



District-Wide Surveys Technical Report

Introduction

The School District of Philadelphia District-Wide Surveys represent a unique opportunity for students, parents & guardians, teachers, and principals in Philadelphia’s District and Charter schools to share their perspectives and provide feedback about how they experience and perceive their schools. It is the goal that the feedback on the surveys will be viewed as rigorous, actionable data that can be used to improve our city’s schools.

This report describes the framework that guided survey development, the administration of the surveys, the processes of survey reliability testing and validation, and the construction of school-level scores for reports. With an eye toward the Action Plan 3.0 goal of creating an equitable system of schools, this feedback provides a more complete picture of Philadelphia schools than relying solely on traditional measures of school success. By considering the perspectives of different groups in a school, the data derived from these surveys can help pinpoint what is working well in a school along with areas that need to be improved.

With the launch of the new survey website, Shared Solutions has created a simple tool that can be used by both school and District staff and leadership to inform decision-making as they continue working to educate the city’s students.

Survey Framework

Building on the extensive research on effective schools and comprehensive school reform, and the work of Bryk and his colleagues at The University of Chicago Consortium on School Research,¹ members of Shared Solutions worked collaboratively with school stakeholders to refine and further develop Philadelphia’s District-Wide Surveys. The four surveys (student, parent & guardian, teacher, and principal) are designed to measure five key topics related to school improvement:²

¹ Bryk, A. S., Sebring, P. B., Allensworth, E., Luppescu, S., & Easton, J. Q. (2010). *Organizing Schools for Improvement: Lessons from Chicago*. Chicago, IL: The University of Chicago Press.

² These topics draw on Bryk and colleagues’ (2010) work in Chicago, which identified five essential supports for school improvement. Shared Solutions altered the language of the essential supports to make the terms more publically accessible and reflect the broader set of questions covered by the surveys. The original names of the five essential supports identified by Bryk and his colleagues are: school leadership, parent-community ties, professional capacity, student-centered learning climate, and instructional guidance.

1. **Climate** -- Areas affecting the school environment: school mission and vision, respectful relationships, student safety and support, and challenges to student learning.
2. **Instruction** -- Student engagement and how students, parents/guardians, and teachers feel about the quality of teaching and learning at their school.
3. **Leadership** -- How school leaders communicate and implement their school vision, how they manage their responsibilities, and how they perceive their level of autonomy.
4. **Professional Capacity** -- How school staff work together, what types of professional development teachers receive, and if teachers feel supported in growing and innovating in their classrooms.
5. **Parent/Guardian-Community Ties** -- How schools reach out to and communicate with parents/guardians, what parents/guardians think about these efforts, and how parents/guardians are getting involved with their child's education.

This survey feedback provides a more complete picture of Philadelphia schools than relying solely on traditional measures of school success. By considering the perspectives of different groups in a school, this feedback can help identify what is working well along with areas that need to be improved.

For example, survey results may show that a school is successful in the area of **Instruction**, but is experiencing challenges in **Parent/Guardian-Community Ties**. Additionally, each of the five main topics is comprised of subtopics that can be used for a closer look at specific areas where leaders and stakeholders might target their attention. For many (but not all) topics, the surveys ask similar questions of multiple respondent groups (e.g., teachers, students, and parents/guardians) to allow comparison of different views. Table A-1 of the Appendix lists which subtopics are measured on each survey.

Survey Development & Administration

Development

In the spring of 2014, The School District of Philadelphia (SDP) Office of Research and Evaluation (ORE) administered pilot surveys to students and parents/guardians across the city. These surveys served as the foundation for the Student and Parent & Guardian District-Wide Surveys. To create the Principal and Teacher District-Wide Surveys, Shared Solutions staff combined the original SDP survey items with items from other surveys used nationally that had documented reliability and validity. After the initial draft surveys were created, SDP and Penn GSE researchers and practitioners reviewed them. The next phase of development involved collecting feedback on the draft surveys from Philadelphia stakeholders. These efforts included focus groups and cognitive interviews³ with students, teachers, school administrators,

³ During which a respondent talks through each survey question, indicating any confusions or problems with the question.

principals, parents & guardians, as well as staff from the SDP Office of Family and Community Engagement. Stakeholders who provided feedback were representative of a variety of schools, grades, subjects, and communities. Over the six-month period of survey development, each survey went through over 10 rounds of intensive review and revisions.

