



## Measuring Elementary School Students' Social and Emotional Skills:

Providing Educators with Tools to Measure and Monitor Social and Emotional Skills that Lead to Academic Success

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*Child Trends*  
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## Introduction

“When paradigms change, the world itself changes with them.” – Thomas Kuhn

[A Growing Need in Education.](#) Mounting evidence from the field’s research points to social and emotional skills as playing a central role in shaping student achievement, workplace readiness, and adult wellbeing (See, Chien, Harbin et al. 2012; Delale-O'Connor, Farley et al. 2012; Guzman, Caal et al. 2014). In the last 20 years, volumes of research have been published documenting and quantifying the importance of social and emotional learning in creating better outcomes for children. More and more, schools and youth-serving organizations are seeking ways to effectively integrate social and emotional learning into their classrooms and programs. But as of yet, the development of consistent standards, measures, and tools to support schools and organizations in measuring and monitoring these skills remains a need in the field.

[Tauck Family Foundation’s New Mission.](#) In 2012, the Tauck Family Foundation adopted a new mission that seeks to address this need:

to invest in the development of social and emotional skills that lead to better prospects for children from low-income families in Bridgeport, Connecticut.

Specifically, the Foundation seeks to focus on skills that research shows are malleable (can be taught and learned) and will help students manage their emotions and behaviors effectively, persist toward their goals, value learning for its own sake, effectively interact and cooperate with others, and believe that they are capable of achieving academically. By investing in a small group of non-profits that are working with elementary school students in Bridgeport, the Foundation hopes to build its investees’ capacity to do performance management and use data to inform teacher practice for continuous improvement purposes. For more information on the Foundation’s strategy and Theory of Change, please see [www.tauckfamilyfoundation.org](http://www.tauckfamilyfoundation.org).

This report describes the rigorous, collaborative work undertaken by the Tauck Family Foundation and Child Trends, a national leader in measuring children’s development and well-being, and provides the results of that work. Child Trends’ and the Foundation’s primary goal was to create tools that the Foundation’s investees could use to assess and monitor the extent to which the organizations are improving low-income students’ social and emotional skills associated with success in school and life. A secondary goal was to provide these tools and related guidance to other educators across the country who share a desire to strengthen students’ social and emotional skills as a strategy for supporting their success.

[New Paradigm.](#) In adopting a new mission and Theory of Change, the Foundation acknowledged the promise of social and emotional skills for creating better outcomes for children.

Social and emotional skills include a broad set of competencies. While it would be ideal to focus on all of them, it is not necessarily feasible for a single program or school to do so. Aware of the constraints on schools and other academic programs, the Foundation commissioned Child Trends to narrow the field of possibilities to a specific set of skills that schools or academic programs could reasonably focus on to increase student achievement (see **Figure 1**). Child Trends conducted a systematic literature review of different social and emotional skills. This original review identified approximately 15 different skills linked to academic and/or future adult success, such as self-control, responsibility, attentiveness, prosocial behavior, and mastery orientation. Child Trends further narrowed the list of skills to those which the literature suggested were:

- based on strong research that the skills lead to better long-term prospects for students,
- particularly malleable or can be taught and developed,
- empowering for children,
- appropriate for elementary-aged children to learn, and
- mutually reinforcing.

Based on these criteria, **Child Trends recommended that the Foundation focus on self-control, persistence, mastery orientation, and academic self-efficacy.**

To highlight the malleability of each skill, Child Trends also identified a small number of specific strategies for illustrative purposes that could be used to encourage the development of each of the skills. For example, teaching students coping strategies to deal with failure and setbacks is one way that educators can build students’ abilities to persist. Another example is that helping students set goals and engage in self assessment can foster students’ academic self-efficacy.

Notably, while each of the selected skills is distinct and has their own hallmark characteristics, they also relate to and reinforce each other. For example, students who can regulate their emotions and impulses are better able to persist in the face of challenges. Similarly, persistence may reinforce mastery orientation as the student focuses on working to successfully complete challenging tasks to master the work. Finally, in completing these challenging tasks, students gain in academic self-efficacy.

**Figure 1: Selecting the Skills**



After consulting with other experts in the field of social and emotional learning, the Foundation sought Child Trends’ feedback about adding a social component to the set of identified skills.

**Child Trends’ understanding of the research literature corroborated the Foundation’s suggestion to include social competence to the suite of skills.** Education is a social endeavor with successful students having the ability to get along with their peers and teachers. Like the other skills, social competence is malleable. For example, strategically grouping students and setting classroom expectations can support students’ abilities to successfully work with their peers. Additionally, social competence aligns well with self-control since students who are able to regulate their emotions tend to be able to cooperate more with others.

**Through this iterative, collaborative process with Child Trends, the Foundation is adding to the field of social and emotional skill development in academic environments by helping schools and other programs focus their efforts on a limited suite of skills.** In addition to specifying these social and emotional skills, the Foundation is also testing new methods of tracking and improving the quality of how schools and programs develop them.

[New Measures.](#) In addition to identifying and selecting five key social and emotional skills that improve students’ outcomes, the Tauck Family Foundation is committed to helping investees build their data collection and measurement infrastructure to assess these skills. As part of this commitment, the Foundation partnered with Child Trends to develop tools to measure these skills.

Drawing on previously validated tools and in consultation with the Foundation and its investees, including teachers and experts from the field, Child Trends developed a teacher and student survey addressing these five skills. These surveys can be used as formative assessment tools to track the progress of individual students within a single academic/program year. They can also reinforce and verify data from daily/weekly reports of student behaviors that might be collected in a performance management context. Aggregated data from these surveys can also highlight changes in whole classrooms and programs. A unique aspect of these surveys from others in the field is their ability to track short-term outcomes so that teachers/program administrators can make data-driven adjustments in their practices to build these social and emotional skills.

This paper highlights the research on the importance of five skills to academic success, summarizes the iterative process used to develop a measurement tool to assess these skills, and suggests two options for incorporating the measurement of these skills in regular classroom data collection. The intent of this work is to provide teachers and programs with data they can use to gauge and improve student social and emotional competencies in areas that matter for students’ success in school and beyond. **While the measurement tools described were designed specifically for the Foundation’s investees, they may be appropriate to use in other settings with programs targeting similar social and emotional skills as outcomes.** Suggestions and caveats for use are covered in section titled “Final Measurement Tool.”

## Background: Five Key Social and Emotional Skills

As described above, a series of reviews<sup>1</sup> of the existing research studies revealed five competencies and skills that help students excel in school over time: self-control, persistence, mastery orientation, academic self-efficacy, and social competence. While they are strong as a collective (as indicated above), each skill taps into distinct areas of students' abilities and uniquely affects student achievement, as described below.

**Self-control** refers to the ability to manage or regulate emotion and behaviors, inhibit negative responses, and delay gratification in ways considered socially appropriate for a given situation (Bandy and Moore 2010). Having self-control enables children to focus and stay on task. In fact, researchers have argued that self-control is as important for academic success as intelligence (Blair 2002). Research has also found that self-control in childhood is associated with academic and social competence, verbal fluency, healthier and more productive behaviors (e.g., avoiding substance use and teen pregnancy, spending more time doing homework), and the ability to cope successfully with frustration and stress later in adolescence (Mischel, Shoda et al. 1988; Tangney, Baumeister et al. 2004; Duckworth and Seligman 2005; Moffitt, Arseneault et al. 2011).

Some researchers have defined **persistence** in children as the “voluntary continuation of a goal-directed action in spite of obstacles, difficulties, or discouragement” (Peterson and Seligman 2004). The term grit is also used in some instances to describe “perseverance and passion for long-term goals” (Duckworth, Peterson et al. 2007). Whichever term is used, the underlying concept focuses on a child's attitude and determination to continue at a task or to work at a goal over an extended period of time—despite challenges or failures that may occur along the way. Children with high levels of persistence tend to be less anxious and are more likely to attempt solutions to difficult problems when compared with peers who exhibit lower levels of persistence (Lufi and Cohen 1987). Similarly, research shows that college students with higher levels of grit tend to study more, to have higher grade-point averages, and to watch fewer hours of television than do students with lower levels of grit (Duckworth, Peterson et al. 2007).

