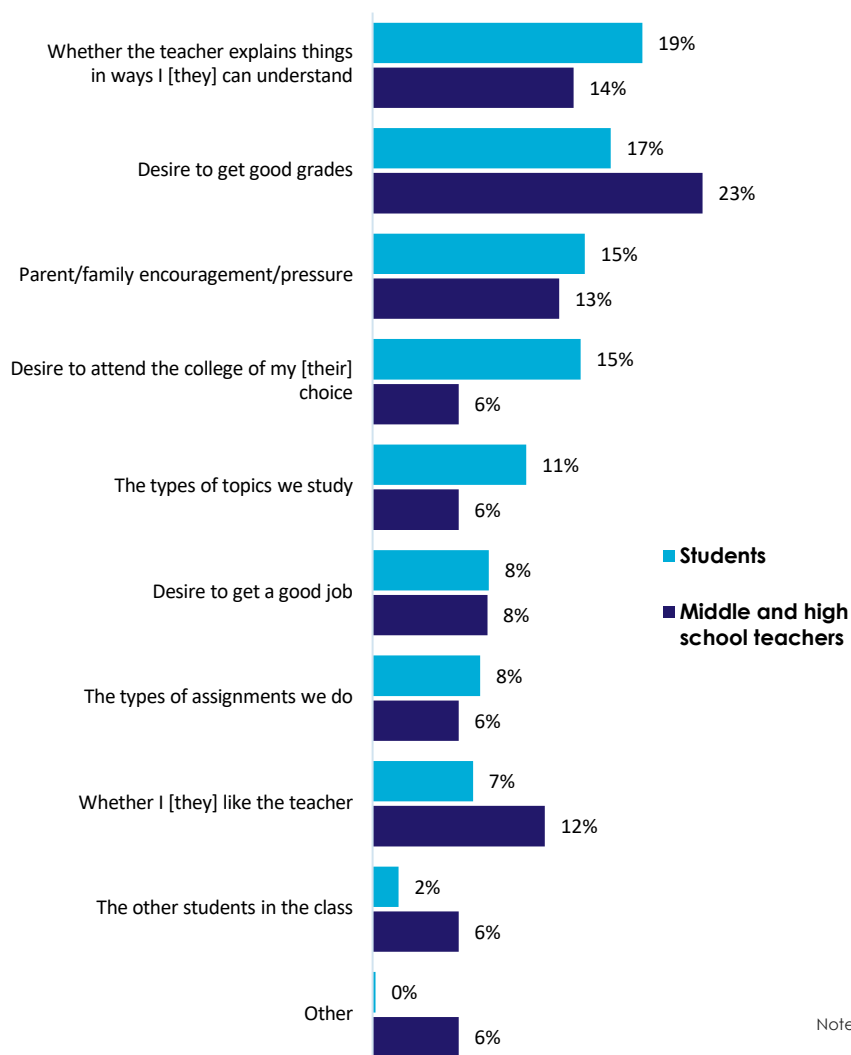
Note: Percentages may not add up to 100 due to rounding. Results show responses from students ages 13-19 and teachers who teach ELA classes.

When asked about additional factors that can have a major impact on motivation levels, students and teachers had somewhat different perspectives.

In STEM subjects, students most commonly pointed to the importance of teachers who explain things in ways they can understand (19 percent) and their desire to get good grades (17 percent). Twenty-three percent of teachers cited students' desire for good grades as a major factor while 14 percent pointed to the role of teachers with the ability to effectively explain concepts to students.

Figure 10

What has a MAJOR impact on your level [most of your students' levels] of motivation in science, technology, engineering and/or math?



Note: Percentages may not add up to 100 due to rounding. Results show responses from students ages 13-19 and teachers who teach STEM classes.

Fifteen percent of students cited college aspirations as a major factor compared to only 6 percent of teachers. Students were also more likely than teachers to say that the types of topics studied in class mattered (11 percent vs. 6 percent). By contrast, students were less likely than teachers to see teacher likeability as an influential factor (7 percent vs. 12 percent) and to see other students in the class playing a major role (2 percent vs. 6 percent).

