Redesigning the Annual NYC School Survey
Improving Measures of School Climate through a Strong Research-Practice Partnership
*Part II: The Survey in the Field*

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Redesigning the Annual School Survey: Part II

The NYC School Survey in the Field: Survey Administration and Response Rates

Once the NYC School Survey was redesigned (see Part I of our collection), the NYC DOE had to make sure it was administered successfully—and that a high and representative proportion of target respondents actually completed it. The NYC School Survey is the largest education census in the United States, distributed in more than 1,800 schools every year. The Survey is administered to all teachers and parents in the system, as well as all students in grades 6-12. In the spring of 2015, 66,957 teachers, 421,160 parents and 401,628 students responded to the Survey.

To facilitate this major administrative undertaking, the NYC DOE contracts with KPMG, a consulting firm, to produce, distribute, and process the Survey. Survey administration is also aided by school-based staff; the NYC DOE trains a staff member at each school on the logistics and ethics of Survey administration.

In this section, we describe how the newly redesigned Survey was administered in the 2014-2015 school year and the response rates for that year, and discuss why response rates matter as well as strategies to address low response rates.

The aspirational goal in New York City is to for all teachers, parents and 6th through 12th grade students to take the annual School Survey, but in reality, this is next to impossible. Generally, districts and schools settle for obtaining a high completion rate, or what researchers refer to as the response rate. The response rate is the percentage of people invited to take a Survey who actually complete it. In general, the higher the response rate, the more likely it is that a Survey’s results reflect the perspectives of the full population. Many districts establish thresholds for survey response rates, and these thresholds have important practical implications. If the threshold is too low, the danger is that survey responses are not truly reflective of the total population. Alternatively, if the threshold is too high, the danger is that survey data won’t be used because a small percentage of individuals’ perspectives aren’t included. The NYC DOE allocates significant resources, in terms of time and money, to the administration of the surveys, in an effort to secure a high response rate.
Administration

Student Surveys
School leaders decide if they want to administer the student survey online or on paper. If they select paper, KPMG uses NYC DOE data to label each paper survey with an individual student’s name, ID number, and class number ID. The paper surveys are then sent to each school and organized by class number ID or by alphabetical order for distribution. KPMG sends the surveys to schools by early March, and students have until early April to complete it.

Students complete the Survey during school hours, and the schools then ship the Survey back to KPMG. KPMG scans and processes the student data as they are received, with the goal of providing all student Survey results to the DOE in the first week of May.

Parent Survey
For the parent survey, KPMG uses the DOE’s data to pull a current address for each student in the district and mails a paper survey to the household for the parent or guardian to complete. Parents may return the Survey directly to KPMG or bring it to their child’s school, which can then forward it to KPMG. KPMG also provides parents with a unique online login so they can complete the Survey online instead, if they prefer.

The online login information and paper survey are sent to families in early March, and parents must complete the Survey within five weeks. The data is then processed by KPMG and provided to the NYC DOE by the first week of May.

Teacher Survey
The teacher survey is administered online starting in early January and closes six weeks later. KPMG provides each teacher with their own login information, which is linked to their school to ensure that teachers are reporting about the correct school. Since these surveys are all online, data processing is faster, and the results are available by early March.
Survey Data Sets

Following processing, KPMG delivers a data set with school-level survey results, organized by respondent group, to the NYC DOE. This data set has only de-identified data that cannot be linked back to any individual. This is necessary to maintain the confidential nature of the parent and student survey and anonymous nature of the teacher survey. KPMG also implements a suppression rule, which means they do not provide the DOE with results for groups that have less than five people responding (because in cases of very small sample sizes, it can be easy to identify a particular individual on the basis of their responses).

KMPG compiles a different data set for the Research Alliance, with individual survey results, organized by respondent group. When the Research Alliance receives individual survey results we keep all identifiable information on a high-security server. Before analyzing the data we scrub all identifiable information to protect the confidentiality of the survey respondents. The student and parent surveys include individual identification numbers, so the Research Alliance is able to link these results with other administrative data. This allows us to conduct important analyses about survey results for students with different backgrounds, academic profiles, and so forth, and means that we can look at an individual’s survey results over time (i.e., across years).

