

YouthTruth

— STUDENT SURVEY —

A NATIONAL NONPROFIT

Design & Methodology

Student Survey

2017



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Background

YouthTruth is a national nonprofit that harnesses student and stakeholder perceptions to help educators accelerate improvements. Through validated survey instruments and tailored advisory services, YouthTruth partners with schools, districts, states, and educational organizations to enhance learning for all students. Founded in 2008 by the Center for Effective Philanthropy (CEP), YouthTruth began as a tool for gathering feedback from students. YouthTruth now also offers family and staff surveys. Further information about the YouthTruth Family Survey and YouthTruth Staff Survey is detailed [here](#).

After gathering candid student feedback, we rigorously analyze and report on the resulting quantitative and qualitative data in a robust, interactive online reporting platform. Through these services, YouthTruth surveys provide a cost-effective, rigorous, and meaningful way to inform data-driven practices, school improvement plans, and targeted professional development.

In partnering with YouthTruth, partners can survey students in grades 3-12 using any or all of the following survey instruments:

- The YouthTruth Overall School Experience Survey is primarily used as a climate and culture instrument, as it gathers feedback from students about their overall experiences at their schools. The middle and high school versions of the survey focus on: engagement, academic rigor, relationships, Belonging & Peer Collaboration (including bullying), culture, and, for high school surveys only, college and career readiness. The elementary version of the survey focuses on: engagement, academic rigor and expectations, relevance, instructional methods, relationships between students and teachers (including bullying), and culture. Results are reported at the school and district level.
- The YouthTruth Feedback for Teachers Survey is primarily used for teacher professional development and instructional coaching as it gathers student feedback about their experiences with specific teachers and classes. The secondary version of the survey focuses on six key areas: engagement, academic rigor and expectations, relevance of instruction, instructional methods, relationships between students and teachers, and culture. The elementary version of the survey focuses on: engagement, academic rigor and expectations, relevance of instruction, instructional methods, relationships between students and teachers, and culture. Results are reported at the teacher, school, and district level.

The above surveys can be administered separately or as part of a single, integrated survey experience.

YouthTruth partners may also customize the surveys with Additional Topics:

- *Student Motivation & Grit
- *Project Based Learning
- *STEM Education
- *School Safety
- Learning Styles
- General Health
- Nutrition & Exercise
- Drugs & Alcohol
- Emotional & Mental Health
- Student Voice & Leadership

All topics are available for secondary and the asterisked topics are also available in an elementary version. Please see “Survey History & Development” for more information about the development of these Additional Topics.

This document provides an overview of YouthTruth’s student surveys and reporting products, and

technical documentation regarding:

- Survey development, design, and administration,
- Data processing and analysis procedures,
- Data reliability and validity, and
- Findings from existing survey data.

This document is designed for district and school leaders, researchers, program evaluators, and other parties interested in using validated student survey instruments to help districts, schools, and teachers improve or to evaluate the effects of programs, professional development, or interventions.

Finally, this document shares large portions of YouthTruth’s survey instruments but does not represent the full survey instrument. Please note that survey content cannot be used without the expressed permission of YouthTruth.

Value of Student Surveys

The perceptions of beneficiaries are critical factors in evaluating the effectiveness of systems, programs, and interventions. Recently, there has been growing interest in making better use of beneficiary perceptions in program improvement.¹ The use of beneficiary perception data – from students, in this case – leads to a more nuanced understanding of organizational effectiveness, is a reliable predictor of teacher performance, and is a leading indicator that allows for mid-course adjustments before it is too late to achieve desired impact.²

Recent evidence suggests that student feedback should be a complementary component of school improvement and teacher evaluation initiatives alongside student test performance and classroom observations. The *Measures of Effective Teaching* (MET) study empirically links student perceptions to academic performance, finding that student perceptions predict teacher quality better than classroom observations do.³ Another study appearing in the *Journal of Educational Psychology* found that students who perceived stronger connections between their schoolwork and their later life success had higher grades and lower absenteeism.⁴

While test scores and teacher value-added measures can be useful in measuring overall performance, it can be difficult to act on these measures because they are often reported after the student has left the classroom and because educators may find their meaning unclear. Student feedback can serve as an actionable, real-time barometer of both school and teacher factors that influence academic success.

The 15-year research synthesis from the American Educational Research Association (AERA), “Research Synthesis of the Associations Between Socioeconomic Background, Inequality, School Climate, and Academic Achievement,” suggests that by promoting a positive climate, schools can allow greater equality

¹ Twersky, Fay, Phil Buchanan, and Valerie Threlfall. "Listening to those who matter most, the beneficiaries." *Stanford Social Innovation Review* 11, no. 2 (2013): 40-45.

² Kane, Thomas J., Daniel F. McCaffrey, Douglas O. Staiger, and J.R. Lockwood. "Ensuring Fair and Reliable Measures of Effective Teaching: Culminating Findings from the MET Project’s Three-Year Study." *Bill and Melinda Gates Foundation* (2013).

³ Kane, Thomas J., Daniel F. McCaffrey, Douglas O. Staiger, and J.R. Lockwood. "Ensuring Fair and Reliable Measures of Effective Teaching: Culminating Findings from the MET Project’s Three-Year Study." *Bill and Melinda Gates Foundation* (2013).

⁴ Church, Marcy A., Andrew J. Elliot, and Shelly L. Gable. "Perceptions of classroom environment, achievement goals, and achievement outcomes." *Journal of educational psychology* 93, no. 1 (2001): 43.

in educational opportunities, decrease socioeconomic inequalities, and enable more social mobility for students.⁵ Student surveys are an effective and powerful way to measure school climate.

Feedback from student surveys can provide detailed, contextual, and targeted data on a number of important markers school performance. Student surveys are not necessarily summative in nature, so they can be administered at any point in the year. Additionally, student surveys can be used to understand student perceptions within any classroom and subjects or grade levels. Student surveys, moreover, can serve as tools for evaluating the effectiveness of school-based interventions. Finally, in comparison to academic assessments or classroom observations, student surveys are cost-effective and easy to implement. For instance, some districts have found that student surveys cost one-sixth as much to implement per pupil as classroom observations or value-added estimates.⁶

Survey History & Development

Survey Development and Refinement

YouthTruth surveys ask questions that focus on critical areas of school experience and teacher practice. We carefully developed and refined our surveys in deliberate stages. In developing our pilot survey instrument in 2008, we completed a comprehensive review of the field of student surveys including more than 15 existing survey instruments. We drew many of the questions for the YouthTruth pilot, with permission, from other survey instruments that have been well-validated in the field, including the Chicago Consortium on School Research's *My School, My Voice* survey and the *Survey of Engagement* led by Indiana University's School of Education. Other pilot YouthTruth survey questions represented adaptations of existing survey questions that explored constructs related to school quality and teacher effectiveness. In this way, we paid careful attention to the content validity of our instrument. Additionally, we convened an advisory group that contributed substantial expertise to the design of the survey. This advisory group was made up of survey design experts, educators, district administrators, school leaders, university researchers, students, public officials, foundation staff, and non-profit leaders.

In 2009, with the support of the Bill & Melinda Gates Foundation, we piloted the Overall School Experience Survey with more than 5,300 students in 20 high schools from Georgia, North Carolina, Washington, D.C., and Washington State. The Gates Foundation was interested in assessing the student experience in the schools they were supporting with funds for specific initiatives. The Gates Foundation asked the Center for Effective Philanthropy (CEP) to lead and execute the pilot because of CEP's deep experience in collecting and analyzing perceptual survey data for foundations.

Given the success of the pilot, we expanded YouthTruth during the 2009-2010 school year, surveying more than 15,000 students from 72 high schools spanning eight districts and networks in Arizona, Colorado, Florida, Georgia, North Carolina, Ohio, and Texas. Six of the 20 schools that participated in the YouthTruth pilot repeated the survey in 2009-2010 and three other pilot schools repeated the survey in subsequent years.

A formative evaluation of YouthTruth's progress conducted by researchers at Brandeis University in 2010 reported that, "high school leaders overwhelmingly believe that YouthTruth has been valuable for their

⁵ Berkowitz, Ruth, Hadass Moore, Ron Avi Astor, and Rami Benbenishty. "A research synthesis of the associations between socioeconomic background, inequality, school climate, and academic achievement." *Review of Educational Research* 87, no. 2 (2017): 425-469.

⁶ Education First (2014). "Student Surveys: Measuring Students' Perceptions of Teacher Effectiveness." http://www.education-first.com/files/Strategies_for_Success_Student_Surveys.pdf

schools.” Among school and district leaders that participated in the first two years, 94 percent who responded to a follow-up survey stated that the survey generated valuable information for schools. One school leader commented that YouthTruth “was a powerful vehicle for student voice.” Although the evaluation identified several challenges facing YouthTruth, the report concluded that there was “a high potential of going to scale with YouthTruth.”⁷

To date, YouthTruth’s Overall School Experience Surveys have been administered in approximately 750 unique schools, many of whom have repeated the survey over time, with over 526,000 student responses. This represents the largest proportion of the approximately 630,000 total student responses received through YouthTruth products.

Developing Surveys for Different Age Groups

YouthTruth developed our first survey instrument for students in grades 9-12. In response to increasing demand from school and district leaders, we subsequently developed survey instruments designed for younger students in 2012 (middle school) and 2013 (upper elementary school). The middle school survey targets many of the same concepts as the high school survey. However, through extensive research, including literature reviews, focus groups and field tests with middle school students, we refined the survey to ensure that the questions were age-appropriate and relevant for grades 6-8. In developing our survey instrument for grades 3-5, we conducted an extensive review of: 1) research about teaching practice that supports positive student learning outcomes, 2) existing well-validated survey instruments, and 3) best practices for surveying young children. We also conducted field tests and focus groups to ensure understanding of the survey items.

Early research from the Measures of Effective Teaching (MET) study points to specific constructs, namely challenge and control, which were associated with high-quality teaching and student achievement.⁸ Informed by this research, we incorporated specific publicly available question items from the elementary version of the MET survey, which were identified in the MET study as being most strongly associated with effective teaching. As we selected concepts to include in the instrument, we also referenced research by the John W. Gardner Center at Stanford University that suggests that students’ motivational beliefs are closely related to their achievement, and that classroom practices that encourage effort and understanding and create a caring learning environment will improve student motivation.^{9, 10} Furthermore, studies published in the *Journal of Educational Psychology* and studies by the Chicago Consortium on School Research have repeatedly demonstrated the influence of student perceptions on goal adoption and consequently on achievement – particularly students’ perceptions of their own engagement and motivation and the quality of their relationships with their teachers.¹¹ In response to the MET research and to the broader literature surrounding the perceptual predictors of student achievement, we structured our instrument’s content to assess the referenced predictors of these achievement outcomes.