In English/language arts, students identified their desire to get good grades as the top motivation driver at 21 percent, while teachers were closely aligned with this assessment at 19 percent. However, significant gaps emerged in other areas.

The largest difference in ELA appeared around peer influence, where 15 percent of teachers believed other students in the class had a major impact on motivation, but only 3 percent of students agreed.

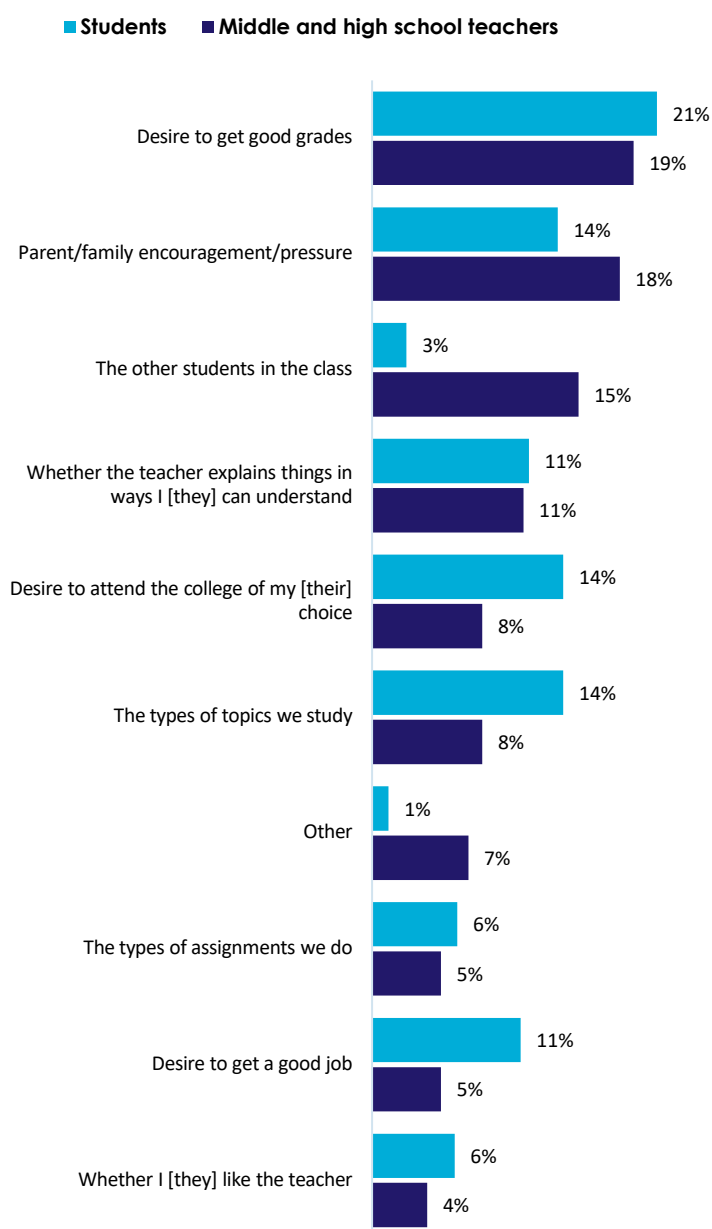
Teachers didn't see a key role for postsecondary plans as often as students did. The share of teachers pointing to the importance of students' desire to get a good job was only about half (5 percent) the percentage of students (11 percent) giving that element a prominent role.

Only 8 percent of teachers thought that the topics studied in class have much influence while 14 percent of students believed they do.

Clear explanations from teachers in ELA were important to 11 percent of both students and teachers, unlike in STEM where students cited this factor more often than teachers did.

Figure 11

What has a MAJOR impact on your level [most of your students' levels] of motivation in English/language arts?



Note: Percentages may not add up to 100 due to rounding. Results show responses from students ages 13-19 and teachers who teach ELA classes.

Student Confidence Levels

Students reported significantly higher confidence in their abilities than teachers thought their students had.

