

FAQS: Normed Scoring in Panorama Surveys and Feedback

By Panorama's Data Science and Applied Research Team

Panorama Surveys and Feedback now includes a revamped survey reporting experience—one that's highly actionable, efficient, and collaborative. A major part of this new experience is normed scoring: a research-backed scoring method that shows how students scored relative to others at their grade level nationally.

The purposes of this document are to: 1) provide a foundational understanding of normed scoring and our approach to it, 2) explain why we enhanced our survey reporting with normed scoring, and 3) answer common questions from our district partners during the scoring development process.

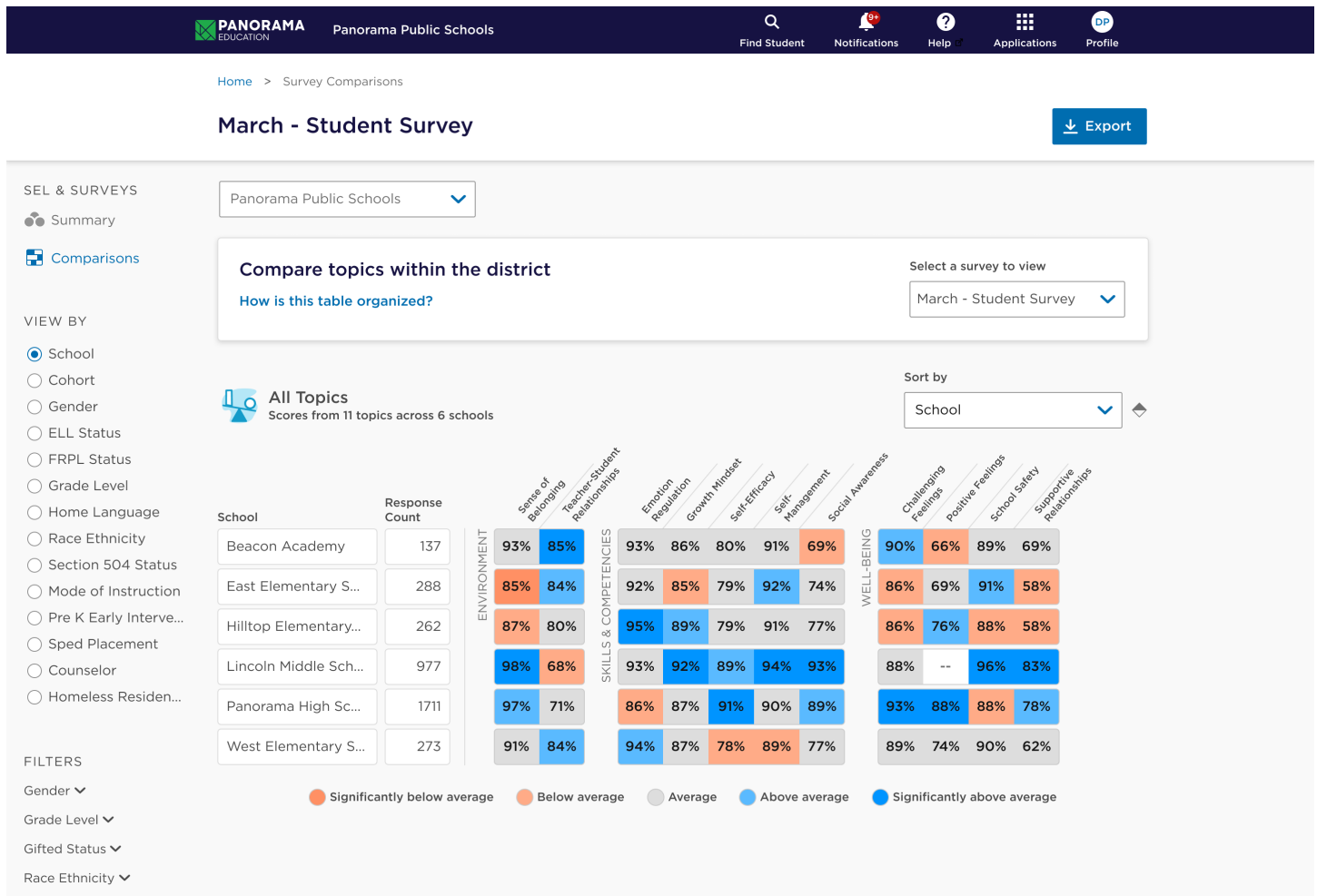
We hope that this document provides transparency and gives our district partners the information they need to evaluate their survey scoring options with Panorama and best support their students.