In developing our survey instruments, YouthTruth has paid close attention to constructing age-appropriate surveys and using evidence-based best practices for surveying children and adolescents. Our philosophy is

⁷ Bailis, L., et al. “Formative Evaluation of YouthTruth – Final Report.” (2010). Prepared for The Bill and Melinda Gates Foundation.

⁸ Kane, Thomas J., Daniel F. McCaffrey, Douglas O. Staiger, and J.R. Lockwood. “Ensuring Fair and Reliable Measures of Effective Teaching: Culminating Findings from the MET Project’s Three-Year Study.” *Bill and Melinda Gates Foundation* (2013).

⁹ Strobel, Karen, and Graciela Borsato. “Caring and Motivating Middle School Classrooms. Issue Brief.” *John W. Gardner Center for Youth and Their Communities* (2012).

¹⁰ Strobel, Karen. “Practices that promote Middle School students’ motivation and achievement.” *John W. Garden Centre for Youth and Their Communities* (2010).

¹¹ Allensworth, Elaine M., and John Q. Easton. “What Matters for Staying On-Track and Graduating in Chicago Public High Schools: A Close Look at Course Grades, Failures, and Attendance in the Freshman Year.” *Consortium on Chicago School Research* (2007).

that the questions asked should match with children’s cognitive development and accommodate their expected reading abilities.

Our approach to developing survey instruments appropriate for each age group has included:

Conducting research including literature reviews of relevant studies, focus groups and field tests with students of the given age group, and consultation with teachers and administrators. This in-depth process ensures that the questions developed are age-appropriate and relevant for students, asking them only about concepts they observe and experience firsthand. Importantly, this attention to age-appropriate instruments lends credibility and “face validity” to ensure the data gathered is believable to the adults receiving the feedback.

Recommending appropriate survey administration protocols for each age group, and including recommended survey administration instructions and best practices recommendations.

Ensuring appropriate survey design for the age group. Our design process includes considerations of reading level, survey length, and structure of survey questions.

- **Lexile Level:** Unlike some surveys, YouthTruth ensures that the reading level is *below* the lowest grade level of students reading the survey questions. For all of our surveys, we test the reading difficulty of each question and of the overall survey using Flesch-Kincaid readability tests. Evidence suggests that the reading level should be lower (up to 50% lower) than the survey taker’s ability. YouthTruth surveys take this into consideration. Our elementary school (3-5) surveys have an average reading grade level of **2.2**, meaning that students reading at an early-year 2nd grade level would be able to comprehend the questions. Our middle and high school (6-12) Overall School Experience Surveys have an average reading grade level of **5.3**, and our middle and high school Feedback for Teachers Surveys have an average reading level of **4.7**. As one example of the inconsistent reading difficulty across other student surveys, the Tripod 3rd-5th grade survey used in the MET study had an average reading grade level of **4.4**, with several individual questions registering at a high school reading level.
- **Survey Length:** Our survey instruments are relatively short, with 53 questions in the high school survey (which takes an average of 17 minutes to complete), 40 questions in the middle school survey (which takes an average of 16 minutes to complete), and 32 questions in the elementary survey (which takes an average of 10 minutes to complete). We strive to strike a balance between asking enough questions to have reliable and valid feedback on each topic and also keeping our surveys brief enough to address the risk of survey fatigue.
- **Response Options:** In accordance with research-based best practices for surveying young respondents, the anchor scale for YouthTruth’s elementary survey includes only 3 points, rather than the 5 point scale used in our secondary surveys. This is consistent with best practices suggesting that, because young children have comparatively less sophisticated linguistic and cognitive processing skills than adults, they are better able to map their perceptions to specific response options when there are fewer response options available – ideally, “not more than two or three response categories.”¹²
- **Structure of Survey Questions—Avoid Negatively Worded Questions, and Use Neutral Questions:**
 - **Focus on Individual Experience** Our survey design process results in questions tailored to surveying children and teenagers. Whereas some surveys frequently ask children to report

¹² de Leeuw, Edith D. "Improving data quality when surveying children and adolescents: Cognitive and social development and its role in questionnaire construction and pretesting." In *Report prepared for the Annual Meeting of the Academy of Finland: Research Programs Public Health Challenges and Health and Welfare of Children and Young People*, May, pp. 10-12. (2011).

on what others in the class are doing and thinking, YouthTruth personalizes questions so each student responds *primarily about his or her own experience*. This approach also reduces question ambiguity and directly solicits each student’s perspective.

- **Avoid Negatively Worded Questions:** YouthTruth surveys *avoid negatively worded questions* wherever possible, based on the research that “reverse-coded items diminish scale reliability.”¹³ Reversed Likert scales can be confusing for children; they “force the respondent to (a) notice the altered direction of wording and (b) use the opposite end of the rating scale to produce a response that is consistent with the prior items.”¹⁴
- **Use Neutral Question Framing:** Survey questions are worded carefully to *minimize social desirability biases*, which is especially important when surveying younger children who may be hesitant to provide critical feedback to adults. For example, in our elementary survey, rather than asking students to report on how strongly they agree with a statement that could be somewhat leading (“I like coming to class.”), we reframe into more a more neutral question (“Do you like coming to your class?”).

Feedback for Teachers Survey Development

After two years gathering student perceptions about their teachers at an aggregate level through our Overall School Experience Survey, YouthTruth developed a survey instrument focused explicitly on students’ classroom experiences with their individual teachers. In creating the pilot Feedback for Teachers Survey instrument in 2011, we drew from two sources. First, we adapted relevant teacher-specific versions of items in the Overall School Experience Survey related to relationships and rigor. Second, early research from the MET study pointed to specific constructs that were associated with high-quality teaching. Informed by this research, we incorporated those items identified in the MET study as being most strongly associated with effective teaching. The first iteration of the Feedback for Teachers Survey was administered in January 2012 in 111 classrooms to approximately 2,000 students in the 2011-12 school year. After the first administration, YouthTruth further refined the survey instrument based on results from analysis and practitioner feedback. To date, YouthTruth’s Feedback for Teachers Survey has been administered in approximately 14,000 classrooms with nearly 70,000 student respondents.¹⁵

Appendix Tables 1-4 list the Likert questions included in each survey.

Supplemental Survey Content

In addition to the core survey themes listed on page 3 and referenced throughout this report, the following survey content is also available.

Additional Questions Addressed in the YouthTruth Overall School Experience Survey

In addition to the Likert scale questions and factors referenced throughout this report, supplemental questions that address other elements of the student experience appear in the middle and high school Overall School Experience Survey. These additional questions collect critical student perceptions by asking students to indicate:

¹³ Gehlbach, Hunter, and Maureen E. Brinkworth. "Measure twice, cut down error: A process for enhancing the validity of survey scales." *Review of General Psychology*, 15 (2011): 315-387.

¹⁴ Carlson, Mike, Rand Wilcox, Chih-Ping Chou, Megan Chang, Frances Yang, Jeanine Blanchard, Abbey Marterella, Ann Kuo, and Florence Clark. "Psychometric properties of reverse-scored items on the CES-D in a sample of ethnically diverse older adults." *Psychological assessment* 23, no. 2 (2011): 558.

¹⁵ Approximately 12,000 students participated in an early version of the Feedback for Teachers Survey administered in partnership with the national teacher training organization, TNTP

- Their school's greatest strength and greatest area for improvement, along with the option to comment about both selections
- Whether they have participated in supplemental academic support services, such as tutoring or after-school academic programming, along with a rating of the helpfulness of such services
- Whether they have participated in college and career readiness services, such as college entrance exam preparation or career counseling, along with a rating of the helpfulness of such services
- Whether the student believes that there is at least one adult in his or her school who he or she could ask for a job, scholarship or college recommendation
- Whether the student believes that there is at least one adult in his or her school who he or she could approach for help with a personal problem
- Whether the student wants to go to college and what the student expects to do after finishing high school
- Whether the student has ever considered dropping out of school and, if yes, the reason for considering dropping out (including falling behind in school and feeling unable to catch up, feeling like no one cared whether the student stayed in school, feeling unsafe at school, and other options)
- Whether the student is involved in any extracurricular activities at or outside of school (clubs, teams, etc.)
- Indicators of obstacles to a student's optimal performance in school, such as family responsibilities, crime and violence, or extracurricular commitments.
- Indicators of whether the student has been physically, verbally, socially, or electronically bullied at school and, if the student has been bullied in these ways, the causes of such bullying, as the student perceives them (with response options including items such as the student's gender, sexual orientation, and race, among other student characteristics). Modified age-appropriate questions about bullying are also asked of elementary school students.

Additional Topics and Customization

YouthTruth also offers clients the opportunity to customize their surveys by adding questions about areas of particular interest. In 2012, we reviewed custom questions previously developed for specific clients, identified themes that garnered broad interest from schools and districts, and developed supplemental content related to these themes. In doing so, we consulted many existing instruments, such as the California Healthy Kids Survey, the Learning Styles Inventory, and the New York City School Survey, as well as a variety of external advisors with content-specific expertise. For instance, our work with the research staff at the Stupski Foundation in 2011 informed the development of our supplemental Student Motivation and Grit topic, with questions drawn or adapted from several validated inventories of student motivation, ownership, and engagement developed by researchers at Stanford University, the University of Pennsylvania, and other institutions. In summer 2013, we further refined supplemental questions by examining survey data we had collected from these question modules using quantitative analysis and by engaging with clients about the utility of individual questions.

To date, additional survey topics for grades 6-12 include: Student Motivation & Grit, Project Based Learning, STEM Education, School Safety, Learning Styles, General Health, Nutrition & Exercise, Drugs & Alcohol, Emotional & Mental Health, and Student Voice & Leadership. Additional topics for the elementary school level include: Student Motivation & Grit, Project Based Learning, STEM Education, and School Safety.

We also assist school and district leaders in developing high-quality, customized survey questions to address other specific topics of interest.