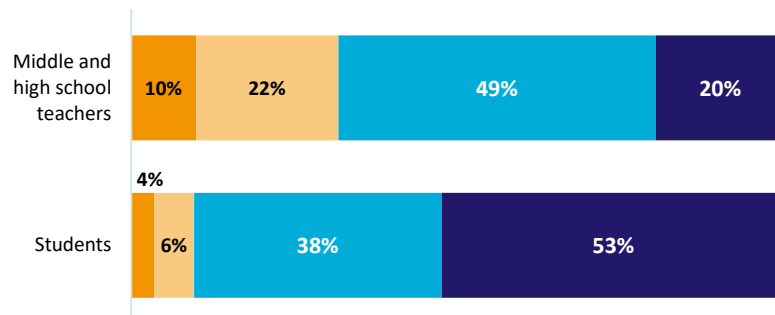
In STEM subjects, 53 percent of students said they were very confident they could learn and succeed, while only 20 percent of teachers thought that most of their students have a lot of confidence. An additional 38 percent of students described themselves as somewhat confident, while 49 percent of teachers described their students' level of confidence that way.

The gap was even more pronounced in English/language arts, where 60 percent of students reported being very confident in their abilities, but only 21 percent of teachers thought that most of their students have that type of belief in their own capacity to succeed.

Figure 12

How confident are you [most of your students] that you [they] can learn and succeed in math-, science-, engineering- and/or technology-related subjects?

■ Very unconfident ■ Somewhat unconfident ■ Somewhat confident ■ Very confident

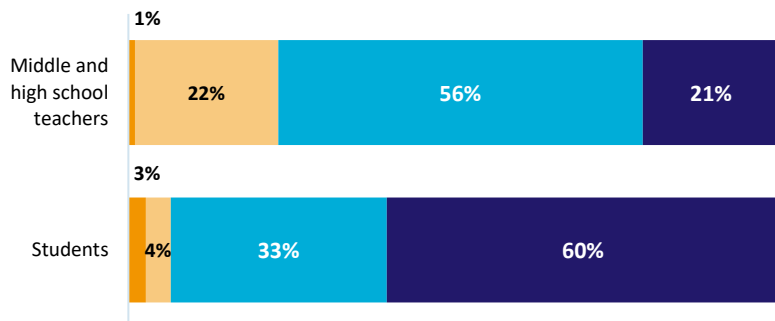


Note: Percentages may not add up to 100 due to rounding. Results show responses from students ages 13-19 and teachers who teach STEM classes.

Figure 13

How confident are you [your students] that you [they] can learn and succeed in English/language arts classes?

■ Very unconfident ■ Somewhat unconfident ■ Somewhat confident ■ Very confident



Note: Percentages may not add up to 100 due to rounding. Results show responses from students ages 13-19 and teachers who teach ELA classes.

Peer Pressure Effects

Students and teachers view the effects of peer pressure in differing ways.

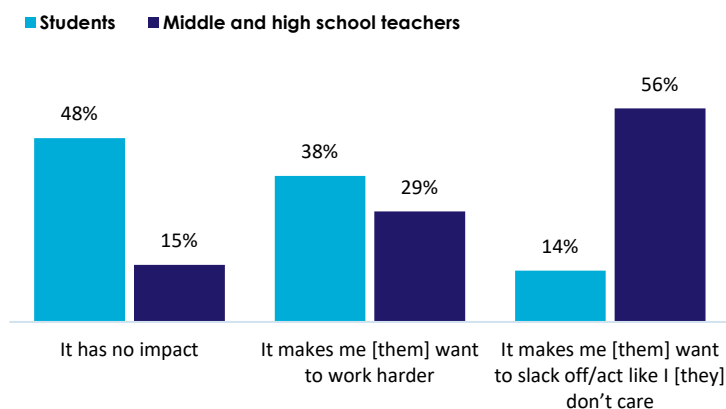
In STEM classes, 56 percent of teachers believed peer pressure made students want to slack off or act like they don't care about their work. However, only 14 percent of students reported experiencing this negative peer influence. Forty-eight percent of students said peer pressure had no impact on their motivation in STEM classes and 38 percent said peer pressure made them want to work harder.