**Mastery orientation** is an approach to learning in which a child pursues learning because he or she wants to increase his or her overall competence or abilities over time until something is mastered. This concept is frequently contrasted with a performance orientation, the act of pursuing learning in order to obtain positive feedback from others on his or her competence (Wolters 2004; Delale-O'Connor, Farley et al. 2012). Research shows that children with this orientation tend to procrastinate less, to use more effective learning strategies, and to achieve higher science grades than do children with a performance orientation (Meece and Holt 1993; Wolters 2004). In addition, children with mastery orientation tend to believe that intelligence is more malleable, that is, that through their efforts they can improve (Dweck and Leggett 1988). Perhaps reflecting this belief, they earn higher grades and achieve higher test scores (Stipek and Gralinski 1996) than do children who believe that intelligence is fixed and cannot be improved. Additional studies have found that the positive effect of mastery orientation on academic performance can continue for several years (Blackwell, Trzesniewski et al. 2007).

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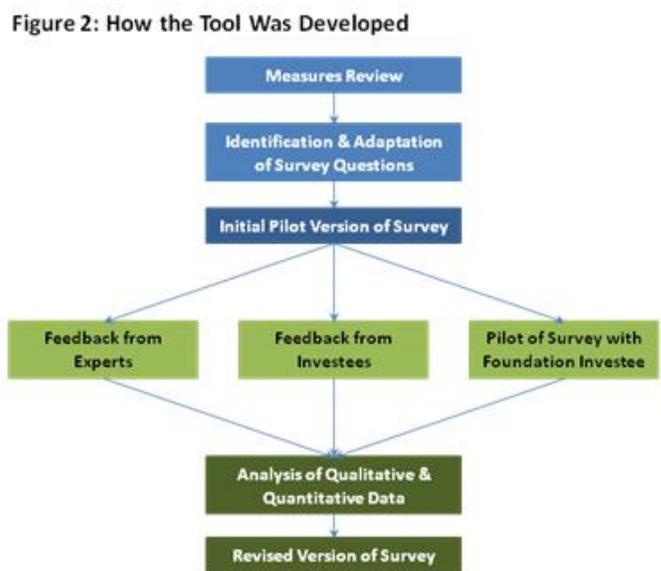
<sup>1</sup> Earlier [working papers](#) and memos Child Trends prepared for the Foundation provide a more detailed literature review (Chien, Harbin et al 2013; Delale-O'Connor, Farley et al. 2012; Guzman, Caal et al. 2014). These are available online or upon request.

**Academic self-efficacy** refers to a person’s belief that he or she can perform a variety of academic tasks effectively, while general self-efficacy refers to the belief in one’s ability to accomplish any task, along with the understanding that the actions one takes will influence a task’s outcome (Zimmerman 1989; Liew, McTigue et al. 2008). This belief influences the effort put into academic work, as well as continued persistence and resilience when faced with challenges (Zimmerman 1989; Liew, McTigue et al. 2008). An individual’s academic self-efficacy is believed to be linked to the individual’s thought patterns, emotional responses, and — ultimately— to his or her academic success (Zimmerman 1989; Liew, McTigue et al. 2008). Prior research has found that children with high levels of academic self-efficacy use more effective learning strategies and frequently achieve higher levels of literacy and math achievement than do children with low academic self-efficacy (Zimmerman 1989; Liew, McTigue et al. 2008).

**Social competence** refers to a broad set of skills necessary to get along with others and behave constructively in groups (Rose-Krasnor 1997; Smith and Hart 2004). For the purposes of this work, we defined social competence as a student’s ability to: 1) take others’ perspectives, 2) work well with peers to accomplish a task, 3) resolve problems in ways that maximize positive consequences and minimize negative consequences for the student and her/his peers, and 4) behave appropriately according to the situation and social norms. Although social competence is linked with the other skills described above, it contributes uniquely to academic success by addressing the inherently social dimensions that are characteristic of learning in a classroom setting (Ladd, Herald et al. 2006). Social competence helps students interact constructively with peers, teachers, and other school officials and shapes their feelings of connection to the school, thus indirectly improving academic competence (Smith and Hart 2004; Ladd, Herald et al. 2006; Valiente, Lemery-Chalfant et al. 2007).

## Measuring Social and Emotional Skills

As noted earlier, the Tauck Family Foundation and Child Trends worked closely to develop tools to measure the identified social and emotional skills. This iterative process (see **Figure 2**) included: 1) a measures review; 2) identification and adaptation of draft questions; 3) feedback from experts; 4) feedback from Foundation investees, including teachers; 5) piloting the tools with one of the Foundation’s investees; and (6) analyzing the qualitative and quantitative data to revise the instrument. To view the evolution of the survey questions from their use in the literature to their use in the surveys developed for the Foundation’s grantees, see the companion document, “Measures Development Resource: Source Table for Original Items Used in the Tauck Family Foundation Formative Assessment Tools.”



## Measures Review

Child Trends reviewed tools that researchers have used to measure each of the five social and emotional skills. Child Trends was particularly interested in measurement approaches that had or could be used with the population served by the Foundation’s investees: children from low-income families in K-5<sup>th</sup> grade. Additionally, Child Trends was interested in approaches that could be applied on an ongoing basis in a classroom/program setting. These skills have been measured in a variety of ways, including observations, peer ratings, laboratory tests, reports from individuals about their own behaviors, and reports from parents and/or teachers. Each of these measurement approaches has both advantages and disadvantages. This section describes how each social and emotional skill has been measured in the past based on the literature.

### Self-Control

Prior attempts to measure self-control in young children have included parent and teacher observations along with the use of a series of tests or activities completed by children (Newman, Noel et al. 1998; Normandeau and Guay 1998). Perhaps the most well-known method for measuring self-control among children is the “marshmallow test,” which was originally conducted in 1972. For the original marshmallow test, children received a single marshmallow and were told that if they could wait 15 minutes without eating the marshmallow, they would receive a second marshmallow, at which time they could eat both. Researchers timed how long each child waited before eating the marshmallow (Mischel, Ebbsen et al. 1972). Periodic observations, usually conducted by a child’s teacher or parent, provide an additional method to measure self-control, and have been used successfully in past research studies to measure changes over time among children (Liew, McTigue et al. 2008). While these types of tests or activities can provide accurate measures of self-control and may predict later outcomes, they have several limitations. First, they are resource intensive and require that an adult be available to oversee the test and time each child’s response. Additionally, they are not designed to be administered repeatedly to assess change over time. They probably would not be feasible for the Foundation’s investees to use to measure self-control in students, since these approaches are resource intensive and would be difficult to administer for a large number of children.

Other researchers have used teacher, parent, and student surveys to measure self-control in elementary school-age children. For example, the *Self Control Rating Scale* has been used to assess children’s self-control through reports from teachers and parents (Kendall and Wilcox 1979), whereas the *Child Self Control Rating Scale* was developed and tested as a way for older elementary school children (3<sup>rd</sup> and 5<sup>th</sup> graders) to report about their own ability or lack of ability with self-control (Rorhbeck, Azar et al. 1991). Surveys can be used to repeatedly assess changes over time and require less resources than formal observations; however, a key challenge is that they are often long, many containing upwards of 30 distinct questions (Kendall and Wilcox 1979; Rorhbeck, Azar et al. 1991; Causey and Dubow 1992; Canivez, Willenborg et al. 2006). For the Foundation’s investees, teacher and student surveys with fewer questions would be more appropriate.

- Child Trends recommended that Foundation investees measure **self-control** through a **teacher survey** and a **student survey**.

## Persistence

Persistence has been measured in previous studies primarily through the administration of a series of activities or tasks, or through the use of surveys (Lufi and Cohen 1987; Duckworth, Peterson et al. 2007; Duckworth and Quinn 2009). The most commonly used approach to measure persistence among elementary school-age children is to have them work on progressively more challenging tests or activities and see whether or not they continue to work through challenges (Lufi and Cohen 1987; Duckworth, Peterson et al. 2007; Duckworth and Quinn 2009). Although this approach can be successful in measuring persistence, these tests are time-consuming and are not designed to be administered to children repeatedly or to assess changes in levels of persistence over time.

