# VI. INTERPRETING YOUR HSSSE AND MGSSE RESULTS: NINE NOTEWORTHY TIPS AND TECHNIQUES

User's Guide and Toolkit for the Surveys of Student Engagement: The High School Survey of Student Engagement (HSSSE) and the Middle Grades Survey of Student Engagement (MGSSE)

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Receiving your HSSSE or MGSSE report can be either exciting or aggravating. It's up to you to do the planning, adopt the attitude, and take the right steps to make it more like the former than the latter.

## 1. MAKE AND TAKE THE TIME.

Report interpretation should be a scheduled priority. It is important to anticipate when the report is likely to arrive and to schedule time for the work to analyze it. Currently, reports are arriving in mid-August, but efforts are being made to move it up to June when school life is slightly less busy.

## 2. WIDEN THE CIRCLE OF INTERPRETERS.

It often makes sense to ask heads or senior administrators to take the first pass at reading and reviewing the report and then, soon thereafter, work to widen the circle. More readers bring more insight and more ownership for action on the findings.

- **Involve faculty.** Invite teachers on an optional basis to join administrators for a review and discussion, and perhaps include lunch or another incentive. Retreats are another option for this work. Form a joint admin/faculty task force, and schedule a one-day annual retreat where you can focus on the work of interpretation. Schools that want teachers to use data for meaningful action will be far more successful when teachers participate in interpretation, rather than just receiving PowerPoint presentations.

  Youngstown University (Ohio) hosted 15 NSSE "Lunch and Learn" workshops for faculty. They looked at NSSE themes, shared data, and gathered feedback on how to improve

practices. The teachers were given time to dig into data reports and discuss why they thought certain areas were low performing.

In *Using Evidence of Student Learning*, Timothy Reese Cain and Pat Hutchings offer nine recommendations for involving faculty members, including these five:

- Locate assessment in the commitments that faculty hold.

- Respect faculty curricular authority and ownership.

- Cultivate faculty voice.

- Facilitate both formal development opportunities and informal spaces for faculty to engage with, learn about, and enact assessment.

- Create mechanisms to share internal best practices and success stories.[1]

- **Involve students.** Though less widely practiced, this is an exciting avenue some schools could pursue, especially when surveying older students. After all, the HSSSE and MGSSE are vehicles for employing and honoring student voice, and why shouldn't that sentiment be extended to the data interpretation? At The American School in London, where the upper school head's focus was on social engagement, he realized that he could make much more sense of what

1 Timothy Reese Cain and Pat Hutchings, "Faculty and Students: Assessment at the Intersection of Teaching and Learning," in *Using Evidence of Student Learning to Improve Higher Education*, ed. George D. Kuh et al. (San Francisco: Jossey-Bass, 2015), 104–105.

was important in the data if students joined him in reading and discussing the results. At Greenhill School (Texas), a special research tutorial class was created that enabled an administrator to work with students for two trimesters on analyzing HSSSE data (see the case study below).

- **Involve other schools.** Independent schools should begin working closely together, especially when it comes to data. First, identify three to five non-competitor schools like your own that have also recently administered the HSSSE or MGSSE. After forming a group and promising confidentiality, take about an hour to share reports via Google Hangout or Skype and to discuss results and explore divergences.

  This approach is sometimes referred to as creating "communities of practice" or organizing "networked improvement communities." Although underutilized across NAIS schools, it is proving highly effective in other contexts. Depending on the size of the group and the complexity of the project, it is best implemented with a consultant acting as facilitator.

## 3. INVITE PREDICTIONS BEFORE JUMPING INTO DATA.

A common practice in many guides to data use in schools is to ask your colleagues to predict what the data will reveal on selected items and then compare expectations with reality. Perhaps those areas where the data conform to predictions require little further attention, but areas of surprise might call for greater discussion.

