



District-wide Surveys Technical Report (updated March 2018)

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 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.

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 constructs related to school improvement:²

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.

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 construct 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.

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.

Additionally, each of the five main constructs is comprised of sub-constructs that can be used for a closer look at specific areas where leaders and stakeholders might target their attention. For many (but not all) constructs, the surveys ask similar questions of multiple respondent groups (e.g., teachers, students, and parents/guardians) to allow comparison of different views.

Table 1: Constructs and Survey Instrument Alignment

	Climate	Instruction	Leadership	Professional Capacity	Parent/Guardian Community Ties
Parent/Guardian	X	X			X
Student	X	X			
Teacher	X	X	X	X	X
Principal	X	X	X	X	X

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**. The survey also includes questions that are not aligned to one of the five research based constructs but are of interest to stakeholders across our schools and city. These include questions about school lunches, transportation, and District programs.

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, 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

Each year, the timing and duration of the administration windows for each of the surveys is carefully planned to optimize participant access and response rates. The surveys are primarily administered online via SurveyMonkey. However, schools are 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 and 2016-2017 school years, schools were asked to request paper copies up to a maximum of 10% of their school’s enrollment. Photocopying or otherwise duplicating these surveys is prohibited. To accommodate the diverse populations served by SDP, the Parent & Guardian survey is translated into eight languages. All nine languages are available online. In the 2014-2015 school year, schools with non-English speaking populations were provided with surveys translated into Spanish and Chinese based on the percentage of enrolled students with a home language on file other than English. In the 2015-2016 and 2016-2017 school year, schools were asked to request paper copies in English, Spanish, and Chinese. The administration windows for each survey are outlined in Table 2. In response to feedback from stakeholders, the window was extended beginning in the 2015-2016 school year.

Table 2: Survey Administration Windows

Survey	2014-2015 Administration Window	2015-2016 Administration Window	2016-2017 Administration Window
Student	May 4 – June 19, 2015	March 31 – June 27, 2016	April 3 – June 23, 2017
Parent & Guardian	April 20 – June 19, 2015	March 31 – June 27, 2016	April 3 – June 23, 2017
Teacher	May 18 – June 19, 2015	May 3 – May 27, 2016	May 31 – June 5, 2017
Principal	May 18 – June 19, 2015	May 10 – May 27, 2016	May 31 – June 5, 2017

To ensure the validity of responses, students and parents & guardians are required to enter a unique, seven-digit District Student ID number in order to access the surveys. Teachers and principals are

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

provided with secure links to the survey via their District and Charter email accounts. Efforts to increase response rates include mailing letters home, scheduling robo-calls, and providing schools with posters and flyers with information about the surveys.

Response Rates

Table 3 provides an account of the survey response rates for each respondent group for the 2014-2015, 2015-2016, and 2016-2017 school years.

Table 3: Response Rate and Number by Respondent Group⁴

Respondent Group	2014-2015		2015-2016		2016-2017	
	Response Rate	Number of Respondents	Response Rate	Number of Respondents	Response Rate	Number of Respondents
Student	33%	46,695	50%	73,187	50%	72,580
Parent & Guardian	7%	13,360	13%	25,911	16%	30,968
Teacher	53%	5,423	51%	5,688	56%	6,515
Principal	64%	185	73%	241	57%	184

Data Validation and Reliability Testing

Item Reliability

In order to assess the internal consistency of the survey items within each construct and sub-construct, ORE calculated Cronbach’s alphas for each of the five constructs 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). This was done in 2014-2015 and again in 2016-2017. All scale reliabilities, with the exception of three, 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 **Parent/Guardian Community Ties** 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 4 provides the alphas for the five topics as measured across the four surveys.

⁴ Parent & Guardian and Student response percentages are based on student enrollment records as of May 31. Teacher response percentages are based on District teachers with an “active status” on record as of May 31. For charters schools, the response percentage is based on the emails provided by Charter schools during the survey administration period.

Table 4: Cronbach’s Alpha for Survey Constructs (Topics), 2016-2017⁵

Constructs	<i>Student</i>	<i>Parent</i>	<i>Teacher</i>	<i>Principal</i>
Climate	0.86	0.84	0.95	0.88
Instruction	0.92	0.86	0.86	0.81
Leadership	--	--	0.91	0.68
Professional Capacity	--	--	0.92	0.69
Parent/Guardian Community Ties	--	0.90	0.90	0.62

Construct Validity and Factor Analysis

After determining the internal reliability of the constructs and sub-constructs, 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 constructs 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.

In 2014-2015 and again in 2016-2017 EFA was run for the surveys. 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 constructs and their sub-constructs. 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 constructs.