However, per agreements between the NYC DOE and UFT, the teacher survey is anonymous, which means we cannot link individual teacher surveys to administrative data or examine individuals’ responses over time. This limits our ability to conduct analyses to determine, for instance, if teachers with different backgrounds, or who have different lengths of tenure, respond differently to the Survey. The reason for the anonymity is to encourage teachers to answer survey questions honestly. If teachers thought that their principal or district officials could identify them, they might hesitate to be entirely candid. For example, the Survey asks some important questions about teachers’ perspectives on their principal (their boss), and teachers might feel pressured to answer more positively if their principal could find out how they responded. Safeguarding teachers’ anonymity is seen as a way to foster more candid responses.
Response Rates

When administering a survey to a very large population, it’s almost impossible to achieve a perfect response rate. The goal should be to obtain as many responses as possible, and to try to ensure that respondents are representative of the full target population. When responses rates are low, it is less likely that survey results will be representative of the full population. If people who take the Survey are different from those who don’t take the Survey, the results may be biased and inaccurate (this is known as non-response bias). Alternatively, if people who do take the Survey are the same as potential respondents who do not respond, the results may be unbiased and accurately represent the full population. But this becomes harder to achieve when response rates are low.

So, how high do response rates need to be in order to be relatively confident that the results are unbiased and true? In general, schools with higher survey response rates will yield more accurate survey results than schools with low response rates. For example, if a school has a 25 percent parent response rate, the results may not be representative of all parents’ thoughts about the school. Maybe that 25 percent is more motivated to complete the Survey because they are particularly unsatisfied with the school; or, they might be more satisfied than those who did not take the Survey, and want to help the school out. We don’t know which way the results would be skewed (or if they would be skewed at all), but when we have low response rates, we know to be skeptical and careful about generalizing the results to the school as a whole.

Researchers commonly consider a response rate of 70 percent or more to be sufficiently representative and generalizable to a larger population. In an effort to provide more schools with data, some districts accept slightly lower response rates. For example, Chicago uses a 50-percent response rate as the minimum necessary to report school-level scores. We use the 70-percent threshold in the discussion below.

District-Wide Response Rates

Average response rates to the NYC School Survey differ by respondent group (teacher, student, and parent) and by school level (Elementary, Middle, and High), as shown in Figure 3 below. In the 2014-2015 school year, the teacher survey had consistently high response rates for all levels, each above 80 percent. Students’ response rates depended on the level. District-wide, the middle school student response rate was just above 90 percent, whereas the high school student response
rate was about 75 percent—both exceeding the 70-percent threshold (elementary school students do not take the Survey). The response rates for parents were much lower, particularly for parents of high school students. Elementary school parents had a 60-percent response rate, middle school parents had a 55-percent response rate, and high school parents had a 30-percent response rate. Obviously, none of these exceeded the 70-percent threshold. From these results, we can be relatively confident in using the teacher and student responses to generalize to most teachers and students in the district. However, we are more cautious about generalizing on the basis of the parent responses.

**Figure 3: 2014-2015 Average School Response Rates by Survey Respondent (%)**

![Bar chart showing response rates by survey respondent and school level.](image)

**Source:** Research Alliance calculations using data from the NYC DOE.

**Notes:** School level is determined by the NYC DOE school type. Elementary schools have the grade configuration of K-5 (n = 605), middle schools 6-8 (n = 281), and high schools 9-12 (n = 364). Other schools with different grade configurations were excluded from this analysis.
School-Level Response Rates

While district-wide response rates help us consider how representative the Survey results are for the entire district, it does not assess whether individual schools met the 70-percent threshold. Because the NYC DOE wants to learn about climate and capacities at each school (particularly the elements of the Framework for Great Schools) it is important to consider not only district-wide response rates, but also school-level response rates.

Figure 4 below shows the percentage of schools that did not achieve a 70-percent response rate, by respondent type and school level. For the teacher survey, only 10 to 20 percent of schools did not meet the 70-percent threshold, across all levels. For the student survey, almost all middle schools met the threshold, but about 25 percent of high schools did not. For the parent survey, most schools struggled to achieve a 70-percent response rate. We found that over 90 percent of high schools, 65 percent of middle schools and 60 percent of elementary schools did not meet the threshold for parents.
For schools with lower response rates, we have to be concerned about whether survey results are reflective of the broader school population and an accurate representation of the school’s strengths and weaknesses. Particularly when response rates are low, it is important to consider whether respondents differ from non-respondents in a meaningful way.

It is possible to test for non-response bias by asking people who did not respond to the Survey to take it, and then comparing their results to those who originally responded. However, this is resource intensive and generally impractical.

Another option is to test whether the non-respondents have different characteristics than the respondents (e.g., are they more likely to be male, low-income, etc.?), and then see if those characteristics are associated with different responses, among
those who did take the Survey. We used this strategy to assess non-response bias among students. We found that, for many background characteristics, such as race, gender, and grade, students who took the Survey were similar to those who did not. The one exception, perhaps not surprisingly, is that students who didn’t take the Survey were much more likely to be chronically absent. Put simply, many of these students weren’t in school to take the Survey. In schools with response rates less than 70 percent, students who did not take the Survey were, on average, absent 35 days out of the year, while students who did take the Survey were absent, on average, 16 days.