## 4. REFER TO PSYCHOMETRIC PROPERTIES AND BUILD DATA LITERACY SKILLS.

Jumping into reports and taking the numbers as they come can work just fine some of the time. But recognize that as the results get shared across various constituencies, some will ask and wonder about the margin of error and the statistical reliability of the tool. It's good to be prepared when those questions arise. When you are working with others, make sure that the key properties of the HSSSE and MGSSE are understood. Consider taking a few minutes to step back and explain the key properties. This effort will pay dividends at your school far beyond the surveys themselves. (For more information, see Section IV: About the HSSSE and the MGSSE.)

This is an opportunity worth exploiting to support the strengthening of data literacy among both your colleagues and your students. Data surround us now more than ever; everyone can benefit from opportunities to become savvier. As Datnow and Park write in their Call #4 for data-driven leadership: "Build skills and knowledge for data use. The data-informed leader plays a crucial role in developing and investing in professional capital — people's knowledge, skills at working together, and ability to make wise judgments with respect to data use."[2]

## 5. COMPARE WITH NORMS.

One of the most common ways to go about studying your school data is to compare performances with norms via NAIS and the

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2 Amanda Datnow and Vicki Park, *Data-Driven Leadership* (San Francisco: Jossey-Bass, 2014).

public school system. You can prioritize among the abundant data items by focusing on areas of greatest and least divergence from these norms and determining whether they represent points of pride and accomplishment to carry forward and communicate or points of concern demanding greater attention.

- **Note the limitations.** Some members of the HSSSE NAIS user community caution strongly against making any comparison with public norms: public school structures, mandates, constraints, and populations are just "too different" from independent schools for fair or meaningful comparison. When comparing with NAIS norms, remember that they include very large and very small schools, boarding and day schools, religious and nonsectarian schools, and single-sex and coed schools.

- **Consider custom reports.** In the parallel work of NSSE at the college level, many institutions focus on comparison with a "basket" of carefully selected similar schools. Consider investing in a custom report from CEEP (Center for Evaluation and Education Policy at Indiana University), which allows you to compare your school with a set of like schools, with a minimum of six.

## 6. STUDY SUBGROUP DATA.

An approach to your analysis that is potentially more fruitful than norm comparison is subgroup comparison. Spend less time comparing your entire student body with that of other schools and school types and more time comparing the experience of different sets of students within your school. In interviews, few NAIS schools report spending much time in this kind of analysis. Not only is it

more strategic to do so, it is essential for any school with a deep concern for and commitment to equitable student learning among their boys and girls, students of color, and socioeconomically diverse student bodies.

- Really dig in to see whether — and how — students of color view their learning experience differently. For instance, identify key gaps between groups, and use those identified gaps as springboards for closer examination and research. Review them as potential levers for closing any achievement gaps in your school. (For more information, see Section VIII: Using the HSSSE and the MGSSE to Drive Improvement.)

- Compare cohorts. Some schools dial in tightly on their grade-level cohorts, looking to see how freshmen view schooling compared with seniors or how one graduating class compares with another in their social dynamics.

  At Seacrest Country Day School (Florida), for example, school leaders have looked at how students gain in confidence and self-esteem over their four years.

  At Pace University (New York), when administrators are studying NSSE data, their attention has been primarily on the "sophomore slump," using evidence to determine where it hits hardest and how they can best address it.

## 7. STUDY OPEN-ENDED RESPONSES.

Most schools see the open-ended responses as being of limited value compared with the survey data, but there are nuggets to mine. Think about taking time to review these responses as your

team looks for themes and patterns to illuminate the quantitative results. A full-bore qualitative study is also an option, as described in the Greenhill School case study (see below).

## 8. USE THE DATA AS A SPRINGBOARD.

Treat data as a starting place, not a finish line.

- **Send a follow-up survey.** Surprised by something you observe in your HSSSE or MGSSE results? A follow-up survey can explore topics in more detail or pull students in for focus group discussions of the issues. A Google search for "NSSE cognitive interviews" yields information about how to facilitate student focus groups.