The survey responses were nearly identical for English/language arts classes, where 60 percent of teachers thought peer pressure caused students to slack off, but only 13 percent of students agreed.

Thirty-nine percent of students said peer pressure motivated them to work harder, while 48 percent reported no impact.

Figure 14

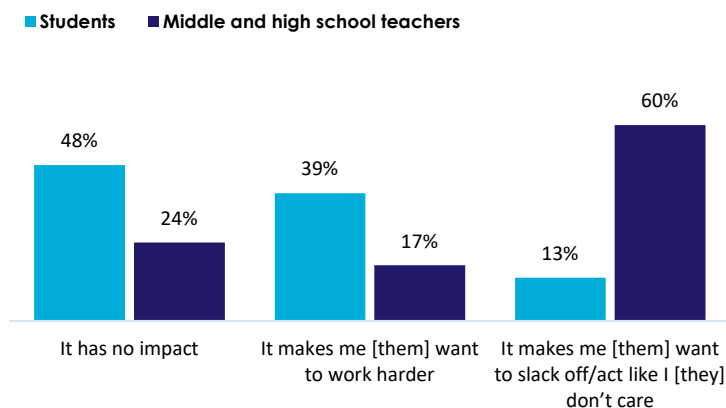
How does peer pressure impact your [most of your students'] motivation to work hard in math, science, engineering, or technology classes?



Note: Percentages may not add up to 100 due to rounding. Results show responses from students ages 13-19 and teachers who teach STEM classes.

Figure 15

How does peer pressure impact your [your students'] motivation to work hard in English/language arts classes?



Note: Percentages may not add up to 100 due to rounding. Results show responses from students ages 13-19 and teachers who teach ELA classes.

Sources of Encouragement

The majority of students believed that teachers encouraged them to enroll in advanced courses but that was still far lower than the share of teachers who reported that students received support from that source.

For STEM classes, 81 percent of teachers said teachers encouraged students to take advanced courses, but only 58 percent of students cited teacher encouragement. Similarly, 47 percent of teachers believed school counselors provided encouragement, while just 29 percent of students reported receiving this support.

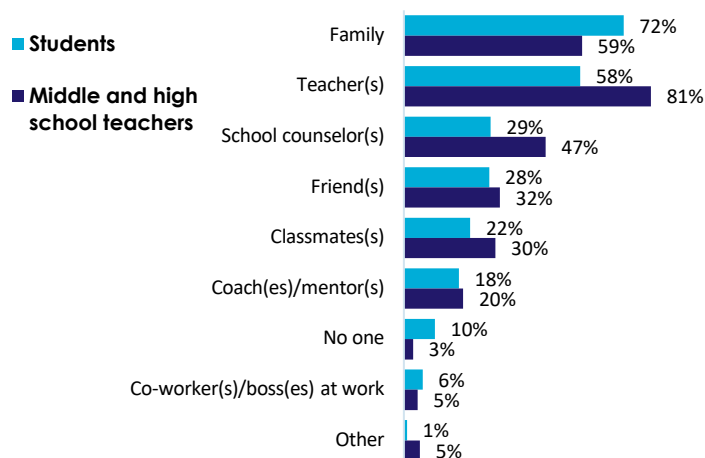
Family emerged as the primary source of encouragement according to students, with 72 percent citing that influence. Teachers were less likely to cite it, with only 59 percent recognizing family encouragement as a factor in STEM.

Teachers were even more likely to report that teachers encourage students to take advanced ELA courses (89 percent) while 60 percent of students cited teacher encouragement. The perception gap regarding the role of guidance counselors was wider in ELA than in STEM, with 63 percent of teachers believing counselors encouraged students compared to just 28 percent of students.

Students identified family as their primary source of encouragement for taking advanced ELA classes, with 74 percent citing that factor compared to only 62 percent of educators.