Survey Administration

YouthTruth uses a survey administration process that places the utmost emphasis on data accuracy and ease of administration. Because critical school improvement, professional development, and teacher evaluation decisions are made based on YouthTruth survey data, it is important that we gather student feedback in a valid manner and accurately link that feedback to the appropriate schools, teachers and classes.

We offer standard two-week survey windows each month throughout the academic year, in which YouthTruth partners may participate. YouthTruth partners also have the option of creating their own custom survey window. During the administration window, administrators can closely monitor their response rates – how many students have completed the survey overall and disaggregated by grade – in a dashboard updated hourly. All surveys are offered in both English and Spanish, and students can toggle between languages. Surveys can also be translated and programmed in other languages as a custom element of a client’s survey upon request. We encourage schools to meet a minimum response rate of 75 percent. Average response rates range from 75 percent to 94 percent across student survey instruments.

YouthTruth surveys are administered online, and can be taken on computers, tablets or even smart phones. YouthTruth prepares a set of student login codes that the school distributes along with a unique survey URL. The login codes are six-digit randomized assortment of letters and numbers that help ensure survey security. Schools plan a survey administration schedule to cycle students through computer labs, use classroom based laptops, or mobile or tablet devices.

Sampling and Roster Verification

In the case of the Feedback for Teachers Survey, we work with client organizations to determine a sampling plan that fits their needs. Thus, students may provide feedback about one or more of their teachers. When students provide feedback about more than one teacher, the survey can be administered in a single sitting or in multiple sittings. The more complex, but most widely used, administration for the Feedback for Teachers Survey is a single-sitting survey administration—which takes less instructional time compared to multiple sittings. In this scenario, students log in to the online survey using a unique identifier granting them access to a survey with questions about all of their participating teachers. We recommend that middle and high school students provide feedback on 3-4 of their teachers, and elementary school students provide feedback on only 1-2 of their teachers to avoid survey fatigue. To implement this type of administration, clients must submit student enrollment data as part of the class roster verification process. We then prepare that data in our FERPA- and PPRA-compliant data management system.¹⁶ This process ensures that students are responding to survey questions only about teachers in whose classes they are currently enrolled.

Specifically, the district or school submits class roster data, including student identification numbers, teacher names, course names, and departments for all students and classrooms to be included in the survey. The data is then processed through a set of algorithms that reshapes and standardizes the data in preparation for upload to the survey tool. After processing, we send clients a report highlighting possible errors and summarizing the enrollment data. We then work with clients to help resolve any identified

¹⁶ The Family Educational Rights and Privacy Act (FERPA) and the Pupil Privacy Rights Act (PPRA) are the two central federal laws governing the protection of educational records and personally identifiable information, such as student names and identification numbers.

issues. For example, schools receive a report pointing out classrooms that appear to contain fewer than five students, or more than 40 students, as well as teacher, course, and department names that appear to be misspelled or duplicated. Clients then have an opportunity to confirm the enrollment data internally and to correct any errors before the survey is opened to students.

An alternative means of administering the Feedback for Teachers Survey involves classroom-based as opposed to student-based login codes. This method of survey administration links randomized student login codes to one teacher and one class section and can be distributed to all students in the relevant class. The login codes are not connected to individual students, as the codes do not need to correspond to students' unique set of teachers. This approach was refined through a partnership with the San Francisco Teacher Residency, because it allowed us to easily administer the Feedback for Teachers Survey to only a subset of teachers across various schools within San Francisco Unified School District.

Post-Survey Data Processing and Quality Control

When the school-based survey administration is complete, we run collected survey data through a rigorous and standardized cleaning, checking, and aggregation process. Newly collected survey data is cleaned and aggregated in our data management system and then folded into the larger comparative dataset.¹⁷

Participating Schools

As a national nonprofit, YouthTruth operates with grant support and fee-for-service revenue. As a result, YouthTruth does not administer surveys among a random or fully nationally representative sample of schools or students and, therefore, the comparative data should not be interpreted as representative of all U.S. schools and students. Nonetheless, the comparative data include a diverse representation of schools and students. Table 1 describes a range of school-level sample statistics from the grades 6-12 Overall School Experience Survey sample, alongside a comparison of these indicators across the U.S. population of public schools.

YouthTruth's comparative dataset includes only the most recent survey data from all school's YouthTruth has worked with to ensure that all schools are equally represented. This means that schools that repeat the survey over time are still only represented once in the comparative dataset. Given that the middle school and elementary school Overall School Experience Survey products were introduced only in the 2012-2013 and 2013-2014 school years, respectively, responses from high school students represent the largest of YouthTruth's comparative datasets. Approximately 200,000 high school students from 415 schools, 66,000 middle school students from 168 schools and 40,000 elementary school students from 167 schools make up the Overall School Experience Survey comparative dataset.

This survey's sample fairly evenly represents a range of U.S. geographies. Approximately fifty percent of the sample is evenly divided between large cities and rural areas, with another 13 percent of the schools drawn from small cities and 25 percent drawn from suburbs. Compared to the U.S. population of schools, the Overall School Experience Survey has a larger proportion of large city schools and smaller proportion of rural schools.¹⁸

¹⁷ The data cleaning process includes a number of tasks, including recoding data, summarizing factor variables, and determining which missing data should be excluded from analysis.

¹⁸ The geographical designations are drawn from the National Center for Education Statistics locale codes and are as follows (for more information, please see: <https://nces.ed.gov/programs/edge/geographicLocale.aspx>):

Distribution by school size is fairly consistent between the YouthTruth and the national samples. The YouthTruth sample includes a larger percentage of high poverty schools (defined by the National Center for Education Statistics as a school in which at least 70 percent of students qualify for free or reduced price lunch) and a somewhat higher proportion of schools designated for turnaround status. A larger proportion of YouthTruth schools have curricula focused on science, technology, engineering, and math (STEM); project-based learning; or subscribing to non-traditional models, such as early college, charter or vocational models.

Table 1. Overall School Experience Survey School-Level Sample Statistics¹⁹

		% of U.S. schools	% of sample	n*
Geography	<i>Rural</i>	49%	19%	142
	<i>Suburban</i>	29%	25%	187
	<i>Small city</i>	11%	13%	94
	<i>Large city</i>	12%	33%	251
School Size	<i>Small</i>	29%	28%	211
	<i>Medium</i>	41%	52%	391
	<i>Large</i>	30%	20%	148
School Type	<i>High Poverty</i>	22%	44%	327
	<i>Early College</i>	<1%	9%	66
	<i>STEM</i>	n/a	9%	67
	<i>Project-Based Learning</i>	n/a	6%	46
	<i>Charter</i>	5%	10%	75

*“n” is shorthand for “sample size” and will be used throughout this report. In this table it refers to the number of schools in each category of the YouthTruth sample.

- Large city schools: school located in urbanized area and in a principal city with a population of $\geq 250K$,
- Small city schools: school located in urbanized area and in a principal city with a population of $< 250K$,
- Suburban schools: school located in an urbanized area, but outside a principal city,
- Rural schools: school located more than 10 miles from an urbanized area.

¹⁹ Data on the U.S. public school population is drawn from the National Center for Education Statistics "Common Core of Data." U.S. Department of Education (2013). "Common Core of Data, 2010-2011." National Center of Education Statistics: <http://nces.ed.gov/ccd/index.asp>.

Survey Constructs, Validity, and Reliability

Factor analysis is a data reduction technique for examining the underlying structure of a dataset to understand how variables relate to one another.²⁰ We regularly perform factor analysis on student data to: (1) better understand the structure of these data, (2) organize our survey instruments, analysis, and reporting in a way that is analytically rigorous, and (3) group survey questions in a way that helps clients construct meaning from the data.

The factors identified through this analysis represent a way to understand summary-level data about students' overall school experience and their feedback for teachers that would be difficult to assess by asking students about the summary themes directly. For example, it would not be advisable to ask a student to rate a school's overall culture. However, by capturing student perceptions about the core elements of culture—through specific, age-appropriate questions about concepts students are in a position to observe—we can accurately aggregate these results into a measure summarizing culture.

Tables 2, 3 and 4 list the constructs identified through factor analysis for each of YouthTruth's student survey instruments, and also include the conceptual definition for each construct.

Appendix Tables 1 through 4 list the likert questions included in each factor in each survey. Appendix Table 5 describes the reliability of factors for secondary surveys, and Appendix Tables 6 and 7 describe each question's correlation to the overall factor, known as the factor loading, for secondary surveys. As a result of the elementary survey's 3-point scale, the response data were treated as categorical. To estimate the fit of a CFA model using categorical response data, the Mean- and Variance-adjusted Weighted Least Square (WLSMV) estimator was used, as described in Appendix Table 8. Appendix Table 9 provides discriminant validity evidence for the elementary survey.

²⁰ Specifically, we use principal factor analysis with oblique rotation to analyze variation in the data and identify a set of latent factors. We retained only factors that explained a substantial amount of variation in the data and grouped variables into a factor only if they were highly correlated with the overall factor itself. We retain only factors with Eigen values greater than 0.4 and include variables within factors only if the factor loadings are greater than 0.3. However, the majority of variables within a factor load at 0.5 or higher, with 30% of the factors loading at 0.7 or higher.

Table 2. Middle and High School Overall School Experience Survey Factors

Engagement:	Describes the degree to which students perceive themselves as engaged with their school and their education.
Academic Rigor:	Describes the degree to which students feel they are challenged by their coursework and teachers.
Relationships:	Describes the degree to which students feel they receive support and personal attention from their teachers.
Belonging & Peer Collaboration:	This summary measure describes the degree to which students feel welcome at their school and have collaborative relationships with their classmates.
Culture:	Describes the degree to which students believe that their school fosters a culture of respect and fairness.
College & Career Readiness:*	Describes the degree to which students feel equipped to pursue college and careers

*Only appears in High School level surveys

Table 3. Middle and High School Feedback for Teachers Survey Factors

Engagement:	Describes the degree to which the teacher fosters in students a love of learning and a desire to succeed.
Academic Rigor:	Describes the degree to which the teacher poses challenging and substantive work to students, building a strong academic work ethic and critical thinking skills.
Relevance:	Describes the degree to which the teacher connects student learning with life inside and outside the classroom.
Instructional Methods:	Describes the degree to which the teacher uses techniques that probe for absorption and understanding, providing effective support to students when needed.
Relationships:	Describes the degree to which the teacher supports students' academic success through positive interpersonal interactions.
Culture:	Describes the degree to which the teacher develops a classroom environment premised on respect, motivation, and organization.