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

Thresholds

In order to ensure that school-level scores were representative of a school’s community, the thresholds shown in Table 5 were applied to the survey to determine if a school had enough survey responses to warrant analysis:

Table 5: 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

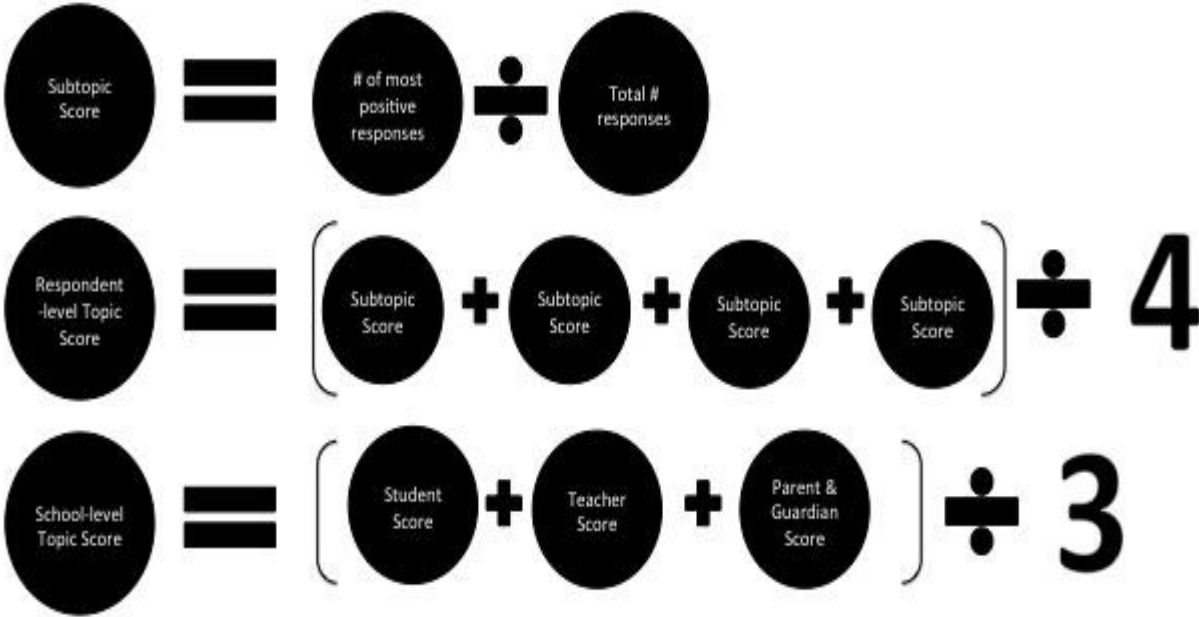
Scoring Procedure

ORE excluded survey items from scoring when they did not have clear polarity (positive or negative) and required more complex interpretations. Items that were selected for scoring were grouped according to construct. 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 score for a given sub-construct 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 sub-construct. For example, to calculate a score for the *Communication Quality* sub-construct 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 construct-level scores for each survey, the relevant sub-construct 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 constructs related to improvement (Climate, Instruction, Leadership, Professional Capacity, and Parent & Guardian-Community Ties).

Figure 1. Survey Scoring Procedure



Contact Information

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Appendix

Table A-1. Survey Constructs and Sub-constructs by Respondent Type

	Construct	Sub-construct	Number of Items
Parent/Guardian	Climate	Bullying	8
		Safety/Building condition	3
		Overall	11
	Instruction	Evaluation of teaching & learning	6
		Evaluation of extracurricular	3
		Overall	9
	Parent/Guardian Community Ties	Communication Quality	10
		Communication Frequency	6
		Parent/Guardian-School Relationship	6
		Parent/Guardian Involvement	4
		Parent/Guardian-School Networks	5
		Overall	31

	Construct	Sub-construct	Number of Items
Student	Climate	Bullying	7
		Safety/Building condition	6
		Belonging	5
		Overall	18
	Instruction	Evaluation of teaching & learning	15

	Construct	Sub-construct	Number of Items
Teacher	Climate	Student Centered Learning Climate	13
		Respect	9
		Challenges: Classroom Level	6
		Challenges: School Level	18
		Challenges: External	5
		Attendance	4
		School Discipline	7
		Overall	61
	Instruction	General Instructional Strategies	15
		Student Engagement	17
		Overall	32
	Parent/Guardian Community Ties	Communication/Outreach	8
	School Leadership	Expectations and Feedback	5
		Inclusive Leadership	5
		Classroom-level decision making	11
		Overall	21
	Professional Capacity	Innovation	5
		Quality of PD: Focus and duration	12
		Quality of PD: Learning	6
		Quality of PD: Consistency	5
		Peer Collaboration	8
Overall		36	

	Construct	Sub-construct	Number of Items
Principal	Climate	Student Centered Learning Climate	5
		Challenges: School Level	15
		Challenges: External	8
		Challenges: Attendance	5
		Interpersonal Relationships	4
		Overall	37
	Instruction	Data Use	9
		External Supports	4
		Overall	13
	Parent/Guardian Community Ties	Overall	4
	School Leadership	Managerial	8
		Instructional	3
		School-level decision making	9
		Overall	20
	Professional Capacity	Peer Collaboration	4

Table A-2: Survey Items Outside of Constructs by Respondent Type

	Topic	Number of Items
Parent/Guardian	Attendance	7
	Community Services	7
	Healthy Food Access	4
	Technology	10
	Reading	4

	Topic	Number of Items
Student	Student Beliefs	11
	College and Career Readiness	8
	Food Services	12
	Technology	9
	School Counselor	9
	Health and Nutrition	8

	Topic	Number of Items
Teacher	Rtii/Mtss Implementation	5
	Challenges to Rtii/Mtss Implementation	6
	Curriculum Engine	7
	Extracurricular Opportunities	15

	Topic	Number of Items
Principal	District Assistance	5
	Student and Family Interactions	3
	Challenges to Rtii/Mtss Implementation	6