In general, what is normed scoring?

Normed scoring is a system of scoring that is commonly used in educational testing and survey-based assessments. Fundamentally, a norm-referenced score shows how a given score compares to the scores of a reference group. For example, consider a student who correctly answers 8 out of 10 questions on a test. With normed scoring, we would be able to see how that student's score compares with those of other test takers (perhaps those of other students in the same class or grade). For an especially challenging test, 8 correct answers on a 10 question test might be one of the highest scores in the class, and knowing that could help you understand important things about both the student's performance and that of the class. Alternatively, on a very easy test, that 8 out of 10 score could be one of the lowest grades in the class, and knowing that a student scored very low relative to their peers, even with a "B" grade, could also be very important. Ultimately, through the use of appropriate comparison groups, normed scoring helps put scores into context—providing information that is not captured in other forms of scoring.

Why did Panorama decide to add normed scoring (beyond current benchmark reporting) to its platform and why now?

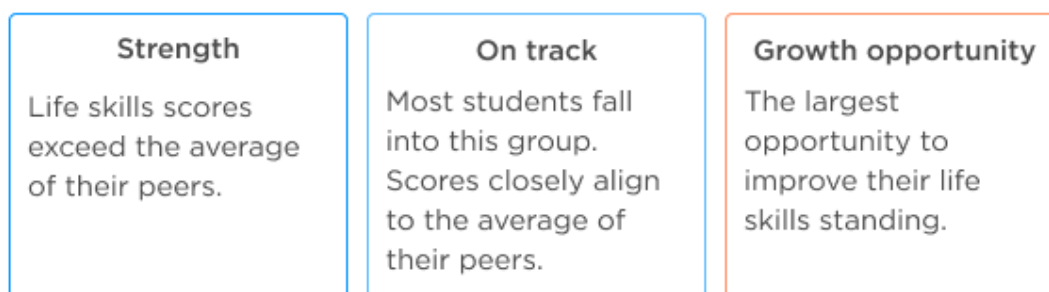
We added normed scoring to several areas of our platform to unlock the benefits it affords our partners. Our enhanced normed scoring allows our partners to better put students' responses into context while taking into account important variables, like student grade, that impact students' scores. Additionally, **a key benefit of normed scoring is that it enables "apples to apples" comparisons** across grade levels and topics, which is especially helpful when identifying areas for intervention and enrichment.



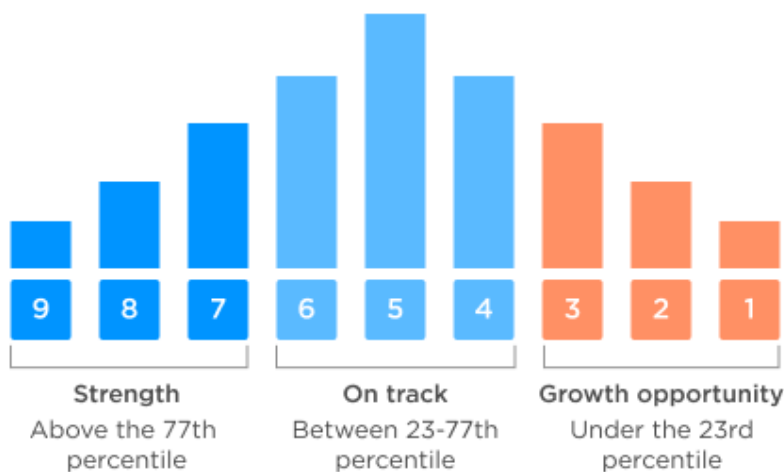
The timing was a function of two forces: the growth of our educational data set and our commitment to thoughtfully determining how to construct normed scores to ensure optimal comparisons. In terms of our data set, with over a billion data points we are now in a unique position to develop and analyze approaches to scoring and ultimately design the best comparisons in collaboration with our partners. Naturally, those analyses take time, and our dedicated Data Science and Applied Research team has engaged in a multi-year process to develop an approach to normed scoring. Ultimately, we believe that these efforts have resulted in an educator-focused system of scoring that is both incredibly powerful and uniquely available to our partners.