Table 4. Elementary School Overall School Experience and Feedback for Teachers Survey Factors

Engagement:	Describes the degree to which students perceive high expectations and feel engaged with their school and their education.
Academic Rigor:	Describes the degree to which students feel their learning is challenging and relevant.
Instructional Methods:	Describes the strategies and approaches students report their teachers using in class.
Relationships:	Describes the degree to which students have strong, supportive relationships with their teachers.
Culture:	Describes the degree to which students experience an orderly, respectful classroom environment.

To ensure that these results were not simply a product of the data we collected in a given year, but were consistent with other samples, the most recent factor analysis of the Overall School Experience Survey was compared to annual factor analyses conducted since 2009. These analyses indicated that results were consistent over time.

We also conducted extensive testing of the factor analyses in the Feedback for Teachers Survey. We first conducted these analyses on data collected in the 2011-2012 school year when the Feedback for Teachers Survey was piloted with a national teacher training organization. Next, we conducted the same analysis on a combined data set containing all data from 2011- 2014 (i.e., all Feedback for Teachers Survey data). In these additional analyses, we produced factors consistent with or identical to the results described in this paper, despite changes to the order in which individual questions appeared in surveys between 2011 and 2014.

This consistency indicates that we have identified the underlying factors of this student perception data in both the Overall School Experience Survey and Feedback for Teachers Survey, and not simply factors produced by a particular sample.

Reliability Testing

In addition to factor analysis, we measure the internal consistency of our survey instruments' factors using a test of reliability known as Cronbach's alpha. Alpha is expressed as a number between 0 and 1, with a higher alpha indicating that the set of items in a factor are measuring the same construct.²¹ Cronbach's alpha is a statistic used widely throughout education research to understand if test questions or survey questions intended to measure a given construct are indeed measuring that construct.

We use this measure to confirm that the questions within each factor are adequately related to the underlying factor. Appendix Table 5 displays the alphas for each factor across survey instruments. With Cronbach's alphas ranging between 0.84-0.91 in the Secondary Feedback for Teachers Survey, 0.74 – 0.88 in the High School Overall School Experience Survey and 0.66 – 0.83 in the Middle School Overall School Experience Survey. These results indicate that the questions grouped within each factor are highly correlated with the factor and truly measure the constructs we intend to measure with them.

²¹ The following rule of thumb applies when interpreting the quality of constructs and their alphas. Excellent: >0.9; Good: 0.8-0.9; Acceptable: 0.7-0.8; Questionable: 0.6-0.7; Poor: 0.5-0.6; Unacceptable: <0.5 [Kline, P. (1999). *The handbook of psychological testing* (2nd ed.). London: Routledge].

We have replicated these analyses on historical YouthTruth Student Survey data within a variety of samples. In all instances, we have found measures of reliability consistent with the results described in this paper. Independent third party validation has confirmed the reliability and validity of YouthTruth surveys.²² In analyzing the Elementary school data, the data were treated as continuous and therefore, the Mean- and Variance-adjusted Weighted Least Square (WLSMV) estimator was used. For additional details refer to Appendix Table 8.

Reporting and Comparative Data

Overall Sample, Comparison Groups, and Subgroup Reporting

One of the primary values of using the YouthTruth surveys is that we present student feedback within a comprehensive comparative context, including comparisons to the overall YouthTruth sample, a school's district, custom comparison groups, and a variety of student subgroups. Comparative data allows clients to better understand the relative position of their ratings both within and beyond their school and district context. YouthTruth's comparative dataset is updated annually and contains the most recent decade's worth of data.

National Comparison

Although we do not claim to have a nationally representative sample of schools and students, we do have a large and robust dataset representing the experiences and perceptions of students from a wide range of environments, geographies, and school contexts. This comparative context informs participants' interpretation of their results, aiding educators and administrators to make improvements that are based on sound data. Within reports, results are displayed along a percentile scale in addition to absolute ratings, so that clients can compare their own ratings to those of other participating schools and teachers.

District and School Type Comparisons

In an effort to make comparisons more contextually meaningful, we provide clients with the opportunity to compare their data to that of smaller subsets of participants with similar characteristics as the client. For example, because most schools participate in the YouthTruth surveys alongside other schools within their local school district or network, most schools can compare their students' feedback to that of students from other schools in their districts.

We also offer a standard set of comparison groups that allow all clients to view the range of results received by subsets of schools meeting certain criteria related to poverty, school size, school type, and geography. These standard cohorts are listed in Table 5.

²² Third party validation has been conducted by John Madura of Connecticut College; a summary of findings is available upon request.

Table 5. Standard Cohorts

High-poverty:	Greater than or equal to 70% of a district or school’s students receiving free or reduced price lunch.
Small schools:	Less than or equal to 300 students for high schools, less than or equal to 200 students for middle schools and less than or equal to 150 students for elementary schools.
Large schools:	Greater than or equal to 1,200 students for high schools, greater than or equal to 800 students for middle schools and greater than or equal to 600 students for elementary schools.
STEM education:	Schools utilizing a curriculum focusing primarily on science, technology, engineering, and math.
Early college:²³	Schools that implement an early college model.
Large city schools:	Schools located in an urbanized area and in a principal city with a population greater than or equal to 250,000.
Small city schools:	Schools located in an urbanized area and in a principal city with a population of less than 250,000.
Suburban schools:	Schools located in an urbanized area, but outside a principal city, or located inside an urban cluster that is no more than 10 miles from an urbanized area.
Rural schools:	Schools located more than 10 miles from an urbanized area or located in Census-defined rural territory.
PBL education:	Schools utilizing project-based learning models as part of curriculum.
Charter schools:	Publicly funded, independently managed schools established under the terms of a charter with a local or national authority.

Other custom cohorts are available upon request. For example, YouthTruth will provide the cohort that includes all schools in a given state.

Demographic Questions and Student Subgroup Analysis

Finally, all YouthTruth surveys ask students a variety of demographic and other questions that allow for subgroup analyses. Secondary students can report the following information about themselves: grade level, gender, race and ethnicity, receipt of free or reduced price lunch, grades, and course enrollment. Elementary school students receive only two demographic questions: grade level and gender. Students are not required to answer any questions they do not wish to answer.

This in turn enables clients to view comparisons of differences in student perceptions across different student subgroups in their reports. Subgroups containing fewer than five respondents are suppressed in reports to protect student confidentiality.

Custom Comparisons and Subgroups

Custom comparison groups and custom subgroup analysis can also be requested to facilitate clients’

²³ The “Early College” cohort is made up of only high schools and as a result is only available in High School level reports.

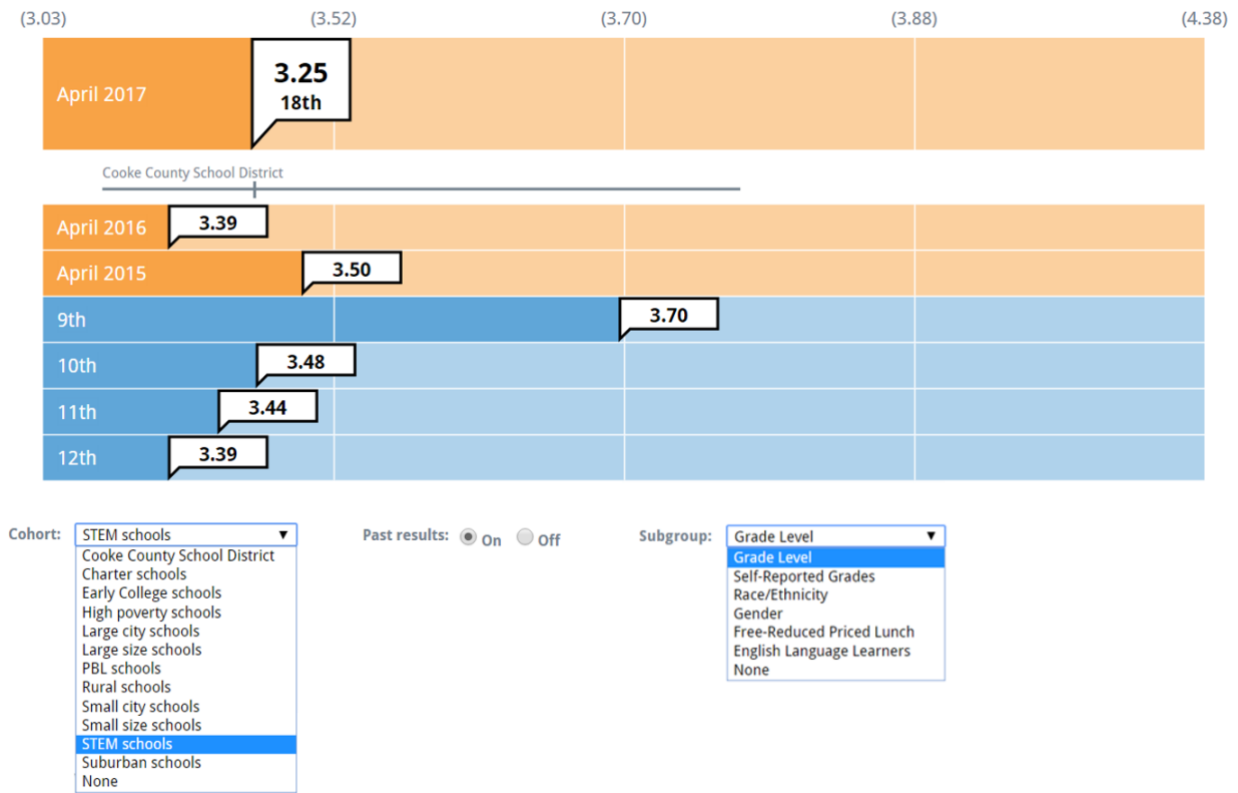
understanding of the student experience across different school types, programs, or student characteristics.

Report Products

YouthTruth reports are delivered to clients through an interactive, online reporting system, which is password-protected and uses bank-grade security. Different reports are produced for different audiences: district or network leaders, school leaders, and teachers. Regional or state “roll-up” reports can also be produced.

Figure 1 contains a sample of a key chart found in a YouthTruth report (Note: the brackets and associated text are for illustrative purposes only).