Figure 16

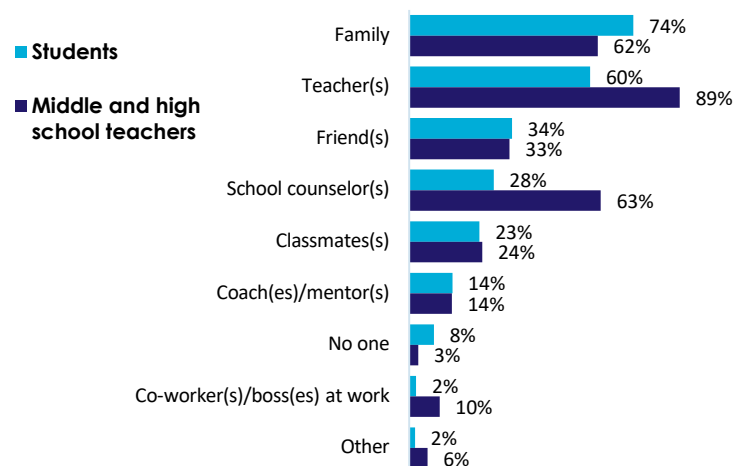
Who encourages you [most of your students] to take advanced math-, science-, engineering- and/or technology-related classes? Select all that apply.



Note: Percentages may not add up to 100 due to rounding. Results show responses from students ages 13-19 and teachers who teach STEM classes.

Figure 17

Who encourages you [your students] to take advanced English/language arts classes? Select all that apply.



Note: Percentages may not add up to 100 due to rounding. Results show responses from students ages 13-19 and teachers who teach ELA classes.

Learning Barriers

Teachers and students identified markedly different primary barriers to classroom learning, revealing fundamental mismatches in how each group perceives obstacles to academic success.

Teachers focused heavily on external factors and behavioral issues. Digital distractions—such as social media—topped their list of concerns in both STEM (78 percent) and English/language arts (79 percent).

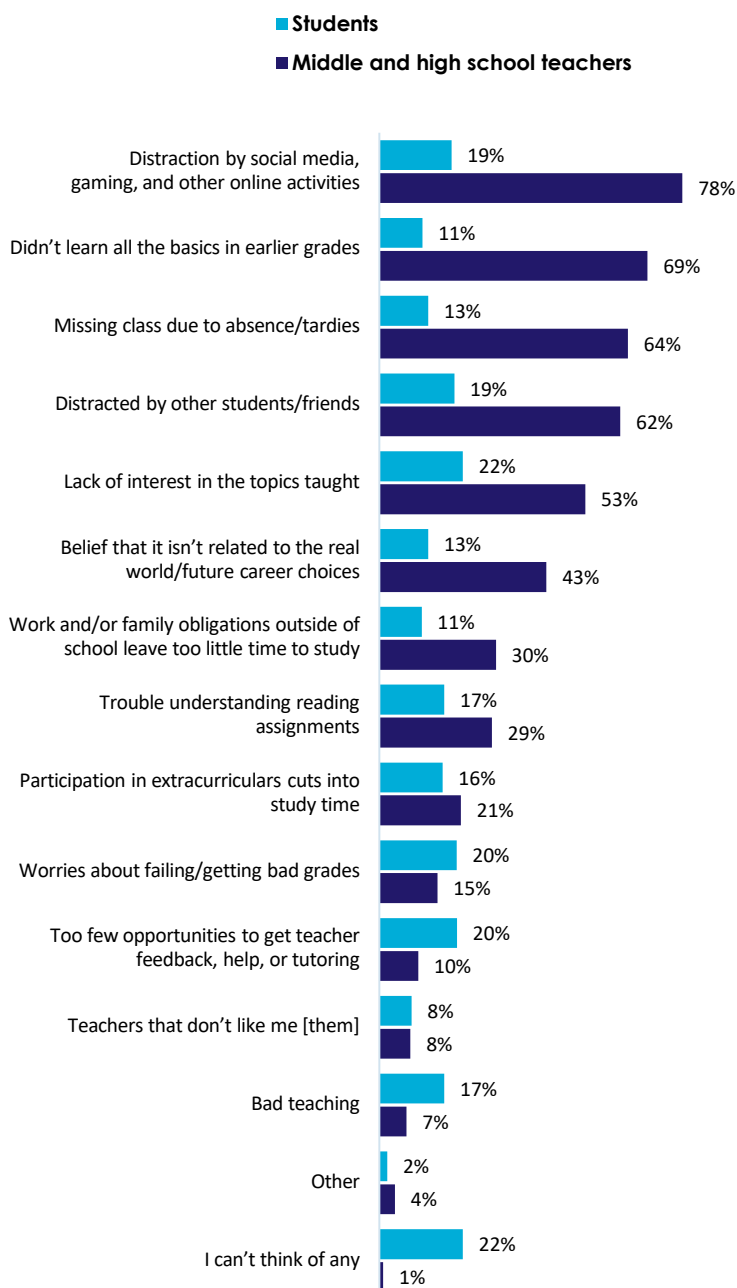
Other major teacher-identified barriers included students not learning foundational skills in earlier grades (69 percent in STEM, 66 percent in ELA) and missing class due to absences or tardiness (64 percent in STEM, 69 percent in ELA).