What is Panorama’s approach to normed scoring?

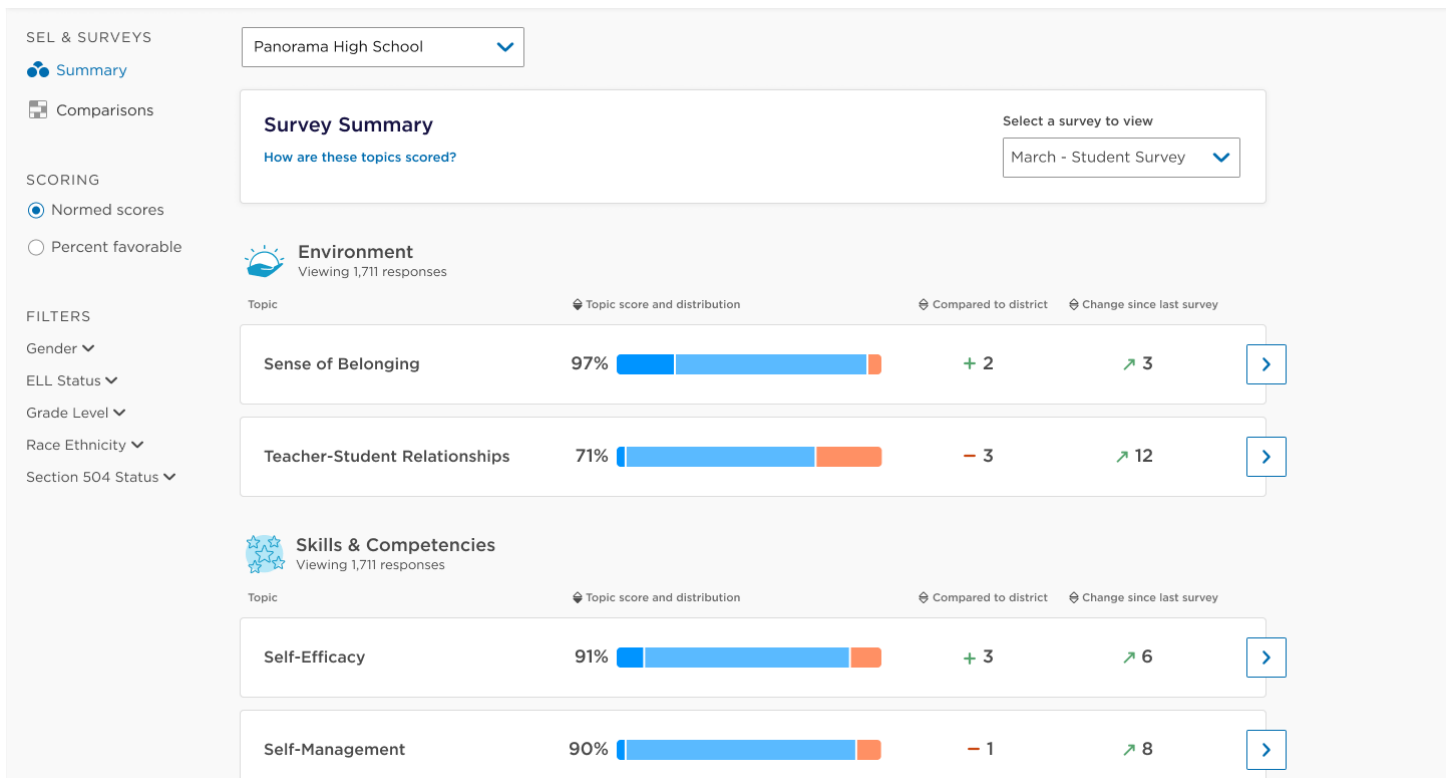
For our normed topic scores, we are using stanine scoring. Stanines (which stands for “standard nines”) are normalized scores with a long history of use in education and testing. Stanines divide a score distribution into nine intervals, with each of the intervals (1-9) containing a certain percentage of scores. Scores in the lowest stanines (i.e., stanines 1-3) represent the lowest scores, while those in the highest stanines (i.e., 7-9) represent the highest scores. Scores in the middle (i.e, 4-6) represent typical or average scores. With stanines (as with percentiles) you can easily tell where a score falls relative to other scores.