Student survey questions for persistence offer a more viable option for programs (such as the Foundation's investees) to measure this skill. However, self-report surveys to measure persistence are frequently long, contain many questions, and are primarily intended for use with teenagers and young adults (Lufi and Cohen 1987). A survey to measure grit among younger populations (*Short Grit Scale*) has been developed and tested on youth between the ages of 10 and 15 (i.e., 4<sup>th</sup>-9<sup>th</sup> graders) and found to be effective (Duckworth and Quinn 2009). Butler-Barnes et al (2013) have measured academic persistence among African American 7<sup>th</sup>-9<sup>th</sup> graders using an adapted version of the *Scale for Academic Engagement*, and Piazza and Siebert (2008) have developed and tested a survey to measure persistence as it relates to writing tasks among 4<sup>th</sup>-6<sup>th</sup> graders.

The literature also suggests that teacher surveys would also be an appropriate means for Foundation investees to measure persistence. Previous studies have accurately measured persistence through the use of teacher rating surveys in which teachers are asked to observe and report on specific behaviors that indicate a child's level of persistence (Meece and Holt 1993). Persistence, as a factor within temperament, has also been assessed through surveys of parents, teachers, and clinicians, such as in the *Temperament Assessment Battery for Children* (Martin 1988). Similar to the student measures, surveys like this one represent a better fit than relying on formal observations, and a more viable approach for Foundation investees.

- Child Trends recommended that Foundation investees measure **persistence** through a **teacher survey** and a **student survey**.

## Mastery Orientation

Measuring mastery orientation presents some unique challenges because it requires understanding a child's motivation towards completing a task, which is an internal state and not readily observable. Thus, teacher surveys may not be the most appropriate approach for assessing mastery orientation. Prior efforts to measure this skill have focused on conducting one-on-one interviews with children, along with some limited observation of tasks performed by the children interviewed (Dweck and Leggett 1988; Elliott and Dweck 1988). The *Dimensions of Mastery Questionnaire* (DMQ) is a commonly used tool to measure mastery orientation. Versions of the DMQ exist for children and youth from six months to 19 years of age (Morgan, Busch-Rossnagel et al. 2009). Although the DMQ (and similar measurement approaches) has been proven to assess mastery orientation accurately, it is resource-intensive to administer, requiring at least one adult working individually with a child for an extended period of time. To

address these concerns, the developers of the DMQ also have created versions that can be administered as traditional surveys with youth of various ages. Researchers at the University of Michigan also have developed a number of surveys aimed at measuring various goal orientations. Questions from this survey have been tested with racially and socio-economically diverse elementary and middle school populations (Midgley, Kaplan et al. 1998) and are included in the *Patterns of Adaptive Learning Scales* (PALS) (Midgley, Maehr et al. 2000).

Research has identified several challenges in using student surveys to measure mastery orientation with elementary school-age students. For example, a study of an orally administered version of the DMQ found discrepancies between child and teacher ratings for children under the age of 10. This might be because children have difficulty rating themselves, or simply because children have different perceptions from adults about the questions used to measure orientation type (Morgan and Bartholomew 1998). However, additional studies using different self-reported surveys have found that mastery orientation can be assessed accurately for 5<sup>th</sup> and 6<sup>th</sup> grade students (Meece and Holt 1993). A short student survey might be the most appropriate approach to measure mastery orientation.

- Child Trends recommended that Foundation investees measure **mastery orientation** through a **student survey**.

### Academic Self-Efficacy

Measuring academic self-efficacy also requires understanding a child's motivation, which teachers may not be able to report on accurately. Prior work to measure academic self-efficacy has focused on child interviews or child-completed surveys. Since the concept of academic self-efficacy relies on a child's beliefs, measurement strategies using observation of the child are inappropriate because they reveal only behavior and not what a child believes he or she can accomplish (Phan 2012). Academic self-efficacy in younger elementary-age children is measured almost exclusively through the use of one-on-one interviews. In these interviews, an adult will ask the child to discuss his or her schoolwork and what academic tasks the child believes he or she can and cannot accomplish. These interviews are often long because they have to cover several distinct topics to gain an accurate picture of a child's overall academic self-efficacy. In addition, these types of interviews are designed to be administered to children at a single time and are not designed or practical to use to measure change in academic self-efficacy over a period of time.

The *Student Report of Academic Self-Efficacy Scale* was developed for older elementary school students. It has been tested on diverse student populations and shown to successfully measure students' self-efficacy (Hoover-Dempsey and Sandler 2005). Additional research further supports using student surveys to measure this concept. One recent study found that a survey completed by 5<sup>th</sup> and 6<sup>th</sup> grade students about how they were doing in school successfully measured child levels of academic self-efficacy. The same study also found that academic self-efficacy can be measured using a survey over multiple points in time, that self-efficacy can change over time, and that self-efficacy can be accurately measured using a survey with this age group (Phan 2012). Thus, a student survey might be an effective approach for Foundation investees to measure this skill.

- Child Trends recommended that Foundation investees measure **academic self-efficacy** through a **student survey**.

### Social Competence

Because peer acceptance is an indicator of social competence, a common method of measuring this skill is to use a peer nomination/rating system to assess students' level of acceptance among their peers (Ladd 1999; Gifford-Smith and Brownell 2003; Smith and Hart 2004). Peer nominations may involve asking children to write down or "nominate" their closest friends, as well as the most-liked and least-liked students in their class (Ladd 1999). In a similar vein, peer ratings may involve showing students pictures of all the students in their class and having them use a Likert scale, (a widely used questionnaire format where respondents record their responses to a question along a continuum, e.g. "strongly agree," "agree," "disagree," and "strongly disagree") to rate how well-liked each student is (Gifford-Smith and Brownell 2003). With each of these methods, students' selections can be compared to map the student social network within a class (Ladd 1999; Gifford-Smith and Brownell 2003). Using a peer nomination/rating system to measure social competence is resource-intensive because instituting such a system requires extra materials (e.g., pictures of the students) and requires considerable analysis once data are collected. Additionally, peer acceptance is dependent upon a wider range of factors, including the learning environment and peer group values (Rose-Krasnor 1997; Gifford-Smith and Brownell 2003).

Researchers have also measured social competence by providing students with scenarios and then asking how the student might respond to the situation (Wheeler and Ladd 1982; Rubin 1983; Walker and Henderson 2012; Dereli-Iman 2013). However, these surveys place a high burden on the students as well as on those analyzing the information. Other surveys have students respond to questions about how much they think they fit a particular statement ("Telling a kid to be nice to your friend is [easy/hard] for you"). While these surveys are less burdensome for students to complete, they also can be subject to social desirability bias (that is, students may answer questions in ways that make them look desirable to others) (Webster-Stratton and Lindsay 1999). For this reason, a student survey may not be the most effective means for Foundation investees to measure social competence.

Some structured surveys for third-party observers (e.g., teachers and parents) are also available. An example is the *Social Competence Scale*, with 25 questions. This survey has been tested with four- to seven-year-old children in various racial/ethnic groups in several locations throughout the United States and has a high level of internal consistency (Conduct Problem Prevention Research Group (CPPRG) 1995). Other validated third-party reports include the *Parent Daily Report*, which has been validated and used to assess potentially rare instances of social malfunctioning, and the *Prosocial Behaviors of Children* (Greenberg, McMahon et al. 1994; Dahlberg, National Center for Injury Prevention and Control Division of Violence Prevention et al. 2005). The evidence for these surveys indicates that despite the internal nature of some aspects of social competence, teachers and parents can report reliably on them.

- Child Trends recommended that Foundation investees measure **social competence** through a **teacher survey**.

### Proposed Measurement Approach

Based on the measures review, Child Trends proposed a two-pronged measurement approach, summarized in **Table 1** (on the following page):

- 1) A **teacher survey** (TS) for kindergarten-fifth grade teachers to rate students across three of the five skills (self-control, persistence, and social competence); and
- 2) A **student survey** (SS) to be administered with third-fifth grade students which would include questions about four of the five skills (self-control, persistence, mastery orientation, and academic self-efficacy).