Administration

The timing and duration of the administration windows for each of the surveys was carefully planned to optimize participant access and response rates. The surveys were primarily administered online via SurveyMonkey. However, schools were also provided with paper copies of the Parent & Guardian survey. In the 2014-2015 school year, the number was equal to approximately 5% of the school’s enrollment (i.e., a school with 500 students received 25 paper surveys). In the 2015-2016 school year, schools were asked to request paper copies up to a maximum of 10% of their school’s enrollment. Photocopying or otherwise duplicating these surveys was prohibited. To accommodate the diverse populations served by SDP, the Parent & Guardian survey was translated into nine languages. All nine languages were available online. In the 2014-2015 school year, schools with non-English speaking populations were provided with translated surveys based on the percentage of enrolled students with a home language on file other than English. In the 2015-2016 school year, schools could request paper copies in English, Spanish, and Chinese. The administration windows for each survey are outlined in Table 1. In response to feedback from stakeholders, the window was extended in the 2015-2016 school year.

Table 1: Survey Administration Windows

Survey	2014-2015 Administration Window	2015-2016 Administration Window
Student	May 4 – June 19, 2015	March 31 – June 27, 2016
Parent & Guardian	April 20 – June 19, 2015	March 31 – June 27, 2016
Teacher	May 18 – June 19, 2015	May 3 – May 27, 2016
Principal	May 18 – June 19, 2015	May 10 – May 27, 2016

To ensure the validity of responses, students and parents & guardians were required to enter a unique, seven-digit District Student ID number in order to access the surveys. Teachers and principals were provided with secure links to the survey via their District and Charter email accounts. To encourage participation, Shared Solutions staff made phone calls to school leaders and sent e-mail reminders to school staff. Additionally, a survey hotline was set up and manned by ORE staff throughout all survey administration windows.

Response Rates

Table 2 provides an account of the survey response rates for each respondent group for the 2014-2015 and 2015-2016 school years.

Table 2: Response Rate and Number by Respondent Group⁴

Respondent Group	2014-2015 Response Rate	2014-2015 Total Number of Respondents	2015-2016 Response Rate	2015-2016 Total Number of Respondents
Student	33%	46,695	50%	73,187
Parent & Guardian	7%	13,360	13%	25,911
Teacher	53%	5,423	51%	5,688
Principal	64%	185	73%	241

Data Validation and Reliability Testing

Item Reliability

In order to assess the internal consistency of the survey items within each topic and subtopic, ORE calculated Cronbach’s alphas for each of the five topics by combining all questions related to that topic. Cronbach’s alpha is a common measure of reliability that can be used to evaluate the extent to which a group of items are related (Cronbach, 1951). All scale reliabilities, with the exception of one, fell within the 0.71 and .095 range, which indicates an acceptable internal consistency between items within each topic and subtopic, without item redundancy (Nunnally & Bernstein, 1994). The lower alpha level for the **Professional Capacity** topic on the principal survey may be explained by the limited number of questions included in the topic (usually, the more items a dimension has the higher the reliability). Table 3 provides the alphas for the five topics as measured across the four surveys. For a list of alphas by subtopic, see Table A-2 in the Appendix.

Table 3: Cronbach’s Alpha for Survey Constructs (Topics)⁵

	Student	Parent & Guardian	Teacher	Principal
Climate	0.86	0.72	0.95	0.91
Instruction	0.92	0.94	0.89	0.88
Leadership	NA	NA	0.91	0.79
Professional Capacity	NA	NA	0.92	0.59
Parent/Guardian-Community Ties	NA	0.90	0.90	0.74

⁴ Parent & Guardian and Student response percentages are based on student enrollment records as of May 31, 2016. Teacher and principal response percentages are based on District teachers/principals of record as of April 2016, and all teacher/principal emails provided by Charter schools during the survey administration period.

⁵ The reported reliabilities are the values that resulted after the exploratory factor analyses were run.

Construct Validity and Factor Analysis

After determining the internal reliability of the topics and subtopics, we used exploratory factor analysis (EFA) to explore the dimensionality of the topics. The method of EFA is used to explore the possible underlying factor structure (Child, 1990; Thorndike, Cunningham, Thorndike, & Hagen, 1991). In our data validation, we used EFA to explore whether each of the five topics related to school improvement represented a latent factor. EFA was purposely chosen as the type of analysis to analyze the surveys so as to provide an unbiased, theory-neutral validity check on our survey constructs and sub-constructs.

EFA was run for three of the surveys – Parent & Guardian, Student, Teacher. An oblique rotation method—“direct oblim”—was used in order to simplify the structure of the factor loadings. In their research, Bryk and colleagues (2010) found that the five essential supports (analogous to our five topics) all related to one another and correlated with student achievement. Consequently, oblique rotation was chosen over other rotation methods as it allows for factors to be correlated (Costello & Osborne, 2005). Following best practice, in our EFA, we specified a minimum loading value of 0.3 (Costello & Osborne, 2005), and used the Kaiser criterion, specifying that all factors must have eigenvalues greater than 1.0 (Ford, MacCallum, & Tait, 1986; Kaiser, 1970).