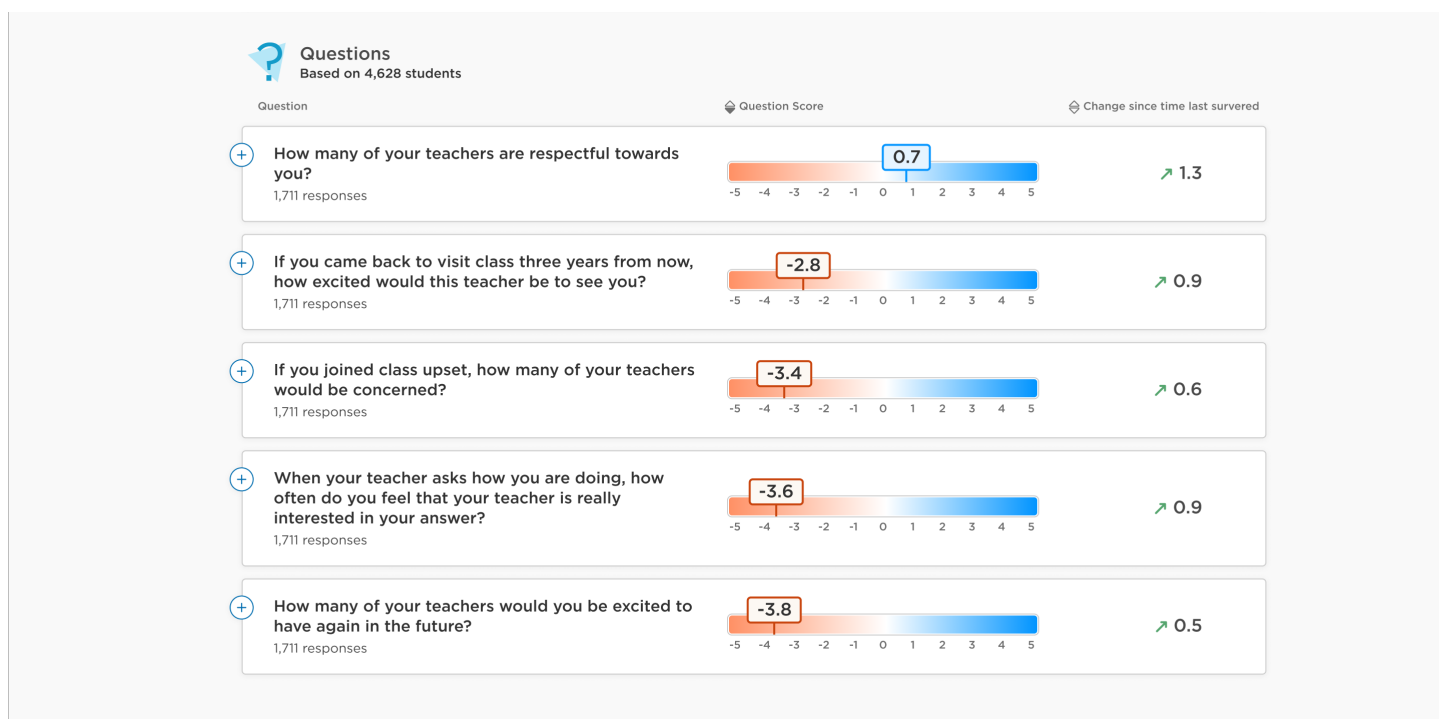
Each group is then sorted into three sections (Strength: 9-7, On track: 6-4, Growth opportunity: 3-1) to provide more granular insight.