**Table 1: Proposed Initial Measurement Approach**

Concept Grade Level	Self-Control	Persistence	Mastery Orientation	Academic Self-Efficacy	Social Competence
K	TS	TS			TS
1	TS	TS			TS
2	TS	TS			TS
3	SS & TS	SS & TS	SS	SS	TS
4	SS & TS	SS & TS	SS	SS	TS
5	SS & TS	SS & TS	SS	SS	TS

KEY: TS= Teacher Survey / SS = Student Survey

Drawing on information collected through our literature and measures review, Child Trends recommended that student surveys only be administered with 3<sup>rd</sup>-5<sup>th</sup> grade students. Reliable research tools used with younger students often rely on an observation protocol or a survey that is read aloud by an adult—an approach that would not be feasible for Foundation investees interested in collecting data from large numbers of children on an ongoing basis. Younger students may also not be able to provide accurate answers to survey questions about the motivations behind their behaviors, that is, they may not be developmentally able to report on these concepts.

Child Trends further recommended that information on certain skills only be collected through the student survey or the teacher survey. For instance, we suggested that mastery orientation and academic self-efficacy be measured through student surveys because these concepts relate to internal thoughts and processes, and thus are best reported by students themselves. Under this approach, mastery orientation and academic self-efficacy would not be measured in early grades (K-2<sup>nd</sup> grade). We also suggested that social competence be measured only through teacher surveys because research suggests students may provide socially desirable responses when reporting on this skill.

### Identification and Adaptation of Survey Questions

Following the measures review, Child Trends’ experts specializing in survey and measure development and in child development identified potential survey questions that could be used in a school or program setting and administered to teachers and students repeatedly to

measure changes in self-control, persistence, mastery orientation, academic self-efficacy, and social competence over time.

Four principles guided the selection of the identified survey questions: 1) questions were aligned closely with the definitions of the target skill; 2) questions for students were developmentally appropriate for administration with 3<sup>rd</sup>-5<sup>th</sup> grade students; 3) the type and number of questions recommended did not place an undue burden on teachers or students; and 4) whenever possible, questions were drawn from surveys that were documented to have strong psychometric properties (e.g., data analysis has shown that the items are reliable and valid) and/or had been tested and designed for younger and racially/ethnically or socioeconomically diverse children. After selecting items from existing surveys, Child Trends adapted questions when it was necessary to: 1) increase their age-appropriateness; 2) make the time frame consistent across questions; and/or 3) increase the comparability of the response categories across questions. During this phase, Child Trends worked closely with the Foundation and one of its investees to further refine the items.

Once teacher and student surveys were drafted, we took three approaches to test the surveys: 1) we solicited feedback from experts in the field; 2) we solicited feedback from Foundation investees, including teachers; and 3) the draft surveys were piloted with teachers and students at a school working with one Foundation investee. These three activities occurred in tandem, and are described in the sections below.

### Expert Feedback

Once Child Trends developed a draft teacher and student survey, we interviewed six experts in the fields of social and emotional learning, performance management, and survey design to obtain feedback on the survey questions and the definitions of the skills. See **Figure 3** (on the next page) for more information about the expert interviews.

Experts generally agreed with our proposed definitions for the five skills and that these social and emotional skills are malleable and linked with future student success. Indeed, the main suggestion in response to the skills was that emotional regulation be added to the definition of self-control. Many, however, expressed concern regarding the length of the survey (15 questions per student) and the proposed frequency (monthly) of the teacher survey. Specifically, they were concerned of the burden that the proposed length and frequency would place on students and teachers. They also recommended against using negatively worded questions in both surveys because such questions could be misinterpreted during survey completion and might also lead to errors in aggregating and reporting results.<sup>2</sup>

The experts also made some suggestions about survey administration, including providing teachers with some more specific instructions for completing the survey (e.g., reminding teachers to keep “typical” age-appropriate behaviors in mind while rating students). Additional feedback was received regarding wording of questions, with most of these recommendations geared towards increasing the readability of the student survey. Experts also corroborated

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<sup>2</sup> Examples of a negatively worded question from the draft student survey included “I have trouble sticking with a task” and “If I have trouble understanding something right away, I stop trying.” Most items from the surveys were worded positively (e.g., “I can figure out difficult homework”).

Child Trends’ emphasis on the importance of securing teacher “buy in” for the surveys—i.e., teachers believing that the data collected are important and useful. The expert in performance management further cautioned that the surveys should not be used as performance management tools, since they were too lengthy and not appropriately worded to be completed on a frequent basis (e.g., weekly).

**Figure 3. Information about the Expert and Teacher Interviews.**

**Gathering Feedback on the Surveys**

**Whom Child Trends Interviewed.** Child Trends conducted individual, hour-long phone interviews with six experts and five elementary school teachers (who worked in a school partnering with a Foundation investee). We interviewed the following experts whose knowledge covered a range of topics across each social and emotional skill, and some had survey development/program management expertise:

- Dr. Paul Goren, Senior Vice President for Program, CASEL: Collaborative for Academic, Social, and Emotional Learning
- Dr. David Hunter, Founder and Consultant, Hunter Consulting, LLC
- Dr. Stephanie Jones, Marie and Max Kargman Associate Professor in Human Development and Urban Education, Harvard Graduate School of Education
- Dr. Stuart Luppescu, Chief Psychometrician, University of Chicago Consortium on Chicago School Research
- Dr. David Osher, Vice President, AIR Institute Fellow, Senior Advisor to the Health and Social Development Program, American Institutes for Research
- Dr. Roger Weissberg, Vice Chair of the Board of Directors and Chief Knowledge Officer, CASEL: Collaborative for Academic, Social, and Emotional Learning

Prior to the interviews, all teachers completed a draft of the teacher survey for their entire class. In addition, those who taught 3<sup>rd</sup>-5<sup>th</sup> grade students administered a draft of the student survey to their class.

**What Child Trends Asked.** The semi-structured interviews were guided by protocols developed by both Child Trends and the Foundation. The expert interview protocol focused on the definition of the skills, the malleability of the skills, how well the survey questions matched the definitions, and their appropriateness for the Foundation’s target population and purposes. The teacher interview protocol focused on the amount of burden the survey placed on students and teachers, the appropriateness of the survey questions, and ways to ease the administration of the surveys.

**How Child Trends Analyzed the Data.** Child Trends took notes during the interviews; compiled the information into a single document; identified themes that ran through responses within and across groups (experts and teachers); and, as much as possible, made alterations to the survey based on a consensus among the interviewees.

### Investee/Teacher Feedback

As noted in **Figure 3**, Child Trends also interviewed five teachers at one school partnering with a Foundation investee. Child Trends also received verbal and/or written feedback from all four Foundation investees on the draft surveys (which included a debrief session held with teachers in one investee’s summer program). Overall, the majority of teachers and investees echoed experts’ view that the length (15 questions per student) and proposed frequency (monthly) of the teacher survey would be burdensome for teachers, and that negatively worded questions would be too taxing and confusing for teachers and students. Teachers and investees also provided feedback on individual questions, noting questions on both the teacher and student surveys that might be hard for students or teachers to understand or to answer. Teachers and investees also made practical suggestions for how to make the surveys more accessible to teachers and students, such as providing more precise directions for teachers, in particular

regarding keeping expectations developmentally appropriate, and making the font larger on the student survey for readability.

### Pilot Data

Staff at Yale University served as technical assistance providers during the survey refinement process and coordinated with the Wilbur Cross School in Bridgeport to pilot the surveys. For the student surveys, Yale staff co-administered the surveys with teachers—reading each of the survey questions aloud to students and answering any questions students had while taking the survey. They also held a brief meeting with teachers regarding the teacher survey to describe the logistics of filling it out. Teachers were able to fill out the surveys in their own time and returned them back to the Yale staff over the course of the week. These data were then entered into a data management system and sent to Child Trends for data analysis.

Child Trends performed factor analyses on data from a Foundation investee that piloted the draft surveys with teachers and students. These analyses tested whether the questions for each of the five key social and emotional skills clustered together; that is, whether questions aimed at measuring a particular skill (e.g., all questions written to measure persistence) worked together and demonstrated a pattern across responses in a scale. Data from 220 teachers and 110 students were included in the analyses. **Appendix A** summarizes the results and provides more technical detail about the analysis. As we discuss below, items that did not seem to contribute to a scale's Chronbach's alpha (estimate of the extent to which the questions measure the concept at hand) were deleted from the final versions.