Students had different ideas. In STEM, the most common responses for students were that they couldn't think of any major barriers to their learning (22 percent compared to just 1 percent of teachers citing the absence of any barriers) and lack of interest in the topics taught (22 percent which was far less than the 53 percent of teachers pointing to that factor), followed by worries about failing or getting bad grades (20 percent compared to 15 percent of teachers).

Digital distractions, which teachers saw as the top barriers, were only cited by 19 percent of students—tied with being distracted by other students. Students were more concerned about academic supports and grade anxiety than they were about the behavioral issues teachers emphasized.

Figure 18

What are MAJOR barriers to your [most of your students'] learning in math, science, engineering, and/or technology classes? Select all that apply.



Results show responses from students ages 13-19 and teachers who teach STEM classes.

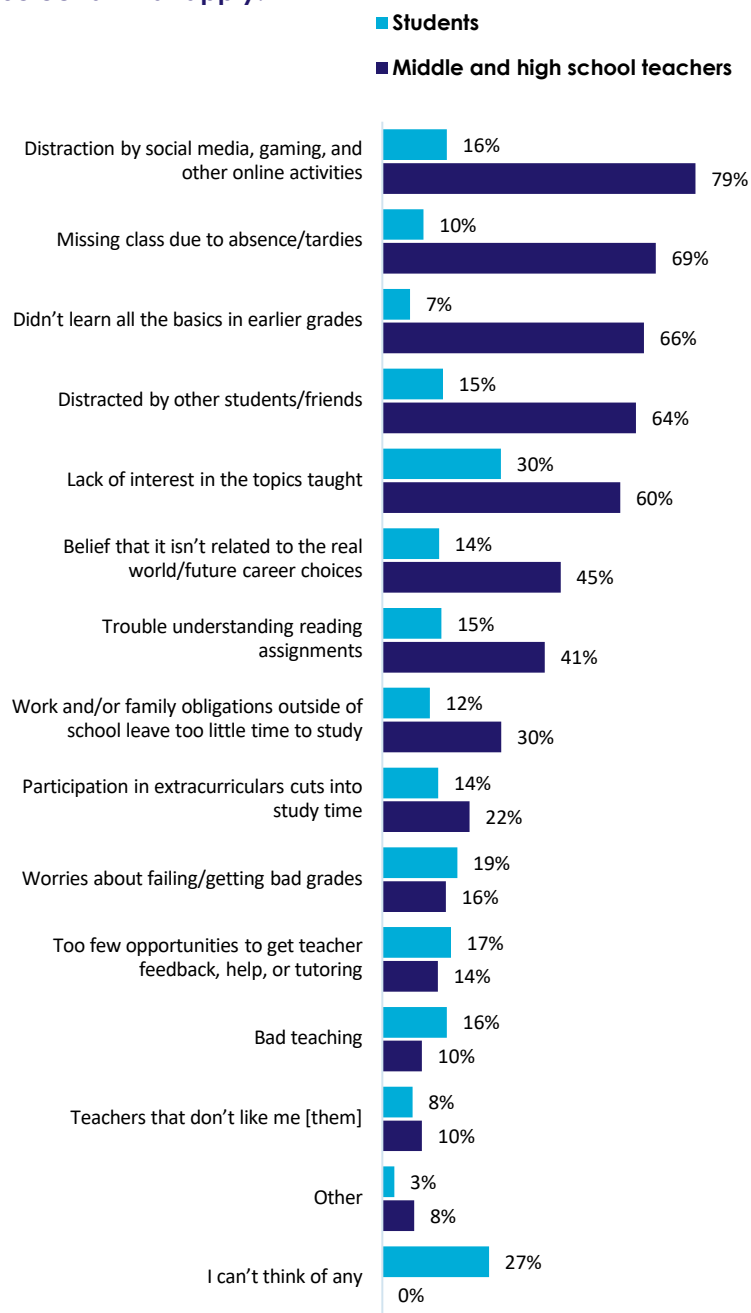
In English/language arts classes, the gaps were even more pronounced. Twenty-seven percent of students said they couldn't identify any major barriers, while zero teachers believed students faced no obstacles. Thirty percent of students cited lack of interest in topics taught as a major barrier compared to 60 percent of educators, while 16 percent cited digital distractions compared to 79 percent of teachers.