Figure 1. Sample YouthTruth Chart



School Rating and National Comparison

The orange bar at the top of the chart sets this school’s rating in a comparative context: compared to all schools of the same grade levels that have participated in the Overall School Experience Survey, this school’s average student rating of 3.25 places it in the 18th percentile—that is, the school received an average rating higher than that of 18 percent of other participating schools. At the top of the chart, the numerical values appearing in parentheses beneath quartile labels indicate the average student rating, on a 1-5 scale, associated with each quartile. In this sample chart, for example, the 25th percentile is associated with an average student rating of 3.52.

Cohort Comparisons: The thin gray line below the top bar provides a second level of comparison. For most clients, this bar will enable a comparison between a school and the district overall, assuming that other schools from the district are also participating. The tick on the gray line represents the “typical” or median school in that cohort, while the left and right-most ends of the line represent the lowest and highest-rated schools in the cohort respectively. The user can also toggle the other comparison groups identified in the previous section using the “Cohort” drop-down menu.

Trend Data: The second and third orange bars in this example (labeled “April 2016” and “April 2015”) allow clients to compare their current average rating to the average ratings they received when they previously participated in the YouthTruth survey, unless they are participating for the first time.

Subgroup Analysis: The remainder of the chart enables clients to make further comparisons with their data alone. The blue section at the bottom of the chart contains a range of subgroup data described in the previous section, which the user may change using the drop-down menus. In reports based on the Feedback for Teachers Survey, school and district leaders can also see comparisons of student feedback across specific teachers and classrooms. Individual teacher reports based on the Feedback for Teachers Survey allow teachers to view student feedback across their classes, and by students’ grade level and gender.

District reports: Districts with more than one school at a given level will receive a District Report to help give an overview of all the schools’ survey results. The calculations in these reports are similar to school reports but include every response from each school in the district. The average rating in a District Report is the mean of all respondents’ responses in the district at that level. Individual schools show up as subgroups. Importantly, these calculations are not the same as the calculations for district cohorts in school reports which, like all other cohorts, display the “typical” or median school in the district.

Other Features: The online reports contain numerous other features, including a key ratings chart, executive summary, narratives of results related to each summary measure, interactive charts for each summary measure and each survey question, students’ perceptions of their school’s strengths and areas for improvement, and a file containing indexed students’ qualitative comments.

General Results: YouthTruth Aggregate Analysis and Descriptive Statistics

This section of the report describes respondent sample statistics and general findings for the high school, middle school and elementary school Overall School Experience and Feedback for Teachers surveys. General findings stem from analyses of comparative data²⁴ associated with particular YouthTruth surveys. The Overall Experience Survey data come from over 199,000 students at 415 high schools, over 67,000 students at 168 middle schools, and over 38,000 students at 167 elementary schools. Feedback for Teachers Survey data come from 21,000 students at 55 high schools, 11,000 students at 32 middle schools, and 1,800 students at 9 elementary schools.

Sample Statistics

Table 6 provides respondent sample statistics for the students who have participated in an Overall School Experience Survey, and who are included in YouthTruth’s comparative data set. Table 7 displays the same

²⁴ Many districts have collaborated with YouthTruth over a number of years, meaning that the total number of surveyed students and schools is greater than the numbers displayed in this section. The comparative data includes only the most recent responses from repeat clients.

information for the *Feedback for Teachers Survey*. All six surveys have average response rates above 75%.

Although representation from grade level to grade level varies slightly across all surveys, the distribution of grades within each survey is close to normal. The high school data includes responses from a slightly lower proportion of twelfth graders, most likely due to higher cumulative dropout rates and other forms of attrition. The middle school data contains greater representation of seventh-graders and eighth-graders than sixth-graders, likely because the grade levels in middle schools can vary. Specifically, 6th grade is sometimes located in elementary schools.

Demographic data for respondents to the *Feedback for Teachers Survey* does not differ considerably from that for respondents to the *Overall Experience Survey*. Unlike administration of the *Overall Experience Survey*, administration of the *Feedback for Teachers Survey* typically takes place in a sample of classrooms at individual schools. Considering such sampling, the data from the *Feedback for Teachers Survey* will require more time to become representative of the full student population participating in YouthTruth.

Table 6. Overall School Experience Survey Student-Level Sample Statistics

		High School Sample	Middle School Sample	Elementary School Sample
n		199, 189	67,189	38,555
Avg. Response Rate		75%	91%	83%
Grade Level	<i>3rd</i>	--	--	27%
	<i>4th</i>	--	--	29%
	<i>5th</i>	--	--	30%
	<i>6th</i>	--	25%	--
	<i>7th</i>	--	35%	--
	<i>8th</i>	--	35%	--
	<i>9th</i>	27%	--	--
	<i>10th</i>	26%	--	--
	<i>11th</i>	24%	--	--
	<i>12th</i>	21%	--	--
	<i>Other</i>	1%	3%	2%
Gender	<i>Female</i>	49%	47%	47%
	<i>Male</i>	47%	47%	47%
	<i>Identifies in another way</i>	1%	2%	--
	<i>Prefers not to say</i>	2%	4%	5%
Race/ethnicity	<i>American Indian or Alaska Native</i>	1%	1%	--
	<i>Asian</i>	5%	7%	--
	<i>Black or African-American</i>	21%	15%	--
	<i>Hispanic, Latino, or Spanish origin</i>	36%	32%	--

<i>Native Hawaiian or Other Pacific Islander</i>	<1%	<1%	--
<i>White</i>	24%	29%	--
<i>Multiracial</i>	8%	12%	--
<i>Other race/ethnicity</i>	3%	6%	--
<i>Prefers not to say</i>	4%	7%	--

Table 7. Feedback for Teachers Survey Student-Level Sample Statistics

		High School Sample	Middle School Sample	Elementary School Sample
n		21,649	11,087	1,828
Avg. Response Rate		80%	83%	94%
Grade Level	<i>3rd</i>	--	--	32%
	<i>4th</i>	--	--	34%
	<i>5th</i>	--	--	31%
	<i>6th</i>	--	21%	--
	<i>7th</i>	--	35%	--
	<i>8th</i>	--	37%	--
	<i>9th</i>	29%	--	--
	<i>10th</i>	27%	--	--
	<i>11th</i>	23%	--	--
	<i>12th</i>	18%	--	--
Gender	<i>Other</i>	3%	3%	0%
	<i>Female</i>	48%	44%	47%
	<i>Male</i>	45%	43%	45%
	<i>Identifies in another way</i>	1%	1%	--
Race/ethnicity	<i>Prefers not to say</i>	2%	3%	7%
	<i>American Indian or Alaska Native</i>	<1%	<1%	--
	<i>Asian</i>	10%	10%	--
	<i>Black or African-American</i>	13%	7%	--
	<i>Hispanic, Latino, or Spanish origin</i>	36%	30%	--
	<i>Native Hawaiian or Other Pacific Islander</i>	<1%	<1%	--
	<i>White</i>	15%	13%	--
	<i>Multiracial</i>	10%	12%	--
	<i>Other race/ethnicity</i>	3%	5%	--
	<i>Prefers not to say</i>	5%	9%	--

Racial and Ethnic Background of YouthTruth Survey Respondents

The racial and ethnic background of respondents differs somewhat from that of public school students nationally. More than 30 percent of the students in both Middle and High School samples self-identify as Hispanic, comprising the largest ethnic group that has participated in YouthTruth surveys. 21 percent of respondents in the high school *Overall Experience Survey* identify as African-American/Black, followed by 24 percent of respondents identifying as White. For the middle school *Overall School Experience Survey*, 29 percent and 15 percent of respondents identify as White and African-American/Black, respectively. 15 percent of respondents in the high school *Feedback for Teachers Survey* identify as White, followed by 13 percent of respondents identifying as African-American/Black. For the middle school *Feedback for Teachers Survey*, 13 percent and 7 percent of respondents identify as White and African-American/Black, respectively. Remaining racial and ethnic groups each comprise less than 10 percent of the sample. In comparison to students nationally, respondents to the YouthTruth surveys are disproportionately non-White: 51 percent, 24 percent, and 16 percent of students nationally are White, Hispanic, and African-American, respectively. The proportion of YouthTruth respondents identifying as Asian or Native American is consistent with the national population.²⁵

Findings

The tables remaining in this section highlight factor-level findings across first, the *Overall Experience Survey* and second, the *Feedback for Teachers Survey*, as well as results disaggregated by grade, gender, and race and ethnicity for each survey.

Overall School Experience Survey

High School Overall School Experience Survey: Summary of Findings

Table 8 contains descriptive statistics for the survey's six factors: engagement, academic rigor, relationships, culture, Belonging & Peer Collaboration, and college and career readiness. The first column contains the proportion of students who rated the factor positively. There is substantial variation in favorability across these areas, with 64 percent of students in the comparative dataset rating academic rigor favorably and 31 percent of students rating culture favorably.²⁶ The following columns include both student- and school-level averages, standard deviations, and counts for each factor. Average student and school ratings are all above the scale's mid-point of three, especially among the factors rated most favorably, indicating a somewhat non-normal distribution among students.

²⁵ U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 1996–97 through 2010–11; and National Public Elementary and Secondary Enrollment by Race/Ethnicity Model, 1994–2010. (This table was prepared by YouthTruth in August 2014.)

²⁶ Calculating the percent of 4s and 5s for factors is less straightforward than calculating the percent of 4s and 5s for a specific question. Factors are calculated by averaging the responses to the questions in a given factor for respondents who answered every question; respondents with missing data in any factor's question (amounting, on average, to 3% of respondents for a given factor) are excluded. For factor favorability ratings, we use rounding to determine the percent of 4s and 5s: any non-missing respondent with an average factor rating greater than 3.5 is counted as rating favorably.

Table 8. High School Overall School Experience Survey: Student & School Ratings

	Proportion of Positive Ratings ²⁷	Average Rating (Standard Deviation)		n	
		Students	Schools	Students	Schools
<i>Engagement</i>	59%	3.60 (0.82)	3.69 (0.25)	156,684	306
<i>Academic Rigor</i>	64%	3.80 (0.85)	3.90 (0.24)	183,359	394
<i>Relationships</i>	42%	3.37 (0.85)	3.53 (0.33)	182,500	406
<i>Belonging & Peer Collaboration</i>	46%	3.38 (0.75)	3.46 (0.30)	90,684	183
<i>Culture</i>	31%	3.13 (0.90)	3.30 (0.42)	186,468	406
<i>College & Career Readiness</i>	41%	3.30 (1.02)	3.43 (0.33)	177,640	371

High School Overall School Experience Survey: Findings by Grade, Gender, and Race/Ethnicity

Grade Level

A general grade level trend emerges, with students in lower grades rating higher than students in higher grades. This is most consistent for Engagement and Academic Rigor. Twelfth graders are relatively consistent with tenth and eleventh graders, although they indicate more positive perceptions of their relationships and college and career readiness than eleventh graders do, on average. A possible explanation for this difference is that some level of attrition has occurred prior to and during the 12th grade, leaving behind the more satisfied and successful students.