### Finalizing the Survey

Child Trends incorporated the information received from the experts, investees, and the psychometric analyses to finalize the teacher and student surveys. Key changes in this final stage included:

- Rewriting all negatively worded questions so that all questions were worded positively and thus higher scores indicated more of the target characteristics. For example, the teacher survey previously asked teachers to rate how often a student “*Stopped working on an activity that was difficult.*” This question was revised to ask teachers to rate how often a student “*kept working on an activity that was difficult.*”
- Removing all Performance Orientation questions from the student survey. First, experts and some teachers were concerned that such questions would promote competitive values in students. Second, experts noted that having a Performance Orientation was neither exclusive nor necessarily opposite of having a Mastery Orientation. This expert finding was supported by the psychometric analyses too.
- Adding more explicit directions to the teacher survey about what they should consider as they rate students. The revised teacher instructions prompt teachers to rate students according to developmentally appropriate behaviors for the student's grade level. These directions were written in response to teacher concerns about how to accurately rate students and what to do about students who are developmentally delayed. Experts also thought that clarifying the reference group for teachers may increase the reliability of scores.

- Rewriting questions that used words teachers and experts thought would be challenging for students. For example, the student survey previously asked students how much the phrase “I am determined to complete tasks” described them. Interviewees suggested that “determined” and “tasks” would be challenging words for some students in the target grades (i.e., 3<sup>rd</sup>-5<sup>th</sup> graders completing the student survey).
- Reducing the number of items to make scales less burdensome while maintaining the scale’s psychometric properties based on analyses of the pilot data. Teachers and experts commented that the scales would be more user-friendly if they were shorter. Several questions were deleted (as opposed to reworded) across the two surveys because they were negatively worded and/or weakened the scale’s psychometric properties. For example, the original teacher question about student self control, “Switched from activity to activity rather than sticking to one thing at a time,” was deleted because it was negatively worded and it weakened the overall scale.
- Adding questions about student self control that asked about emotional regulation. Experts suggested that the initial survey did not capture this component of self control. To address these concerns, Child Trends went back to some of the surveys used to create the original self-control scales to see if some items could be added that would reflect emotional regulation. “I can easily calm down when excited” and “I can wait for my turn to talk in class” are new adaptations from the *Child Self Control Rating Scale* (Rorhbeck, Azar et al. 1991). Other scales were checked as well. “I calm down quickly when I get upset,” adapted from the Emotion Regulation Index for Children and Adolescents, was added to the scale (MacDermott, Gullone et al. 2010).
- Reducing the suggested frequency of administration of the teacher survey. Teachers and experts raised the concern that teacher surveys were too long for investees to fill out frequently. As a result, the recommended frequency of administration was changed from once a month to once a quarter.

We incorporated teacher and expert feedback, which we modified based on findings about items’ psychometric properties. For example, the self-control question, “sitting still” was kept in both teacher and student surveys despite teacher and expert concerns of its vagueness because the psychometric analyses indicated that it was a “lynchpin” question that held all the other questions in the self-control scale together. Removing this particular question would have greatly weakened the self control scale. Similarly, the academic self-efficacy questions were kept without changes because they performed the best when kept together.

## Final Measurement Tool

The final measurement tool includes two distinct parts:

- 1) A **Teacher Survey (Appendix B)** for teachers/instructors to use to rate each child (all K-5<sup>th</sup> grade students) once an academic quarter across three of the five skills (persistence, self-control, and social competence). This collection schedule will provide some data relatively early within a school year to determine whether students’ skills are changing.

This knowledge can then guide teachers and programs to make adjustments accordingly, while still having enough time to determine whether those adjustments were sufficiently helpful before the end of the year. In short, four data points allow for a more data-driven approach to program management. The benefit of having four data points should, however, be weighed against the burden it might place on school or program staff and resources, which could translate to poorer data quality.

- 2) A **Student Survey (Appendix C)** to be administered to 3<sup>rd</sup>-5<sup>th</sup> grade students three times during the school year. Three reporting periods are used rather than four as in the teacher survey, to avoid placing too much burden on the students and to minimize the likelihood that students become familiar enough with the survey questions and begin to answer the questions by rote with the later responses being based on their previous answers. The student survey will include questions for four of the five social skills (academic self-efficacy, mastery orientation, persistence, and self-control).

An **Operationalization Document** with background information and recommendations for program leaders on how to implement the surveys is included in **Appendix D. A Scoring Guide**, with guidance for program leaders on how to aggregate survey data is included in **Appendix E**. The remainder of this section provides additional information about the different tool components. Since one Foundation investee provides a summer program, we include recommendations for how the tools can be used in a program that does not follow the academic calendar year. While these recommended approaches were specifically designed with Foundation investees in mind, they may also be appropriate for other programs targeting the five social and emotional skills.

### Teacher Survey

The teacher survey is intended to be used to measure self-control, persistence, and social competence for all elementary-age students (K-5<sup>th</sup> grade). For programs taking place during the regular school year, we recommend that each K-5<sup>th</sup> grade teacher complete this survey once every academic quarter for each of his or her students. The administrator directions, teacher survey (**Appendix B**), and the operationalization document (**Appendix D**) provide more detailed guidance on administering the survey, including suggested timelines for administering the survey in different program settings, who should complete the survey, and the time frame for reporting the information.

To facilitate the interpretation and usability of data from the surveys, Child Trends developed a scoring guide (**Appendix E**) on how to aggregate data from the teacher survey and how to interpret its results.

### Student Survey

The student survey is intended to be used to measure self control, persistence, mastery orientation, and academic self-efficacy only among 3<sup>rd</sup>-5<sup>th</sup> grade students (ages 8-11) since self-reported measurement of academic self-efficacy, mastery orientation, persistence, and self-control requires a child to consider motivations behind behaviors. It also should be expected that 10- and 11-year-olds (4<sup>th</sup> and 5<sup>th</sup> graders) will provide more accurate answers than will eight- and nine-year-olds (3<sup>rd</sup> and 4<sup>th</sup> graders). The student survey (**Appendix C**) and the

operationalization document (**Appendix D**) provide additional guidance for administering the survey, including: when to administer the survey; how to handle student absences; what kind of background information to provide students prior to distributing the survey; and what kind of support to provide students as they complete the survey.

For programs occurring during the regular school year, Child Trends recommends that the student survey be administered at three points during the academic year/programming period. The first administration should occur in August/September or at the start of the program or academic year, and will be used as the baseline for each child. The second administration should take place in December, at the end of first semester, or at the approximate mid-point of the program, and would measure any changes in these life skills that may have occurred during the first part of the program. The final administration should take place in April/May or at the end of the academic or program year, and would measure any changes in these life skills that each child experienced while participating in each investee’s program or school year. Child Trends further recommends collecting a baseline version of the survey for every child, regardless of when that child begins the program or starts school. For example, students transferring into a school in February should take the baseline survey shortly after their enrollment, even if they have missed the initial baseline administration and the mid-point administration. Please see the scoring guide (**Appendix E**) for information on how to aggregate data from the student survey and how to interpret the resulting data.

### Data Entry and Analysis

With these surveys, data for five skills (self-control, persistence, mastery orientation, academic self-efficacy, and social competence) can be collected for 3<sup>rd</sup>-5<sup>th</sup> grade students and data for three skills (self-control, persistence, and social competence) can be collected for students in K-2<sup>nd</sup> grade. Schools and programs may use their own data systems to collect and analyze these data. However, chosen systems should have the capability to track individual student-level data, and to generate the reports needed to facilitate internal use of data and to meet an organization’s reporting needs. See **Appendix E** for more detailed instructions for scoring, aggregating, and interpreting data from the teacher and student surveys.

At minimum, schools and programs using the surveys may report the number and percentage of children demonstrating improvement, decline, or no change in self-control, academic self-efficacy, and mastery orientation from the beginning to end of the program. Additional analyses that occur in the middle of the program or school year could provide schools and programs supplementary information to the program’s performance management system to confirm patterns of change and adjustments that may be needed to improve practices in real time.