- **Connect the dots.** If you do a parent survey, for instance, compare student and parent perspectives on certain topics to reveal the seriousness of issues or whether parental communications might be lagging on a critical topic. What has been said about NSSE applies to the HSSSE and MGSSE as well: "Corroboration of engagement results with other institutional data increases confidence in decision-making."[3]

  If you administer the College and Work Readiness Assessment (CWRA), think about whether performance gaps in the CWRA can be connected, at least inferentially, to HSSSE or MGSSE data. Do students in a CWRA underperforming cohort report doing less homework, being involved in more extracurriculars, or having weaker

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3 National Survey of Student Engagement, *Using NSSE Data to Assess and Improve Undergraduate Education: Lessons from the Field. Volume 1* (Bloomington, IN: Indiana University Center for Postsecondary Research, 2009), 28.

relationships with teachers than those in a higher performing cohort?

When Juniata College (Michigan) administrators found that the Collegiate Learning Assessment (CLA, the college-level CWRA) reported that their students had lower than expected analytic writing skills, they looked to the NSSE and found that their students wrote fewer long papers than counterparts at peer institutions. They shifted instructional assignments accordingly.[4]

For a very rich example of how HSSSE and CWRA data sets might be compared and connected, see Richard Arum and Josipa Roksa's book *Academically Adrift: Limited Learning on College Campuses*, a study of university students' academic experiences based on a thorough analysis of the NSSE and the CLA.

## 9. REMEMBER, IT'S ALWAYS ABOUT THE QUALITY OF THE QUESTIONS.

At the end of the day, the quality of your work interpreting your data will track closely to the quality of the questions you ask about student life and learning. Hypotheses are another kind of question too. Consider what hypotheses you can form about student growth and success and how can you use the HSSSE and MGSSE to test those hypotheses. Stanley Ikenberry and George Kuh make the following suggestions:

4 National Survey of Student Engagement, *Moving from Data to Action: Lessons from the Field. Volume 2* (Bloomington, IN: Indiana University Center for Postsecondary Research, 2012), 15.

Assessment work preoccupied with collecting data rather than using evidence usually falls short of the mark. It is the articulation of an important question and an explicit understanding of the need for evidence that must drive the assessment. … [A]ssessment begins with the articulation of an important question, such as the following:

- Does the evidence of student learning outcomes align with and confirm our institution's stated learning goals?

- Are there disparities in academic performance among students from various backgrounds?

- How does student-faculty interaction influence our students' success?[5]

5 Stanley O. Ikenberry and George D. Kuh, "From Compliance to Ownership: Why and How Colleges and Universities Assess Student Learning," in *Using Evidence of Student Learning to Improve Higher Education*, ed. George Kuh et al. (San Francisco: Jossey-Bass, 2015), 18.

## CASE STUDY: GREENHILL SCHOOL (TEXAS)

Compare the HSSSE to an onion: it reveals more information as you peel back the layers. Users are encouraged to consider what they might discover if they keep peeling the HSSSE onion.

Many users find value in focusing on a few top-level data points, such as overall cognitive engagement or the year-to-year trend on a single item, such as "I am considering transferring to another school." Others create a basket of multiple items and compare them among cohorts, comparing ninth-graders with 12th-graders, for example. Still others dig deep into the subgroup data, comparing boys and girls, students of different ethnicities, and students of different races. Many scan quickly through the open-ended responses to see what jumps out, trying to perceive trends.

Under the direction of Chris Bigenho, director of educational technology, Greenhill School has taken the deepest dive into HSSSE data identified to date and has involved students. The school has done this by conducting a comprehensive and detailed qualitative data analysis of two open-ended response questions.

In terms of the overall numbers, Greenhill School generally does well and is pleased with the results. The school has a long-standing commitment to what it calls "the triangle" of academics, athletics, and the arts. School administrators look to student reports to determine whether students are engaged in and have good opportunities for the rounded and rich experience Greenhill offers, but yet are not overwhelmed by it.

The administration has also been closely monitoring items around feeling safe and freedom of expression on campus, which has been the subject of some stress for the high school students. This was prompted in part by a speaker program on race and culture, which caused some white

and conservative students to feel uncomfortable when articulating conservative or Republican viewpoints.