Gender

There are differences between female and male students in measures of engagement and academic rigor, with ratings from female students exceeding ratings from male students.

Race/Ethnicity

There are a variety of differences between the three racial and ethnic groups with the greatest representation – Black, Hispanic, and White. In the measures that are most similar to traditional educational outcome measures – engagement, academic rigor, and college and career readiness – Black students rate higher than do students in other groups, followed by Hispanic students, and then White students. However, the trend changes when measuring indicators of more relational dimensions, including relationships, Belonging & Peer Collaboration, and culture. On these measures, White students rate the highest of the three groups.

Other racial groups with smaller surveyed populations exhibit differences, as well. Students identifying as American Indian or Alaska Native rate lower on many survey themes, while students

²⁷ The proportion of positive ratings includes the proportion of students whose average rating across the related questions was greater than 3.5 out of 5.

identifying as Asian rate higher in many areas. Students identifying as Native Hawaiian or Other Pacific Islander comprise a very small number of respondents relative to other surveyed racial or ethnic groups.

Table 9. High School Overall School Experience Survey: Average Student Ratings by Subgroup
n = 199, 189

		Engagement	Academic Rigor	Relationships	Belonging & Peer Collaboration	Culture	College & Career Readiness
Grade	<i>9th</i>	3.69	3.88	3.39	3.41	3.21	3.37
	<i>10th</i>	3.58	3.79	3.33	3.37	3.10	3.26
	<i>11th</i>	3.58	3.79	3.35	3.39	3.10	3.24
	<i>12th</i>	3.60	3.78	3.42	3.39	3.13	3.34
Gender	<i>Female</i>	3.68	3.87	3.37	3.39	3.12	3.31
	<i>Male</i>	3.57	3.78	3.40	3.42	3.17	3.32
	<i>Identifies in another way</i>	3.03	3.24	3.01	3.07	2.78	2.79
	<i>Prefers not to say</i>	3.10	3.33	2.99	3.08	2.79	2.85
Race/ethnicity	<i>American Indian or Alaska Native</i>	3.39	3.61	3.27	3.22	2.94	3.22
	<i>Asian</i>	3.71	3.90	3.53	3.53	3.33	3.34
	<i>Black or African-American</i>	3.76	3.91	3.30	3.40	3.04	3.48
	<i>Hispanic, Latino, or Spanish origin</i>	3.64	3.84	3.35	3.38	3.19	3.34
	<i>Native Hawaiian or Other Pacific Islander</i>	3.48	3.65	3.35	3.42	3.17	3.17
	<i>White</i>	3.55	3.76	3.48	3.42	3.15	3.20
	<i>Multiracial</i>	3.46	3.68	3.34	3.35	3.05	3.12
	<i>Other race/ethnicity</i>	3.43	3.64	3.21	3.26	2.98	3.12
	<i>Prefers not to say</i>	3.35	3.55	3.19	3.20	2.99	3.04

Middle School Overall School Experience Survey: Summary of Findings

The themes highlighted in this survey include academic rigor, relationships, Belonging & Peer Collaboration, and culture.

Academic rigor is the highest-rated theme by a significant margin, with 72 percent of students responding with ratings of fours and fives.²⁸ Middle school students respond less favorably with regard to their culture. Overall, however, middle schools rate their overall school experience quite high. The lowest rated summary measure is culture, with an average student rating of 3.32, while the highest is academic rigor with an average student rating of 3.90.

Table 10. Middle School Overall School Experience Survey: Student & School Ratings

	Proportion of Positive Ratings	Average Rating (Standard Deviation)		n	
		Students	Schools	Students	Schools
<i>Engagement</i>	59%	3.60 (0.85)	3.65 (0.20)	52,548	146
<i>Academic Rigor</i>	72%	3.90 (0.75)	3.93 (0.18)	61,659	164
<i>Relationships</i>	49%	3.49 (0.85)	3.49 (0.27)	59,798	164
<i>Belonging & Peer Collaboration</i>	48%	3.42 (0.73)	3.43 (0.20)	51,765	146
<i>Culture</i>	39%	3.32 (0.87)	3.31 (0.33)	61,794	164

Middle School Overall School Experience Survey: Findings by Grade, Gender, Race, and Ethnicity

Middle school data reveals a pattern of younger students rating their school experience higher than older students. This pattern is more consistent among middle school students than it is among high school students. Across all themes except for Belonging & Peer Collaboration, sixth graders have more positive views on average than eighth graders do.

Differences by gender, race, and ethnicity, however, are smaller in the middle school Overall School Experience Survey than they are in the high school Overall School Experience Survey. Differences between White and Hispanic students are relatively small, but White students do rate Relationships, Belonging & Peer Collaboration, and Culture more positively than do Hispanic students. As we find in the high school survey, Black or African-American students rate these three measures lower than do White and Hispanic students.

²⁸ The proportion of positive ratings were calculated the same way as for high school students in Table 8.

Table 11. Middle School Overall School Experience Survey: Average Student Ratings by Subgroup
n = 67,189

		Engagement	Academic Rigor	Relationships	Belonging & Peer Collaboration	Culture
Grade	<i>6th</i>	3.76	4.04	3.62	3.42	3.47
	<i>7th</i>	3.60	3.90	3.48	3.41	3.32
	<i>8th</i>	3.50	3.83	3.42	3.45	3.24
Gender	<i>Female</i>	3.65	3.92	3.50	3.43	3.31
	<i>Male</i>	3.61	3.94	3.53	3.45	3.38
	<i>Identifies in another way</i>	2.99	3.31	2.96	3.09	2.80
	<i>Prefers not to say</i>	3.31	3.58	3.18	3.21	3.03
Race/ethnicity	<i>American Indian or Alaska Native</i>	3.70	3.92	3.48	3.43	3.41
	<i>Asian</i>	3.72	3.95	3.63	3.60	3.59
	<i>Black or African-American</i>	3.69	4.00	3.40	3.37	3.13
	<i>Hispanic, Latino, or Spanish origin</i>	3.61	3.92	3.51	3.44	3.32
	<i>Native Hawaiian or Other Pacific Islander</i>	3.39	3.74	3.32	3.40	3.20
	<i>White</i>	3.59	3.92	3.62	3.46	3.49
	<i>Multiracial</i>	3.48	3.76	3.35	3.38	3.15
	<i>Other race/ethnicity</i>	3.54	3.85	3.41	3.38	3.29
	<i>Prefers not to say</i>	3.55	3.83	3.43	3.32	3.33

Elementary School Overall School Experience School Survey: Summary of Findings

Please note that unlike other surveys included in this report, the Elementary School Survey is administered on a scale of 1 to 3, rather than a scale of 1 to 5. This is consistent with best practices suggesting that, because young children have comparatively less sophisticated linguistic and cognitive processing skills than adults, they are better able to map their perceptions to specific response options when there are fewer response options available – ideally, “not more than two or three response categories.”²⁹

²⁹ de Leeuw, E. D. (2001). Improving data quality when surveying children and adolescents: Cognitive and social development and its role in questionnaire construction and pretesting. In Annual Meeting of the Academy of Finland: Research Programs, Public Health Challenges, and Health and Welfare of Children and Young People. See also Borgers, N., & Hox, J. J. (2000,

The Culture theme is consistently rated lower than all other themes and show a significantly smaller proportion of positive ratings.

Table 12. Elementary School Overall School Experience Survey: Student & School Ratings

	Proportion of positive ratings	Average Rating (Standard Deviation)		n	
		Students	Schools	Students	Schools
<i>Engagement</i>	91%	2.93 (0.26)	2.92 (0.04)	56,854	270
<i>Academic Rigor</i>	61%	2.54 (0.40)	2.56 (0.09)	54,894	270
<i>Instructional Methods</i>	55%	2.60 (0.38)	2.60 (0.08)	54,855	270
<i>Relationships</i>	81%	2.72 (0.37)	2.71 (0.09)	54,534	270
<i>Culture</i>	22%	2.19 (0.43)	2.17 (0.15)	55,593	270

Elementary School Overall School Experience Survey: Findings by Grade and Gender

There are small but relatively consistent differences by gender among students responding to the Elementary School Overall School Experience Survey. Female students give higher ratings on average for each of the summary measures except for Culture. Differences between students in different grades are minimal.

YouthTruth does not gather self-reported race or ethnicity data from elementary school respondents.

Table 13. Elementary School Overall School Experience Survey: Average Student Ratings by Subgroup
n = 38,555

		Engagement	Academic rigor	Instructional Methods	Relationships	Culture
<i>Grade</i>	3 rd	2.93	2.60	2.59	2.74	2.21
	4 th	2.94	2.56	2.60	2.73	2.18
	5 th	2.93	2.50	2.61	2.70	2.15
<i>Gender</i>	Female	2.94	2.58	2.63	2.75	2.19
	Male	2.93	2.52	2.58	2.71	2.21
	Prefers not to say	2.88	2.37	2.50	2.62	2.16

October). Reliability of responses in questionnaire research with children. In Fifth international conference on logic and methodology, Cologne, Germany.

Feedback for Teachers Survey

High School Feedback for Teachers Survey: Summary of Findings

Although the factors in the Feedback for Teachers and Overall School Experience Surveys are not identical, in general it is clear that students rate their individual teachers higher than they rate their schools.

The most striking difference occurs with respect to the factor related to relationships: 46 percent of high school students rated their relationships in their school favorably in the Overall School Experience Survey. However, in the Feedback for Teachers Survey, 79 percent of all high school respondents rated their relationships with individual teachers favorably.

Accordingly, average ratings at the student and teacher level are quite high, with most above 4.0.