Overall, the EFAs confirmed the validity of the five topics and their subtopics. In the few cases where the EFAs did not, we refined the survey scales to ensure we had reliable measures of each topic and subtopic.

Construct Scoring

With the goal of maximizing the ability to use the data to target areas for school improvement, Shared Solutions developed a system that provides each school with a score for each of the five topics and their respective subtopics. These scores combine subtopics across surveys, so that the scores are representative of multiple perspectives. Principal scores are not included in the overall school scores. Instead, ORE aggregated principal survey results at a broader level (i.e., school type, learning network, etc.).

Thresholds

In order to ensure that school-level scores were representative of a school’s community, the thresholds shown in Table 4 were applied to the survey to determine if a school had enough survey responses to warrant analysis:

Table 4: Survey Participation Rate Thresholds

Survey	Threshold
Student	50 students or 25% of students at a schools, whichever is greater
Parent & Guardian	10% of a school’s enrollment
Teacher	25 teachers or 25% of teaching staff at a school
Principal	N/A

Scoring Procedure

ORE excluded survey items from scoring when they did not have clear polarity (positive or negative) and required more complex interpretations. These data will be analyzed in ORE and Shared Solutions reports. Items that were selected for scoring were grouped according to topic. Table 5 shows the distribution of items across surveys by topic.

Table 5: Number of Survey Items Used for Scoring by Respondent Group and Topic/Subtopic

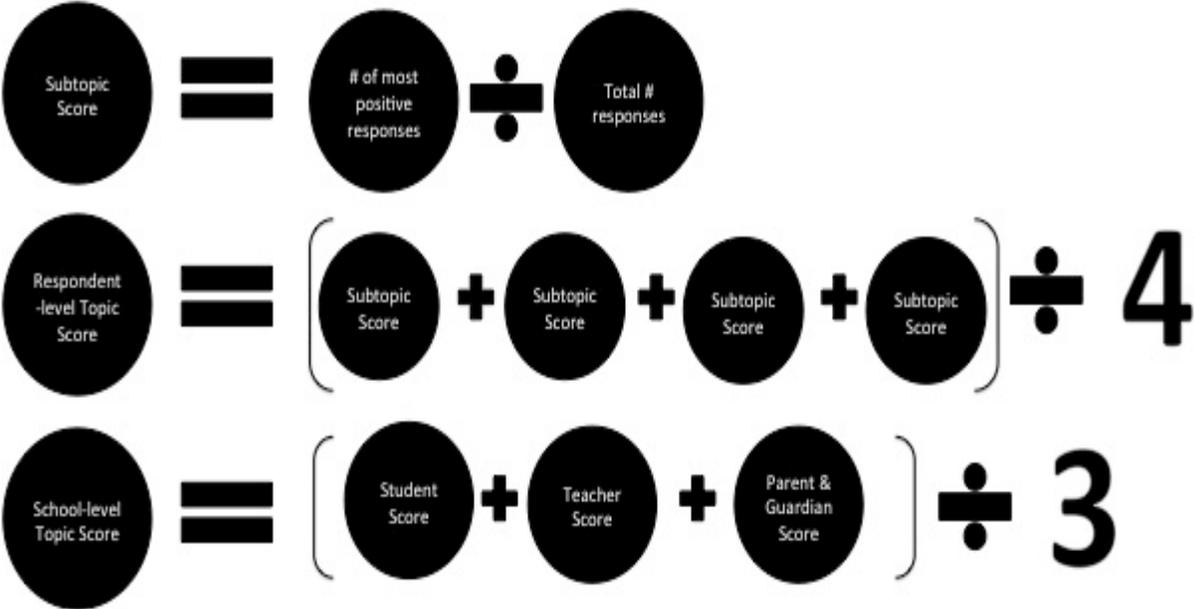
	Student	Parent & Guardian	Teacher
Climate			
Belonging	5	--	--
Bullying	4	5	6
Safety/building condition	6	3	--
Student-centered learning climate	--	--	13
Respect	--	--	9
Classroom-level challenges	--	--	8
School-level challenges	--	--	19
External challenges	--	--	5
Total	15	8	60
Instruction			
Evaluation of teaching & learning	15	6	14
Student engagement	--	--	16
Total	15	6	30
Leadership			
Expectations & feedback	--	--	5
Inclusive leadership	--	--	5
Total	0	0	10
Professional Capacity			
Innovation	--	--	5
PD Quality	--	--	6
PD Consistency	--	--	5
Total	0	0	16
Parent & Guardian-Community Ties			
Communication quality	--	7	--
Parent/Guardian school relationship	--	6	--
Total	0	13	0

Scores were calculated for each school that met the minimum response threshold. Figure 1 describes the steps taken to create the school-level scores. These steps are also detailed below.