To get to our stanine topic scores, we first convert raw question responses (the responses selected on our surveys) into standardized scores that indicate a score’s relative position above or below the mean. For each respondent, we then take the average standardized score of items in a topic and map that score to the stanine intervals. These calculations leverage our grade-level data sets, ensuring appropriate comparisons for students’ scores. The final topic scores represent the total percentage of students mapped to the “on track” and “strength” stanine groups.



For our normed item-level scores, we take a slightly different approach, focusing on the mean z-scores of items. Z-scores are a normalized score that indicates a score’s relative position above or below the mean. (A positive z-score indicates a score is above average, while a negative score indicates a score is below average. A z-score near 0 indicates that a score is close to the average.) This approach combines mean z-scores for items with an item specific scaling factor (a mathematical transformation based on an item’s response distribution that places scores on a -5 to +5 scale) to enable partners to accurately compare items within and across topics. As depicted below, many scores will be near the average, 0.

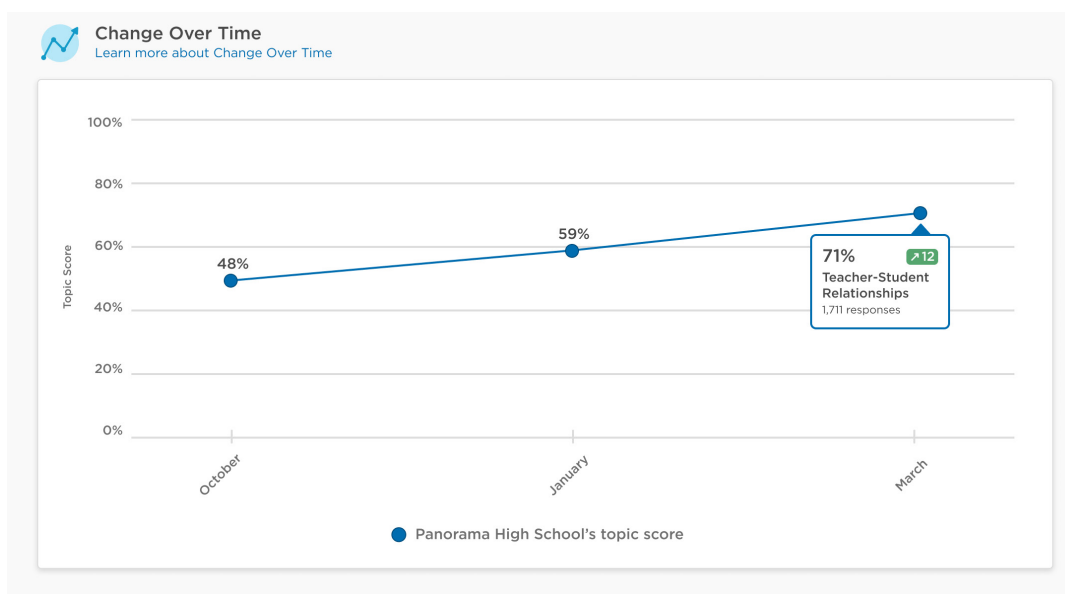


How does Panorama’s normed scoring compare with our percent favorable scoring?