Table 14. High School Feedback for Teachers Survey: Student & Teacher-Level Factor Ratings³⁰

	Proportion of Positive Ratings	Average Rating (Standard Deviation)		n	
		Student	Teachers	Student Responses ³¹	Teachers
<i>Engagement</i>	73%	4.04 (0.84)	4.07 (0.33)	53,666	1,127
<i>Academic Rigor</i>	81%	4.08 (0.79)	4.10 (0.34)	52,146	1,125
<i>Relevance</i>	58%	3.70 (0.99)	3.74 (0.45)	52,536	1,128
<i>Instructional Methods</i>	77%	4.03 (0.89)	4.06 (0.39)	52,882	1,128
<i>Relationships</i>	79%	4.19 (0.88)	4.21 (0.39)	52,602	1,124
<i>Culture</i>	72%	3.91 (0.88)	3.92 (0.46)	52,492	1,124

High School Feedback for Teachers Survey: Findings by Grade, Gender, Race, and Ethnicity

There are generally only small differences between responses from different gender and racial/ethnic groups, with most differences being between one-tenth and three-tenths of a point. However small, ratings from students who identify as Black or African-American tend to be lower than ratings from students of other racial/ethnic groups, while ratings from students who identify as White tend to be higher.

³⁰ Ratings in the Overall School Experience Survey tables are aggregated at the student and school level, whereas the ratings in the Feedback for Teachers Survey are aggregated at the student and teacher level. YouthTruth also reports school-level results from this survey back to schools. Teacher-level results are discussed here, however, as teachers are the primary unit of analysis.

³¹ The numbers displayed in this column refers to the number of teachers and classes that students responded about, not the total number of students. Many students are surveyed about more than one teacher/class. This is different than in the Overall School Experience Survey tables above.

Differences between students in different grades are also generally small. However, students in 12th grade consistently give higher ratings than students in lower grades. This is in contrast to the overarching trend in the Overall School Experience Survey.

Table 15. High School Feedback for Teachers Survey Average Student Ratings by Subgroup
n = 21,649

		Engagement	Academic Rigor	Relevance	Instructional Methods	Personal Relationships	Culture
Grade	<i>9th</i>	4.04	4.06	3.68	4.02	4.14	3.81
	<i>10th</i>	3.98	4.03	3.61	3.97	4.13	3.86
	<i>11th</i>	4.06	4.13	3.71	4.06	4.25	3.99
	<i>12th</i>	4.10	4.15	3.84	4.09	4.29	4.05
Gender	<i>Female</i>	4.09	4.13	3.70	4.06	4.22	3.92
	<i>Male</i>	4.03	4.07	3.73	4.04	4.19	3.92
	<i>Identifies in another way</i>	3.77	3.83	3.49	3.77	3.93	3.66
	<i>Prefers not to say</i>	3.79	3.85	3.49	3.75	3.93	3.73
Race/ethnicity	<i>American Indian or Alaska Native</i>	4.13	4.23	3.76	4.12	4.15	4.00
	<i>Asian</i>	4.11	4.18	3.77	4.09	4.30	4.03
	<i>Black or African-American</i>	4.06	4.06	3.69	4.06	4.09	3.81
	<i>Hispanic, Latino, or Spanish origin</i>	4.05	4.08	3.71	4.04	4.17	3.92
	<i>Native Hawaiian or Other Pacific Islander</i>	4.07	4.22	3.90	4.18	4.34	3.98
	<i>White</i>	4.09	4.14	3.73	4.07	4.28	3.93
	<i>Multiracial</i>	4.05	4.11	3.72	4.05	4.23	3.89
	<i>Other race/ethnicity</i>	4.00	4.06	3.70	4.03	4.14	3.90
	<i>Prefers not to say</i>	3.89	3.92	3.54	3.85	4.05	3.81

Middle School Feedback for Teachers Survey: Summary of Findings

As above for the High School Feedback for Teachers Survey, in general it is clear that students in Middle School rate their individual teachers higher than they rate their schools.

The most striking difference occurs with respect to the factor related to relationships: 49 percent of high school students rated their relationships in their school favorably in the Overall School Experience Survey. However, in the Feedback for Teachers Survey, 79 percent of all middle school respondents rated their relationships favorably.

Average ratings at the student and teacher level are quite high, with most above 4.0. The Relevance and Culture themes are rated lower than other themes, however.

Table 16. Middle School Feedback for Teachers Survey: Student & Teacher-Level Factor Ratings

	Proportion of Positive Ratings	Average Rating (Standard Deviation)		n	
		Student	Teachers	Student Responses	Teachers
<i>Engagement</i>	79%	4.17 (0.78)	4.16 (0.31)	33,173	561
<i>Academic Rigor</i>	84%	4.16 (0.73)	4.15 (0.30)	31,843	563
<i>Relevance</i>	63%	3.83 (0.94)	3.81 (0.39)	32,260	563
<i>Instructional Methods</i>	79%	4.10 (0.84)	4.08 (0.38)	32,480	563
<i>Relationships</i>	79%	4.19 (0.85)	4.19 (0.36)	32,287	562
<i>Culture</i>	69%	3.82 (0.86)	3.82 (0.41)	32,036	558

Middle School Feedback for Teachers Survey: Findings by Grade, Gender, Race, and Ethnicity

There are generally only small differences between responses from different gender and racial/ethnic groups. These differences are even smaller than for the High School Feedback for Teachers Survey.

Differences between students in different grades, however are larger and more consistent. As grade level increases, average ratings decrease. This is consistent across all themes. This is in contrast to the trend identified above for the High School Feedback for Teachers Survey, where 12th graders consistently gave higher ratings than students in lower grades.

Table 17. Middle School Feedback for Teachers Survey: Student-Level Factor Ratings by Subgroup
n=11,087

		Student Engagement	Academic Rigor	Relevance	Instructional Methods	Personal Relationships	Culture
Grade	<i>6th</i>	4.28	4.24	3.95	4.15	4.30	3.89
	<i>7th</i>	4.16	4.15	3.83	4.09	4.20	3.81
	<i>8th</i>	4.09	4.08	3.72	4.04	4.11	3.79
Gender	<i>Female</i>	4.18	4.17	3.82	4.10	4.20	3.81
	<i>Male</i>	4.17	4.15	3.84	4.09	4.21	3.85
	<i>Identifies in another way</i>	3.85	3.88	3.56	3.86	3.91	3.58
	<i>Prefers not to say</i>	4.02	4.04	3.66	3.94	4.01	3.73
Race/ethnicity	<i>American Indian or Alaska Native</i>	4.29	4.25	3.90	4.19	4.24	3.91
	<i>Asian</i>	4.13	4.09	3.79	4.06	4.19	3.81
	<i>Black or African-American</i>	4.19	4.19	3.85	4.15	4.02	3.79
	<i>Hispanic, Latino, or Spanish origin</i>	4.18	4.15	3.85	4.10	4.19	3.83
	<i>Native Hawaiian or Other Pacific Islander</i>	3.90	3.91	3.73	3.82	4.02	3.58
	<i>White</i>	4.19	4.20	3.81	4.11	4.29	3.86
	<i>Multiracial</i>	4.15	4.14	3.80	4.07	4.18	3.79
	<i>Other race/ethnicity</i>	4.13	4.15	3.83	4.06	4.19	3.83
	<i>Prefers not to say</i>	4.12	4.11	3.76	4.03	4.17	3.80

Elementary School Feedback for Teachers Survey: Summary of Findings

An important caveat to any findings from this comparative dataset is that it is by far the smallest YouthTruth dataset with only 1,828 students.

Unlike for the High School and Middle School data, at the Elementary School level there are not consistently higher ratings from the Feedback for Teachers Survey than the Overall School Experience Survey.

Table 18. Elementary School Feedback for Teachers Survey: Student-Level Factor Ratings

	Proportion of Positive Ratings	Average Rating (Standard Deviation)	N (student responses)
<i>Engagement</i>	87%	2.89 (0.31)	3,575
<i>Academic Rigor</i>	63%	2.55 (0.43)	3,528
<i>Instructional Methods</i>	54%	2.58 (0.43)	3,528
<i>Relationships</i>	79%	2.71 (0.40)	3,542
<i>Culture</i>	25%	2.23 (0.43)	3,589

Elementary School Feedback for Teachers Survey: Findings by Grade, Gender, Race, and Ethnicity

There are generally only small differences between responses from different gender groups.

Differences between students in different grades, however are more consistent and tend to mirror the trend found in the Middle School Feedback for Teachers Survey. For the most part, as grade level increases, average ratings decrease.

YouthTruth does not gather self-reported race or ethnicity data from elementary school respondents.

Table 19. Elementary School Feedback for Teachers Survey: Student-Level Factor Ratings by Subgroup
n=1,828

		Engagement	Academic Rigor	Instructional Methods	Relationships	Culture
<i>Grade</i>	3 rd	2.92	2.65	2.62	2.78	2.31
	4 th	2.91	2.58	2.61	2.74	2.25
	5 th	2.89	2.49	2.53	2.69	2.16
<i>Gender</i>	Female	2.90	2.56	2.57	2.73	2.22
	Male	2.90	2.56	2.59	2.72	2.27
	Prefers not to say	2.80	2.36	2.44	2.51	2.11

Appendix

Appendix Table 1. High School Overall School Experience Survey Likert-Scale Questions

Engagement

I take pride in my school work
I try to do my best in school
I enjoy coming to school most of the time
My teachers' expectations make me want to do my best
What I learn in class helps me outside of school

Academic Rigor

In order to receive a good grade, I have to work hard in my classes
The work that I do for my classes makes me really think
I can tell that my teachers understand the subjects that they are teaching
My teachers give me assignments that help me to better understand the subject
Most of my teachers don't let people give up when the work gets hard
Most of my teachers want us to use our thinking skills, not just memorize things
Most of my teachers want me to explain my answers – why I think what I think
In most of my classes, we learn a lot almost every day
In most of my classes, we learn to correct our mistakes

Academic Rigor – English

In order to receive a good grade in my English class, I have to work hard
The work that I do for my English class makes me really think
I can tell that my English teacher understands the subject that (s)he is teaching
My English teacher gives me assignments that help me to better understand the subject

Academic Rigor – Math

In order to receive a good grade in my Math class, I have to work hard
The work that I do for my Math class makes me really think
I can tell that my Math teacher understands the subject that (s)he is teaching
My Math teacher gives me assignments that help me to better understand the subject

Relationships

How many of your teachers are willing to give extra help on school work if you need it?
How many of your teachers try to be fair?
How many of your teachers believe that you can get a good grade if you try?
How many of your teachers are not just satisfied if you pass, they care if you're really learning?
How many of your teachers connect what you're learning in class with your life outside of school?
How many of your teachers make an effort to understand what your life is like outside of school?