Using this information, we then explored whether students who were absent more than 35 days answered survey questions differently than students who were absent for no more than 16 days. Our preliminary analysis shows that for many measures both groups of students appear to have similar results. However, there are some small, statistically significant differences. Students who were absent more than 35 days had slightly lower average scores than less absent students on the Academic Press measure (3.2 vs. 3.3 on a 1 to 4 scale) and Student Peer Interactions measure (2.9 vs. 3.0 on a 1 to 4 scale). Both of these represent about a .2 standard deviation difference, which is considered a moderate effect in education research. This suggests that there is some non-response bias at play with regard to chronically absent students.
Dealing with Lower than Desired Response Rates

Developing strategies to ensure high response rates is a critical challenge for districts administrating school surveys. When response rates fall short of expectations, there are a number of options to consider:

Option One: Use the data the same way as if the school (or district) had a high response rate.

The benefit of this approach is that it uses all completed surveys, and it’s easy to explain how results were calculated. On the other hand, results may not be an accurate representation of strengths and weaknesses of the school (or district), and so decisions could be made based on inaccurate information.

Option Two: Do not use results from schools (or districts) with a low response rate.

This keeps potentially inaccurate information out of results, and might incentivize schools (or districts) to increase their response rate so they can see their results. However, it may also incentivize schools who anticipate bad results to push their response rate below the threshold, so their results are not calculated.

Option Three: Use a statistical weighting method such as a Bayesian model to make potentially biased results more representative.

This method allows you to use the results of surveys that were taken in a given school, but makes statistical adjustments using the district-wide average results. One drawback is that this is a more opaque method that may make it difficult to report results transparently.

Option Four: Target a random sample instead of the full population.

Another approach to low response rates is to change the way the surveys are administered. For example, a district can focus on a small random sample of parents for each school. The random sample would be representative of that school, and the goal would be to attain a high a response rate for that small group (which would, presumably, be easier to accomplish than a high response rate for the entire school). The Survey could remain open to everyone, so all parents have the opportunity to take the Survey, however the priority would be to obtain completed surveys from the randomly selected sample of parents. If the smaller, random sample has a high response rate, and the rest of the school does not, then the results of the random sample should be used for analysis. However, if the response rate of the entire school is high enough, then all survey responses can be used. This method would allow schools to target a smaller group of people to respond to the Survey rather than trying to get everyone in the school to answer.

Option Five: Work hard and strategically to improve response rates.

Districts may consider conducting targeted interventions, such as text message reminders, designed to encourage parents, teachers, and students to complete the Survey. The Research Alliance has suggested to the NYC DOE that they pilot a number of such interventions to see if they can identify strategies that improve response rates.
Conclusion

The NYC DOE faces a logistically daunting task in implementing the annual School Survey. With help from KPMG and school-based staff, the district collects around a million survey responses each year.

One of the major challenges in large-scale survey administration is ensuring a high response rate. It’s important that a large proportion of the target population takes the survey so that we can be confident their responses are representative of the full population. When analyzing response rates for the NYC School Survey, we aimed for a 70-percent response rate for each type of respondent (i.e., parents, students, and teachers)—both for the district as a whole, and within each school.

District-wide, the response rates for students and teachers were, on average, over the 70-percent threshold. There are some individual schools, however, that fell short of this mark. These schools should focus on improving their school-level response rates to improve the quality, accuracy and completeness of the information being gathered about their school’s climate.

As our results show, parent response rates are the lowest across the NYC system. The NYC DOE is working to improve parent response rates. Over the years, the district has tried sending reminder postcards to parents’ homes, for example, and conducting robocalls. Boosting parent response rates continues to be a high priority for the DOE.

Check out the rest of our Redesigning the Annual School Survey collection.
Endnotes

1 Elementary is defined as a general education, non-charter school with grades Pre K to 5 or K-5. Middle is defined as a general education, non-charter school with grades 6-8, and High Schools are defined as a general education, non-charter school with grades 9-12. Schools with alternative grade configurations, charter schools, and non-general education schools are excluded from these analyses. We’ve included a table for other configurations in Appendix C.

2 Using a common ID, we can link the student survey results to their administrative record, to identify which students could have taken the Survey but didn’t and examine how they compare to students who did take the Survey. We are unable to do this analysis for teachers since we do not have individual teacher identifiers. We plan to conduct this analysis with the parent survey in the future.
References