Perhaps most significantly, students consistently reported lower percentages across nearly all potential barriers compared to teachers. Beyond the specific differences, the overall pattern reveals that students see fewer obstacles to their learning than teachers see. This could mean that students are more resilient and adaptable than educators realize, or that teachers are identifying systemic issues that students have learned to navigate without viewing them as major impediments. Alternately, it could indicate that students underestimate challenges and have an overly rosy view of their learning.

The survey results reveal a disconnect between students and teachers on the importance of external distractions or skill deficits. Educators should evaluate whether this perception gap is leading them to focus on behavior management or students' lack of foundational skills when students are seeking more academic support and a more engaging curriculum.

Figure 19

What are MAJOR barriers to your [most of your students'] learning in English/language arts classes? Select all that apply.



Results show responses from students ages 13-19 and teachers who teach ELA classes.

The Cellphone Divide

One of the most dramatic gaps in perception emerged around technology's impact on learning, particularly regarding cellphone use.

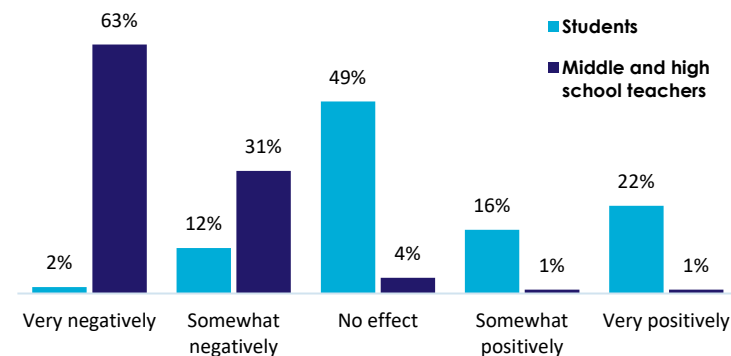
Teachers overwhelmingly viewed cellphone use as detrimental to student learning. In STEM classes, 63 percent of teachers said it had a very negative impact, with another 31 percent reporting somewhat negative effects. Only 2 percent of teachers saw any positive impact from student cellphone use.

Students had vastly different perspectives. Nearly half (49 percent) said cellphone use had no effect on their learning in STEM classes. More students reported positive effects than negative ones: 38 percent saw a somewhat or very positive influence versus 13 percent reporting somewhat or very negative impacts.

The results were remarkably similar in English/language arts classes. Sixty-nine percent of teachers saw very negative and 24 percent saw somewhat negative impacts from cellphone use. By contrast, 26 percent of students reported very positive effects and 16 percent saw somewhat positive effects. Nearly half (49 percent) said it doesn't have any impact.