When thinking about Panorama’s normed scores vs. our percent favorable scores, it is important to remember that the two scoring systems provide different types of information. While our percent favorable scoring evaluates a student’s responses against predefined standards, normed scoring compares their data with those of their peers. Each approach provides different insights into a student’s responses, which means direct comparisons are not straightforward. For example, how a student’s scores change relative to their peers versus how those scores change relative to a predetermined standard may differ; a student may show marked growth against a standard, but show a lesser degree of growth relative to their peers (who may also evidence considerable growth).

If Panorama’s new normed scores are different, how can I compare my new survey results using normed scoring to my past results using percent favorable scoring?

When you use normed scoring, you’ll be able to compare your results with prior results. Prior results will be translated to normed scoring—allowing you to continue to extract value from your historical data.



Which is better and more actionable for goal setting? If we are currently using percent favorable scoring, should we/how should we update our current processes, frameworks, and goals to account for normed scoring?

Whether school and district goals will be better or more actionable when based on our normed scoring (as opposed to our percent favorable scoring) depends on numerous factors (e.g., the context and objectives of a school/district), only some of which pertain to the actual scoring system being used. Both our percent favorable scoring and our new normed scoring provide a sound basis for goal setting, but, as mentioned, approach scoring in different ways. A key benefit of our normed scoring is that it allows schools and districts to make more accurate comparisons across topics and grades. This may allow schools and districts to uncover new insights that can lead to more impactful and better calibrated goals focused on improving/maintaining students’ scores relative to their peers. In comparison, our percent favorable scoring uses a predetermined standard as a basis for scoring. Goals based on this scoring method can help direct efforts to support students in reaching a desired score.

Of course, it is important to remember that using our percent favorable scoring or our normed scoring are not mutually exclusive options. Our educational partners will have access to both scoring systems and the ability to toggle between them. This setup allows our partners to harness the combined power of both scoring methods.

If you are currently using percent favorable scoring, there is no one right way to think about using normed scoring or incorporating normed scoring into your existing process, frameworks, or goals. We know that schools and districts have various processes for determining such things and serve many different constituencies—which can make changes difficult and/or lengthy. As noted above though, partners will have the ability to toggle between our new scoring and our percent favorable scoring. So partners that have existing district goals tied to percent favorable scores will still be able to access the scores they need to track those goals.

Even in such cases though, we would absolutely recommend considering the beneficial ways in which normed data might be used to supplement and/or update your goals going forward. Not only will normed data allow you to establish goals that focus on improving students' relative scores, but looking at the normative data will allow you to make more accurate comparisons across topics and grades. Normed scoring can help you uncover new insights that can lead to more impactful and better calibrated targets.

Should we be using normed scoring for domains like students' emotional competencies and well-being?

Educators often ask, and rightly so, about the implications of using normed scoring for domains like students' emotional competencies and well-being. As with any form of measurement, when using normed scoring in relation to such domains we must proceed thoughtfully.

When thinking about a student's responses to emotionally-focused questions, it is important that we avoid conceptualizing such data as "good" or "bad." Challenging emotions are absolutely adaptive and expected in certain contexts. However, we also want to be aware of responses that may indicate a need for support. Normed scoring can assist with this, by helping educators and others identify responses to emotionally-focused questions that are below those of their reference group—information that might be hidden in scoring based solely on predetermined standards. A low normed score for a student or student group can indicate something that a student or particular group is uniquely struggling with relative to their peers.

Of course, we must also consider the case where most of the students in a given population are struggling. Quickly glancing at a normed score in such cases might lead someone to conclude that students who are actually struggling are not. This is where considering the actual response distributions and/or percent favorable scoring, which are available in Panorama's platform, can be of great assistance—ensuring that educators have a comprehensive understanding of students' responses.

To learn more about Panorama Surveys and Feedback, please visit www.panoramaed.com/products/surveys.