When Bigenho, who has frequently conducted and published research in the learning sciences, saw a copy of the HSSSE report, it occurred to him that this posed a greater opportunity for the school, both to understand its key challenges and opportunities and to provide students with rich hands-on learning. He told the student body that he was welcoming volunteers for a two-trimester independent study and research practicum, explaining that this would be valuable preparation for those intending to do more research in college and beyond. Two 11th-grade students volunteered to participate in the study.

These students would be working with a great deal of data about their school and their classmates, and the data, although anonymous, were sensitive. Before the students had access to the data, Bigenho had them participate in a free online tutorial. They earned a certificate from the National Institutes of Health Office of Extramural Research on Protecting Human Research Participants, which institutions may use to fulfill requirements for training in the protection of human subjects.

Chris Bigenho and the students conducted a literature review regarding research on student engagement and its significance. They reported on the results during an end-of-year faculty meeting. Their report included reading three pieces: "Students' Perceptions of Membership in Their High Schools," "Student Engagement in High School Classrooms from the Perspective of Flow Theory," and "School Engagement: Potential of the Concept, State of the Evidence." This was serious work.

Their qualitative research action commenced by preparing the data set for analysis with the research software Atlas.ti v.6. The short-answer responses were loaded into Atlas.ti. There were two questions:

1.  Q14: Why have you considered transferring to another school? (n=138)

2.  Q31: Would you like to say more about any of your answers to these survey questions or provide any other comment about your experience at this school? (n=150)

As reported in the students' summation paper, the answers were then "coded sentence by sentence with two people in the room at all times coming to a consensus on each code, each code determining the mood, subject, and implications behind the anonymous comments." This labor-intensive process took the three-person research team more than two months. The process involved applying principles of grounded theory, as well as the application of existing schema reported in the literature on student engagement.

Over time, multiple themes emerged. The students elected to focus on four major themes that they felt would be of interest. They presented these themes to the faculty and encouraged them to give the themes attention in the future. One area of particular interest was the question of the school's triangle of academics, athletics, and the arts, which many participants wrote about in both free-response questions. The researchers cited students expressing the desire to focus more on areas of their own particular interest or have a better balance or a less overwhelming load. One student's conclusion on this topic was that "it seems the students would rather have a scalene triangle than an equilateral one."

Another area the researchers dove deeply into was the issue of diversity, acceptance, and inclusion. Although the survey disappointingly doesn't elicit many perceptions about the climate of ethnic and racial inclusion in a school, one item in the selected-response section asked, "How

much does your school emphasize the building of positive relationships with students of different backgrounds?" Note that this item only reveals students' views on the school's actions and emphasis, not how students treat each other or the safety of the school climate and positive relationships existing throughout the school.

Both the administrators and the researchers at Greenhill took satisfaction in the school's overall rating, which was significantly higher than the NAIS mean. Had they stopped there, as too many schools often do, they would have missed the rest of the story. However, Bigenho requested the full data set from the HSSSE administering office at Indiana University. This made it possible to see the quantitative responses matched to the open-ended comments. When the researchers coded students who expressed opinions about diversity in their open-ended responses, they were then able to create two groups of students: those who elected to write about diversity and those who did not. They removed the subset from the full group of participants and re-ran the statistical analysis on both groups. They also paired t-tests and found significant differences on specific questions linked to feelings on diversity. They discovered, in their words, "Maybe we're not doing so great," and that "feelings about diversity were impacting how students viewed the school in both a positive and negative light." For example, students who commented on diversity topics also responded to question 4a, "Overall, I feel good about being in this high school," nearly a full standard deviation lower than the full data set.

By gaining access to the full data set and taking the time to code the free-response questions, the research team was able to better understand the context and story behind many of the numbers reported to the school through the executive summary. This is the hard work that can lead to a clearer understanding of what the data represent and what they mean for the school.

In their final presentation to the faculty, the researchers refused to make the mistake of "solution-itis"; one of their very few recommendations — beyond asking for greater attention to these issues — was for additional research to be conducted. But the administration is not sitting still; Upper School Head Laura Ross has multiple initiatives and conversations under way to address and respond to the issues uncovered by the research. The school is now positioned to continue this research for at least two more cycles as administrators explore the impacts of some of the changes and initiatives being implemented.