Figure 20

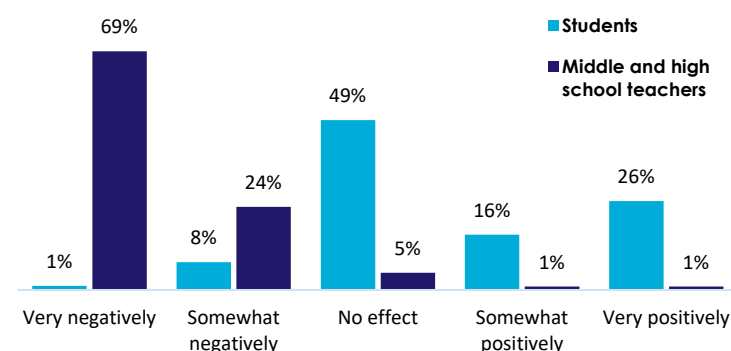
How does the amount of time you [your students] spend on your [their] cellphone affect your [their] learning in math, science, engineering, or technology classes?



Note: Percentages may not add up to 100 due to rounding. Results show responses from students ages 13-19 and teachers who teach STEM classes.

Figure 21

How does the amount of time you [your students] spend on your [their] cellphone affect your [their] learning in English/language arts?



Note: Percentages may not add up to 100 due to rounding. Results show responses from students ages 13-19 and teachers who teach ELA classes.

Teacher Motivation

Students appear to be more in line with teachers about teachers' motivation levels, showing much closer alignment between student observations and teacher self-reports than was seen when teachers assessed student motivation levels.

In STEM classes, 58 percent of students saw their teachers as very motivated while 52 percent of teachers reported being very motivated.

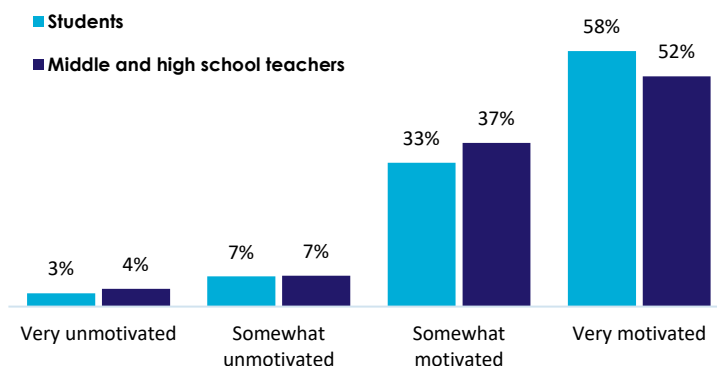
Only 10 percent of students saw teachers as unmotivated versus 11 percent of teachers who viewed themselves as unmotivated.

In English/language arts, 56 percent of students saw teachers as very motivated while only 45 percent of teachers described themselves this way.

About one in ten students saw teachers in those subject areas as unmotivated, closely aligned with the proportion of teachers who viewed their own motivation as low.

Figure 22

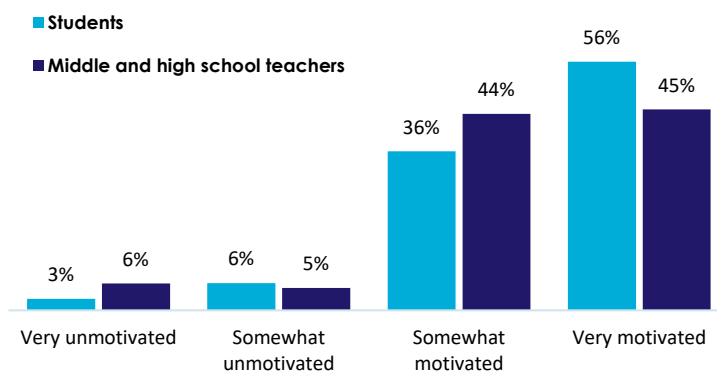
How motivated are your math, science, engineering and/or technology class teachers [you] to do their [your] best teaching you [your students]?



Note: Percentages may not add up to 100 due to rounding. Results show responses from students ages 13-19 and teachers who teach STEM classes.

Figure 23

How motivated are your English/language arts teachers [you] to do their [your] best teaching you [your students]?



Note: Percentages may not add up to 100 due to rounding. Results show responses from students ages 13-19 and teachers who teach ELA classes.