For each respondent category (student, parent & guardian, and teacher), a school’s score for a given subtopic is equal to the number of most positive responses (e.g., strongly agree or always) divided by the total number of responses to the items that comprise the subtopic. For example, to calculate a score for the *Communication Quality* subtopic on the Parent & Guardian Survey, the number of parents & guardians who “strongly agreed” with items asking about communication quality was divided by the total number of parents & guardians who answered survey items about *Communication Quality*. To create topic-level scores for each survey, the relevant subtopic scores were averaged.

School-level scores reflect an average of the scores for each respondent group. For example, a school’s overall **Climate** score is equal to the average of the climate scores from the Student, Parent & Guardian, and Teacher surveys. Schools can potentially receive a school-level score for each of the five topics related to improvement (Climate, Instruction, Leadership, Professional Capacity, and Parent & Guardian-Community Ties).

Figure 1. Survey Scoring Procedure



Contact Information

If you have any questions, please contact The Office of Research and Evaluation at: schoolsurveys@philasd.org.



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Appendix

Table A-1. Survey Topics and Subtopics by Respondent Type

Topic	Subtopic	Student	Parent	Teacher	Principal
Climate	Belonging	✓	--	--	--
	Bullying	✓	✓	✓	--
	Safety/building condition	✓	✓	--	--
	Student-centered learning climate	--	--	✓	✓
	Respect	--	--	✓	--
	Interpersonal relationships	--	--	--	✓
	Classroom-level challenges	--	--	✓	--
	School-level challenges	--	--	✓	✓
	External challenges	--	--	✓	✓
Instruction	General instructional strategies	--	--	✓	Measured at topic-level only
	Evaluation of teaching & learning	✓	✓	✓	
	Student engagement	--	--	✓	
Leadership	Expectations & feedback	--	--	✓	--
	Inclusive leadership	--	--	✓	--
	Management	--	--	--	✓
	Engagement	--	--	--	✓
	Instruction	--	--	--	✓
	School-level decision making	--	--	--	✓
	Classroom-level decision making	--	--	✓	--
Professional Capacity	Innovation	--	--	✓	--
	Peer collaboration	--	--	✓	✓
	Professional Development (PD) Content focus and duration	--	--	✓	--
	PD Quality	--	--	✓	--
	PD Consistency	--	--	✓	--
Parent/Guardian-Community Ties	Communication frequency	--	✓	Measured at topic-level only	Measured at topic-level only
	Communication quality	--	✓		
	Parent/Guardian school relationship	--	✓		
	Parent/Guardian involvement	--	✓		

Table A-2. Cronbach’s Alpha for Survey Topics and Subtopics by Respondent Type

Topic	Subtopic	<i>Student</i>	<i>Parent</i>	<i>Teacher</i>	<i>Principal</i>
Climate	Belonging	0.82	--	--	--
	Bullying	0.73	0.72	0.75	--
	Safety/building condition	0.81	0.78	--	--
	Student-centered learning climate	--	--	0.85	0.70
	Respect	--	--	0.69	--
	Interpersonal relationships	--	--	--	0.76
	Classroom-level challenges	--	--	0.78	--
	School-level challenges	--	--	0.92	0.88
	External challenges	--	--	0.82	0.79
Instruction	General instructional strategies	--	--	0.87	0.88 ⁶
	Evaluation of teaching & learning	0.92	0.94	0.81	
	Student engagement	--	--	0.80	
Leadership	Expectations & feedback	--	--	0.94	--
	Inclusive leadership	--	--	0.95	--
	Management	--	--	--	0.78
	Engagement	--	--	--	0.62
	Instruction	--	--	--	0.73
	School-level decision making	--	--	--	0.76
	Classroom-level decision making	--	--	0.84	--
Professional Capacity	Innovation	--	--	0.88	--
	Peer collaboration	--	--	0.91	0.59
	Professional Development (PD): content focus and duration	--	--	0.88	--
	PD Quality	--	--	0.74	--
	PD Consistency	--	--	0.67	--
Parent/Guardian-Community Ties	Communication frequency	--	0.92	0.90 ⁶	0.74 ⁶
	Communication quality	--	0.95		
	Parent/Guardian school relationship	--	0.92		
	Parent/Guardian involvement	--	0.86		

⁶ Measured at topic level only