### Conclusion

By investing in programs targeting key social and emotional skills, the Tauck Family Foundation has charted a bold new course in efforts to close the achievement gap for low-income students in Bridgeport, Connecticut. **The measurement tools described in this paper can play a key role in this work, by providing schools and programs with data that teachers and program leaders**

**can use to gauge and improve student competency in areas that matter for students' success, in school and beyond.**

The Tauck Family Foundation will continue to use these tools with their investees in Bridgeport. It also hopes that school systems and programs across the country will also use the tools in their quest to improve children's social and emotional skills. The questions were drawn from surveys that have been tested with different types of populations in different regions of the country, and instructions have been provided to accommodate a range of school and program types. Consequently, Child Trends and the Foundation are putting these tools in the public domain to allow other groups who are interested in social and emotional skills to use these tools to track their own work. Those who are interested in using these surveys and have questions can contact Child Trends.

The Foundation and its investees are entering a critical phase in this work as they begin to roll out the teacher and student surveys in the coming school year. Implementing a new measurement tools is always a learning process, and Child Trends anticipates investees will have additional questions as the surveys are implemented and data collection and analysis begins. This next phase will be supported by Dr. Michael Strambler and his team at Yale University, and Dr. Stephanie Jones and her team at the Harvard Graduate School of Education. We look forward to seeing these surveys evolve in the quest to help programs more accurately measure and track students' competency in areas that matter for student success in school and beyond.

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# Appendices

## Appendix A: Psychometric Analyses of Pilot Survey

### Overview

These results come from a series of factor analyses and reliability tests of draft teacher and student surveys piloted at an elementary school in Bridgeport, Connecticut. The draft teacher survey consisted of 15 questions measuring students' self-control, persistence, and social competence. The draft student survey consisted of 17 questions measuring student self-control, persistence, mastery orientation, and academic self-efficacy. For the pilot, K-5<sup>th</sup> grade teachers at the school completed teacher surveys for a total of 220 students. A total of 110 students in the 3<sup>rd</sup>-5<sup>th</sup> grades completed the student survey for themselves.

### Methods

Principal Axis Factor analyses with Varimax (orthogonal) rotations were conducted for both the draft teacher and student surveys. Because of the overlapping nature of the constructs (which was verified by the Principal Axis Factor results shown below), Child Trends also conducted reliability tests on each of the specific skill scales (i.e., testing the reliability exclusively of the teacher self-control questions, exclusively the student self-control questions, exclusively the teacher persistence questions, etc.).

### Results

#### Teacher Factor Analysis Results

With a Varimax rotation, the Principal Axis Factor analysis yielded two factors. One factor consisted primarily of the social competence questions and the second factor consisted of the persistence questions. The self-control questions were spread between the two factors, but most of them loaded weakly (at less than .65 level) on each factor.

#### Student Factor Analysis Results

The Principal Axis Factor analysis with Varimax rotation yielded four factors. One factor consisted of the three questions that positively measured mastery orientation. The second factor consisted of questions related to persistence. The third factor consisted of the questions that measured performance orientation, which was originally conceptualized as the opposite of mastery orientation. No student questions loaded adequately on the fourth factor.

#### Reliability Results

Because the factor analysis indicated considerable overlap of the constructs within each survey, reliability analyses were also conducted on subscales within each survey. The analyses showed that the subscales could be improved by deleting some questions, particularly those questions that were reverse coded. After deletion of those questions, the resulting Chronbach's Alphas for each subscale improved; these alphas are illustrated in **Table 1** below.

In general, the draft teacher survey questions performed better than the draft student survey questions. Some of this discrepancy may be attributable to the measurement challenges outlined in the "Measures Review" section of the paper, such as young students' level of self-

awareness. Both the teacher and student self-control subscales were the weakest performing of the group.

## **Implications**

Despite the limited sample size, Child Trends was able to use results of the psychometric analyses to improve the surveys and strengthen their ability to measure each social and emotional skill. In general, subscales which have an alpha between 0.7 and 0.9 are considered to be of good quality. (Kline 2000) Subscales with an alpha of at least 0.65 were considered to be acceptable for this project.

The psychometric analyses also confirmed some of experts' and teachers' concerns that reverse coded questions might be hard for students to understand and answer. The analyses also supported feedback from some experts that performance orientation and mastery orientation were not mutually exclusive skills, and thus negative-coding of performance orientation questions should not be used to measure mastery orientation. As a result, performance orientation questions were deleted for the final surveys.

The psychometric analyses further underscored the correlation of these skills. The Principal Axis Factor analyses indicated that as a whole, there was considerable overlap between the concepts in each survey. While this overlap meant that the subscales of each skill in each survey were not as distinct, the reliability test results showed that the subscales are reliable measures of each of the skills.

## **Next Steps**

Roll out of the surveys with more of the Foundation's investees will offer new opportunities to test the reliability of the teacher and student surveys. This testing, to be led by Dr. Michael Strambler at Yale University and Dr. Stephanie Jones and her team at the Harvard Graduate School of Education, in partnership with Tauck Family Foundation investees, is needed particularly for questions that were revised in the final student survey to increase their readability, and for questions added to the student survey to measure the emotional regulation aspect of self-control.

Kline, P. (2000). Handbook of psychological testing. London, Routledge.

**Table 1. Cronbach's Alpha for Revised Teacher and Student Survey Questions**

SELF-CONTROL	
QUESTIONS	CHRONBACH'S ALPHA ( $\alpha$ )
Teacher Survey <ul style="list-style-type: none"> <li>• Waited in line patiently.</li> <li>• Sat still when s/he was supposed to</li> <li>• Waited for what s/he wanted.</li> </ul>	$\alpha = 0.82$
Student Survey ( <i>not including new emotional regulation questions</i> ) <ul style="list-style-type: none"> <li>• I can wait in line patiently.</li> <li>• I sit still when I'm supposed to.</li> </ul>	Too few questions to discern an accurate alpha
PERSISTENCE	
Teacher Survey <ul style="list-style-type: none"> <li>• Worked on tasks until they were finished.</li> <li>• Kept working on an activity that was difficult.</li> <li>• Focused on tasks until they were finished.</li> </ul>	$\alpha = 0.92$
Student Survey <ul style="list-style-type: none"> <li>• If I solve a problem wrong the first time, I just keep trying until I get it right.</li> <li>• When I do badly on a test, I work harder the next time.</li> <li>• I always work hard to complete my school work.</li> </ul>	$\alpha = 0.73$
ACADEMIC SELF-EFFICACY	
Student Survey <ul style="list-style-type: none"> <li>• I can do even the hardest homework if I try.</li> <li>• I can learn the things taught in school.</li> <li>• I can figure out difficult homework.</li> </ul>	$\alpha = 0.65$
MASTERY ORIENTATION	
Student Survey <ul style="list-style-type: none"> <li>• I do my school work because I like to learn new things.</li> <li>• I do my school work because I'm interested in it.</li> <li>• I do my school work because I enjoy it.</li> </ul>	$\alpha = 0.83$
SOCIAL COMPETENCE	
Teacher Survey <ul style="list-style-type: none"> <li>• Worked well with peers.</li> <li>• Resolved problems with peers without becoming aggressive.</li> <li>• Was thoughtful of the feelings of his/her peers</li> <li>• Cooperated with peers without prompting.</li> <li>• Understood the feelings of his/her own peers.</li> <li>• Resolved problems with peers on his/her own.</li> </ul>	$\alpha = 0.97$

## Appendix B: Teacher Survey

### Overview for Teachers

This survey is part of a measurement tool designed to help teachers and programs collect information on key social and emotional skills for children in grades K-5. The tool consists of two parts: a teacher survey (to be completed by K-5<sup>th</sup> grade teachers about their students) and a student survey (to be completed by 3<sup>rd</sup>-5<sup>th</sup> grade students about themselves). Together, the surveys are intended to provide teachers and programs with information about how students are progressing in these five social and emotional skills.

These survey questions were adapted from surveys that have been used and validated to measure students' social and emotional learning. Questions have been tested with other teachers in the Bridgeport, Connecticut area. Teachers, program administrators, and experts from the field also provided input on the questions. Information gathered in this survey aims to help teachers and programs assess and improve programs to foster students' social and emotional skills. Please note that this survey is NOT intended to evaluate your or your students' performance.

Below are instructions for how to complete the survey.

**What is this survey measuring?** This teacher survey is designed to measure three skills that research suggests contribute to student success in school and beyond: (1) self-control, (2) persistence, and (3) social competence.

**Self-control** is defined as a student having the ability to: a) control emotions and behavior, b) inhibit negative behavior, c) sustain attention or concentrate on a given task, and d) wait for his or her turn or for what he or she wants.