Belonging & Peer Collaboration

I really feel like part of my school's community
I can usually be myself around other students at this school

Most students at this school are friendly to me
How often do you work with other students for your classes because your teachers ask or tell you to?
How often do you work with other students for your classes, even when your teacher doesn't ask or tell you to?

Culture

Most students in this school treat adults with respect
Most adults in this school treat students with respect
Most students in this school want to do well in class
Discipline in this school is fair

College & Career Readiness

My school has helped me develop the skills and knowledge I will need for college-level classes
My school has helped me understand the steps I need to take in order to apply to college
My school has helped me figure out which careers match my interests and abilities
My school has helped me understand the steps I need to take in order to have the career that I want

Appendix Table 2. Middle School Overall School Experience Survey Likert-Scale Questions

Academic Rigor

In order to get a good grade, I have to work hard in my classes
The work that I do for my classes makes me really think
My teachers explain things in a way that I understand
My teachers give me assignments that really help me learn
My school is helping me learn the material I will need for high school
I feel like I will be ready for high school classes when I finish middle school
Most of my teachers want us to use our thinking skills, not just memorize things
Most of my teachers want me to explain my answers – why I think what I think
In most of my classes, we learn to correct our mistakes
Most of my teachers don't let people give up when the work gets hard
In most of my classes, we learn a lot almost every day

Academic Rigor – English

The work that I do for my English/Language Arts class makes me really think
In order to get a good grade, I have to work hard in my English/Language Arts class
My English/Language Arts teacher gives me assignments that really help me learn
My English/Language Arts teacher explains things in a way that I understand

Academic Rigor– Math

The work that I do for my Math class makes me really think
In order to get a good grade, I have to work hard in my Math class
My Math teacher gives me assignments that really help me learn
My Math teacher explains things in a way that I understand

Relationships

How many of your teachers are willing to give extra help on school work if you need it?
How many of your teachers try to be fair?
How many of your teachers believe that you can get a good grade if you try?
How many of your teachers are not just satisfied if you pass, they care if you're really learning?
How many of your teachers connect what you're learning in class with your life outside of school?
How many of your teachers try to understand what your life is like outside of school?

Belonging & Peer Collaboration

I really feel like a part of my school's community
I can usually be myself around other students at this school
Most students at this school are friendly to me
How often do you work with other students for your classes because your teachers ask or tell you to?
How often do you work with other students for your classes, even when your teacher doesn't ask or tell you to?

Culture

I think my classmates want to do well in class
Most students in this school treat adults with respect
Most adults in this school treat students with respect
Discipline in this school is fair

Engagement

I enjoy coming to school most of the time
I take pride in my school work
What I learn in class helps me outside of school

Appendix Table 3. Elementary School Overall School Experience and Feedback for Teachers Survey Likert-Scale Questions (Grades 3-5)

Academic Rigor

Does your homework help you learn?
Do you learn a lot in your class every day?
Does the work you do in class make you really think?
Do you learn interesting things in class?
Does what you learn in class help you outside of school?

Instructional Methods

Does your teacher ask you if you understand what you are learning?
Does your teacher explain things in ways you can understand?
Does your teacher let you explain your ideas?
When you make a mistake, does your teacher help you correct it?

Relationships

Is your teacher fair to you?
Does your teacher give you extra help if you need it?

Does your teacher treat you with respect?
Do you like the way your teacher treats you when you need help?
Do you think your teacher cares about you?

Culture

Do students behave well in your class?
Do students in your class treat the teacher with respect?
Does your class stay busy and not waste time?

Engagement

Does your teacher want you to do your best?
Do you think your teacher wants you to work your hardest?
Does your teacher ask you to keep trying when the work gets hard?

Appendix Table 4. Feedback for Teachers Survey Likert-Scale Questions (Grades 6-12)

Academic Rigor

How well do your teacher's assignments help you understand the subject? In this class, how much do you learn every day?
How much does the work that you do for your class make you really think?
How well does your teacher understand the subject that (s)he is teaching? How much effort does your teacher expect you to give in class?
How much does your teacher want you to use your thinking skills, not just memorize things? When the work gets difficult, how hard does your teacher expect you to try?

Instructional Methods

How often does your teacher ask students to explain more about answers they give?
How often does your teacher want you to explain your answers – why you think what you think? How often does your teacher ask questions to be sure that you and your classmates are following along when (s)he is teaching?
If someone doesn't understand something, how often does your teacher explain it another way?
In this class, how much have you learned to correct your mistakes?

Relevance

How much does your teacher try to understand what your life is like outside of school? How much do you think your teacher cares about you?
How much does what you learn in this class help you outside of school?
How well does your teacher connect what you're learning in class with your life outside of school?

Culture

How many of your classmates behave the way your teacher wants them to? How much is student behavior under control in this class?
How respectful are students to the teacher in this class? How often does your class stay busy and not waste time? How many students in this class want to do well?

Relationships

How fair is your teacher?

How respectful is your teacher to students in this class?

How much does your teacher believe that you can get a good grade if you try? How willing is your teacher to give extra help on school work if you need it? How fair is discipline in this class?

Engagement

How much do you try to do your best in this class?

How much pride do you take in your work for this class?

How much do your teacher's expectations make you want to do your best?

How often do you enjoy coming to this class?

Appendix Table 5. Reliability of Factor Variables

	Factors	Cronbach's Alpha
Overall School Experience Survey High School	Engagement	0.82
	Academic Rigor	0.83
	Relationships	0.86
	Belonging & Peer Collaboration	0.74
	Culture	0.78
	College & Career Readiness	0.88
Overall School Experience Survey Middle School	Engagement	0.66
	Academic Rigor	0.83
	Relationships	0.81
	Belonging & Peer Collaboration	0.71
	Culture	0.68
Feedback for Teachers Survey Middle School & High School	Engagement	0.84
	Academic Rigor	0.90
	Relevance	0.86
	Instructional Methods	0.91
	Relationships	0.90
	Culture	0.90

Appendix Table 6. Overview of Factor Loadings: Feedback for Teachers Survey (Grades 6-12)

Questions	Factor Loading
Engagement	
How much do you try to do your best in this class?	0.77
How much pride do you take in your work for this class?	0.82
How much do your teacher's expectations make you want to do your best?	0.70
How often do you enjoy coming to this class?	0.70
Academic Rigor	
How well do your teacher's assignments help you understand the subject?	0.80
In this class, how much do you learn every day?	0.78
How much does the work that you do for your class make you really think?	0.72
How well does your teacher understand the subject that (s)he is teaching?	0.73
How much effort does your teacher expect you to give in class?	0.74
How much does your teacher want you to use your thinking skills, not just memorize things?	0.77
When the work gets difficult, how hard does your teacher expect you to try?	0.75
Relevance	
How much does your teacher try to understand what your life is like outside of school?	0.80
How much do you think your teacher cares about you?	0.77
How much does what you learn in this class help you outside of school?	0.70
How well does your teacher connect what you're learning in class with your life outside of school?	0.77
Instructional Methods	
How often does your teacher ask students to explain more about answers they give?	0.85
How often does your teacher want you to explain your answers – why you think what you think?	0.84
How often does your teacher ask questions to be sure that you and your classmates are following along when (s)he is teaching?	0.80
If someone doesn't understand something, how often does your teacher explain it another way?	0.79
In this class, how much have you learned to correct your mistakes?	0.75
Relationships	
How fair is your teacher?	0.86
How respectful is your teacher to students in this class?	0.82
How much does your teacher believe that you can get a good grade if you try?	0.75
How willing is your teacher to give extra help on school work if you need it?	0.72
How fair is discipline in this class?	0.77
Culture	
How many of your classmates behave the way your teacher wants them to?	0.86
How much is student behavior under control in this class?	0.82
How respectful are students to the teacher in this class?	0.83
How often does your class stay busy and not waste time?	0.75

How many students in this class want to do well? 0.74

Appendix Table 7. Overview of Factor Loadings: Overall School Experience Survey (Grades 9-12)

Questions	Factor Loading
Engagement	
I take pride in my schoolwork.	0.80
I enjoy coming to school most of the time.	0.52
My teachers' expectations make me want to do my best.	0.57
I try to do my best in school.	0.77
What I learn in class helps me outside of school.	0.51
Academic Rigor	
In order to receive a good grade, I have to work hard in my classes.	0.76
The work that I do for my classes makes me really think.	0.74
I can tell that my teachers understand the subjects that they are teaching.	0.55
My teachers give me assignments that help me to better understand the subject.	0.54
Relationships	
How many of your teachers are willing to give extra help on schoolwork if you need it?	0.78
How many of your teachers try to be fair?	0.80
How many of your teachers believe you can get a good grade if you try?	0.68
How many of your teachers are not just satisfied if you pass, they care if you're really learning?	0.71
How many of your teachers connect what you're learning in class to life outside of the classroom?	0.61
How many of your teachers make an effort to understand what your life is like outside of school?	0.58
Belonging & Peer Collaboration	
I really feel like part of my school's community.	0.62
I can usually be myself around other students at this school.	0.70
Most students at this school are friendly to me.	0.69
How often do you work with other students for your classes because your teachers ask or tell you to?	0.44
How often do you work with other students for your classes, even when your teacher doesn't ask or tell you?	0.44
Culture	
Most students in this school treat adults with respect.	0.78
Most adults in this school treat students with respect.	0.61
Most students in this school want to do well in class.	0.65
Discipline in this school is fair.	0.59
College & Career Readiness	
My school has helped me develop the skills and knowledge I will need for college level classes.	0.53

My school has helped me understand the steps I need to take in order to apply to college.	0.73
My school has helped me figure out which careers match my interests and abilities.	0.85
My school has helped me understand the steps I need to take in order to have the career that I want.	0.90

Appendix Table 8: Elementary Survey Model Fit

Fit Index	5 factor model
Chi-square	6827.667, df = 160, p < 0.001
RMSEA	0.035
CFI	0.956
SRMR	0.027

Appendix Table 9. Elementary Survey Factor Correlation Matrix

Factor	Academic Rigor	Instructional Methods	Engagement	Relationships	Culture
Academic Rigor	1.00				
Instructional Methods	0.51	1.00			
Engagement	0.36	0.39	1.00		
Relationships	0.52	0.56	0.52	1.00	
Culture	0.35	0.29	0.15	0.39	1.00