**Persistence** is defined as a student choosing to continue toward a goal in spite of obstacles, difficulties, or discouragement. For persistence to be present, a student's actions must be voluntary and indicate an underlying determination to continue at a task or goal despite challenges of failure that may occur along the way.

**Social competence** is defined as a student having the ability to: a) understand and take peers' perspectives (e.g., by picturing what peers are feeling or thinking), b) work well with peers to accomplish a task, c) resolve problems in ways that maximize positive consequences and minimize negative consequences for oneself and one's peers, and d) behave appropriately according to the situation or social norms.

**Who should complete the survey?** We recommend that a lead teacher complete the survey in self-contained classrooms, and a student’s homeroom teacher complete the survey for departmentalized grade levels. For other instructional settings, the person who interacts most with the student on a daily basis should complete the survey.

**For whom should data be collected?** Please complete the survey for EACH student in the class.

**What time frame should teachers think of when completing the survey?**

[EACH PROGRAM SHOULD INSERT LANGUAGE FROM THE OPERATIONALIZATION DOCUMENT APPROPRIATE TO THEIR RESPECTIVE PROGRAM SETTING]

**How should students be scored?** Rate the students according to what is developmentally appropriate for students of that age group. For example, if you teach kindergarten, think about what is developmentally appropriate and expected for a typically developing kindergartener and use this as a guide to rate your students. Also, rate students according to when they are expected to carry out behaviors targeted in the survey questions. For example, rate a student’s ability to sit still during quiet or instructional time, as opposed to during activities where more movement is to be expected.

The scoring should apply to all students, regardless of developmental delays that may affect their abilities. It is expected and perfectly reasonable that students with developmental delays may score lower than others in their class. The hope is that all students will progress over time and that this survey will capture this progress of each child.

It is also appropriate for you to rate a student during a challenging period of time for that student, even if it results in an uncharacteristically low score. The important thing is for students to show a positive change over time, not for students to score highly every time.

## Teacher Survey

Please answer the following questions for each of your students.

**Please think about the student’s behavior in the last QUARTER or SINCE the last reporting period. If this is the first report of the year/program, think about the student’s behavior since she or he has been in your class.**

**On a scale from 1 to 4, how well do each of the statements describe the student’s behavior? Would you say 1-NONE OF THE TIME, 2-A LITTLE OF THE TIME, 3-MOST OF THE TIME, or 4-ALL OF THE TIME?**

		NONE OF THE TIME	A LITTLE OF THE TIME	MOST OF THE TIME	ALL OF THE TIME
1	Worked on tasks until they were finished.	1	2	3	4
2	Kept working on an activity that was difficult.	1	2	3	4
3	Waited in line patiently.	1	2	3	4
4	Sat still when s/he was supposed to.	1	2	3	4
5	Waited for what s/he wanted.	1	2	3	4
6	Focused on tasks until they were finished.	1	2	3	4
7	Worked well with peers.	1	2	3	4
8	Resolved problems with peers without becoming aggressive.	1	2	3	4
9	Was thoughtful of the feelings of her/his peers.	1	2	3	4
10	Cooperated with peers without prompting.	1	2	3	4
11	Understood the feelings of her/his own peers.	1	2	3	4
12	Resolved problems with peers on her/his own.	1	2	3	4

## Appendix C: Student Survey

### Overview for Teachers

This survey is part of a measurement tool designed to help teachers and programs collect information on key social and emotional skills for children in grades K-5. The tool consists of two parts: a teacher survey (to be completed by K-5<sup>th</sup> grade teachers about their students) and a student survey (to be completed by 3<sup>rd</sup>-5<sup>th</sup> grade students about themselves). Together, the surveys are intended to provide teachers and programs with information about how students are progressing in these five social and emotional skills.

These questions were adapted from surveys that have been used and validated to measure students' social and emotional learning. Questions have been tested with other students and teachers in the Bridgeport, Connecticut area. Teachers, program administrators, and experts from the field also provided input on the questions. Information gathered in this survey aims to help teachers and programs assess and improve programs to foster students' social and emotional skills. Please note that this survey is NOT intended to evaluate your or your students' performance.

Below are instructions for how to administer this survey to your students.

### What is this survey measuring?

This survey is designed to measure four skills that research suggests contribute to student success in school and beyond: (1) self-control, (2) persistence, (3) mastery orientation, and (4) academic self-efficacy.

**Self-control** is defined as a student having the ability to: a) control emotions and behavior, b) inhibit negative behavior, c) sustain attention or concentrate on a given task, and d) wait for his or her turn or for what he or she wants.

**Persistence** is defined as a student choosing to continue toward a goal in spite of obstacles, difficulties, or discouragement. For persistence to be present, a student's actions must be voluntary and indicate an underlying determination to continue at a task or goal despite challenges of failure that may occur along the way.

**Mastery orientation** is defined as a student's desire to complete work in order to learn and improve their skills and ability rather than for external validation (e.g., wanting to look good in front of peers and teachers; get good grades).

**Academic self-efficacy** is defined as a student's belief that s/he can effectively perform a variety of academic tasks.

**Who should complete the survey?** We recommend that all 3<sup>rd</sup>-5<sup>th</sup> grade students complete the survey. If a student is absent when the survey is administered, we suggest that teachers try to have the student fill it out the next day the student attends (perhaps during independent reading time/quiet time).

**How should I introduce the survey to my students?** Before handing out the surveys, please discuss with students why this survey is being given to them. Explain that the survey asks how they feel about school and schoolwork, and that their answers will be used to help them learn. Their honest answers will show what really happens at school, which is needed to figure out what, if anything can be improved. Emphasize that the survey is NOT a test. There are no right or wrong answers; the students should simply mark the answers that they feel are right for them. If there is a question that makes a student uncomfortable, assure the student that he or she does not have to answer the question, and should feel free to skip it.

Once this background information is provided to the students, please distribute the surveys. The students should read each question and mark the appropriate answer. You may also read the survey aloud to students

**What if my students have questions during the survey?** Please feel free to clarify or define concepts or words for students. However, do not provide students with an answer. If students do not feel that there is an appropriate answer category to match how they feel, ask them to leave the question blank (do not mark an answer).

**What should I do when students are finished?** Have students raise their hands to signal that they have completed the survey, and collect the surveys from each student. Please confirm that each student has written his or her first name, last name, and date of birth on the surveys. After you have collected all of the surveys, follow the guidance provided to you on who you should give the surveys to for data entry.

## Student Survey

*Thank you for taking the time to answer these questions. This is NOT A TEST. There are no right or wrong answers. Please be honest when answering the questions. Your honest answers will help your school or program do a better job to help you learn!*

***Please write your name and birthday in the space below.***

**First Name:** \_\_\_\_\_ **Last Name:** \_\_\_\_\_

**Date of Birth: Month:** \_\_\_\_\_ **Day:** \_\_\_\_\_ **Year:** \_\_\_\_\_

**These questions are about different ways students may behave in school. Please mark the box that best describes you.**

		Not at all like me	A little like me	Somewhat like me	A lot like me
1	I can wait in line patiently.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	I sit still when I'm supposed to.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	I can wait for my turn to talk in class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	I can easily calm down when excited.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	I calm down quickly when I get upset.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**These next questions are about how well you feel you can do your schoolwork. Mark the box that best describes you.**

		Not at all like me	A little like me	Somewhat like me	A lot like me
6	I can do even the hardest homework if I try.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	I can learn the things taught in school.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	I can figure out difficult homework.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

***Please turn to the next page so you can finish the next questions.***

**These next questions are about how you get your schoolwork done. Mark the box that best describes you.**

		Not at all like me	A little like me	Somewhat like me	A lot like me
9	If I solve a problem wrong the first time, I just keep trying until I get it right.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	When I do badly on a test, I work harder the next time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	I always work hard to complete my school work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**The last set of questions will ask you how you feel about school. Please mark the box that best describes you.**

		Not at all like me	A little like me	Somewhat like me	A lot like me
12	I do my schoolwork because I like to learn new things.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	I do my schoolwork because I'm interested in it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	I do my schoolwork because I enjoy it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

***Thank you! You're done! Please follow your teacher's instructions for what to do next.***

## Appendix D: Operationalization Document

This document provides program leaders and administrators with guidance on how to administer a tool designed to measure key social and emotional skills among elementary –age students (K-5<sup>th</sup> grade). We encourage you to review all the information, and to share the information appropriate for your particular setting with your teachers. While the tool was designed for Tauck Family Foundation investees, it may be appropriate to use in other similar program settings.

### Background

This tool is designed to help programs collect information about student competencies in five key social and emotional skills: self-control, persistence, mastery orientation, academic self-efficacy, and social competence. Research shows that these skills are tied to student success in school and beyond.

The tool consists of two parts: a teacher survey (to be completed by K-5<sup>th</sup> grade teachers about their students) and a student survey (to be completed by 3<sup>rd</sup>-5<sup>th</sup> grade students about themselves). Together, the surveys are intended to provide teachers and programs with information about how students are progressing in these five social and emotional skills.

**Self-control** is defined as a student having the ability to: a) control emotions and behavior, b) inhibit negative behavior, c) sustain attention or concentrate on a given task, and d) wait for his or her turn or for what he or she wants.

**Persistence** is defined as a student choosing to continue toward a goal in spite of obstacles, difficulties, or discouragement. For persistence to be present, a student's actions must be voluntary and indicate an underlying determination to continue at a task or goal despite challenges of failure that may occur along the way.

**Mastery orientation** is defined as a student's desire to complete work in order to learn and improve their skills and ability rather than for external validation (e.g., wanting to look good in front of peers and teachers; get good grades).

**Academic self-efficacy** is defined as a student's belief that s/he can effectively perform a variety of academic tasks.

**Social competence** is defined as a student having the ability to: a) understand and take peers' perspectives (e.g., by picturing what peers are feeling or thinking), b) work well with peers to accomplish a task, c) resolve problems in ways that maximize positive consequences and minimizes negative consequences for oneself and one's peers, and d) behave appropriately according to the situation or social norms.

The questions on the teacher and student surveys were adapted from surveys that have been used and validated to measure students' social and emotional skills. Questions have been tested with students and teachers in the Bridgeport, Connecticut, area. Teachers, program administrators and experts from the field also provided input on the questions. By gathering information on students' social and emotional skills, these surveys aim to help teachers and programs assess and improve programs to foster these skills. Please note that these surveys are not intended to evaluate teacher or student performance.

## Teacher Survey

The teacher survey collects information about students in three of the skill areas outlined above: (1) self-control, (2) persistence, and (3) social competence. The teacher survey does not collect information about mastery orientation or academic self-efficacy. These two skills relate to students' internal thoughts and process; as such, students may be the best reporters for these skills.

**Who should complete the survey?** We recommend that that a lead teacher complete the survey in self-contained classrooms, and a student's homeroom teacher complete the survey for departmentalized grade levels. For other instructional settings, the person who interacts most with the student on a daily basis should complete the survey.

**For whom should data be collected?** Teachers should complete the survey for EACH student in their class.

### When should information be collected?

- For academic calendar school settings: We recommend that information be collected once an academic quarter. We suggest that surveys be distributed to teachers within the first two weeks of the school year or start of the quarter, and that teachers complete the surveys for all students in their class within one week of receipt. The schedule for collecting information may be altered to meet the needs of, and not place too much burden on, the school/program, so long as information is collected at least three times through the length of the program.
- For summer school program settings: We recommend that information be collected three times during the program. We suggest that surveys be distributed to teachers within the first week of the program and that teachers complete the surveys for all students in their class within one week of receipt.
- For other nonacademic calendar-based program settings: The schedule for collecting information may be altered to meet the needs of the program, so long as information is collected at least three times through the length of the program. If the program is short (10 weeks or less), we suggest that teachers have a three day window to complete the surveys. Programs that are a year or longer may wish to consider collecting information quarterly, as described for academic calendar school settings.

**What time frame should teachers think of when completing the survey? [Please insert the information relevant to your program setting into the teacher survey instruction]**

- For academic calendar school settings: For the first quarter, we recommend teachers consider the student’s behavior/performance since the beginning of the quarter in order to establish a baseline. For subsequent quarters, teachers should complete the survey based on a student’s behavior/performance since the last survey.
- For summer school program settings: For the first collection of information, we recommend teachers consider the student’s behavior/performance since the beginning of the program in order to establish a baseline. For subsequent information collection points, teachers should complete the survey based on a student’s behavior/performance since the last survey.
- For other nonacademic calendar-based program settings: The time frame for collecting information for other nonacademic calendar-based programs may be similar to the summer school time frames. Following the first data collection point, teachers should always complete the survey for the student’s behavior/performance since the last survey.

**How should students be scored?** Teachers should rate students according to what is developmentally appropriate for students of that age group. For example, kindergarten teachers should think about what is developmentally appropriate and expected for a typically developing kindergartener and use this as a guide to rate students. Also, teachers should rate students according to when they are expected to carry out behaviors targeted in the survey questions. For example, teachers should rate a student’s ability to sit still during quiet or instructional time, as opposed to during activities where more movement is to be expected.

The scoring should apply to all students, regardless of developmental delays that may affect their abilities. It is expected and perfectly reasonable that students with developmental delays may score lower than others in their class. The hope is that all students will progress over time and that this survey will capture this progress of each child.

It is also appropriate for teachers to rate a student during a challenging period of time for that student, even if it results in an uncharacteristically low score. The important thing is for students to show a positive change over time, not for students to score highly every time.

## Student Survey

The student survey collects information on four of the skills outlined above: (1) self-control, (2) persistence, (3) mastery orientation, and (4) academic self-efficacy. The student survey does not collect information about social competence since students may want to provide socially desirable responses when reporting on this skill.

**Who should complete the survey?** We recommend that all 3<sup>rd</sup>-5<sup>th</sup> grade students complete the survey. If a student is absent when the survey is administered, we suggest that teachers try to have the student fill it out the next day the student attends (perhaps during independent reading time/quiet time).

**When should information be collected?** We recommend that student surveys be completed three times a year (or during the length of the program): once at the beginning, once in the middle, and once towards the end. The exact timing will depend on the program length.

**How should teachers introduce students to the survey?** Before handing out the surveys, encourage teachers to discuss with students why this survey is being given to them. Teachers might explain that the survey asks how students feel about school and schoolwork, and that students' answers will be used to help them learn. Students' honest answers will show what really happens at school, which is needed to figure out what, if anything, can be improved. Encourage teachers to emphasize that the survey is not a test and there are no right or wrong answers; the students should simply mark the answers that they feel are right for them. If there is a question that makes a student uncomfortable, teachers can assure the student that he or she does not have to answer the question, and should feel free to skip it.

**How should students complete the survey?** Students may read the surveys independently or teachers may read the survey aloud to students. Students should always select their answers independently.

**How should teachers handle questions during the survey?** Teachers can clarify or define concepts or words for students. However, teachers should not provide students with an answer. Students who do not feel that there is an appropriate answer category to match how they feel should leave the question blank (the teacher should not mark an answer).

**What should teachers do when students are finished?** Ask teachers to confirm that each student has written his or her first name, last name, and date of birth on the surveys. Please ensure teachers have clear guidance on whom to give the surveys to for data entry.

## Appendix E: Scoring Guide

This guide provides recommendations for entering and analyzing student-level data from the teacher and student surveys to track student progress in key social and emotional skill areas (self-control, persistence, mastery orientation, academic self-efficacy, and social competence).

Teachers will complete the teacher surveys for all K-5<sup>th</sup> grade students to measure self-control, persistence, and social competence. Third-5<sup>th</sup> grade students will complete the student survey to measure self-control, persistence, mastery orientation, and academic self-efficacy. For 3<sup>rd</sup>-5<sup>th</sup> grade students, analyzing the teacher and student surveys together will provide a more complete picture of a student's progress in skills measured on both surveys (self-control and persistence).

We also recommend that programs report the number of teacher and student surveys completed at each survey administration, and further track which students dropped out prior to program completion or left before the end of the school year.

### Scoring Teacher and Student Surveys

**Table 1** (on the following page) and **Table 2** (on the following page) show which questions from each survey correspond to each social and emotional skill and the numerical value assigned to student and teacher responses. For example, a teacher response of "None of the time" and a student response of "Not at all like me" would be scored as "1"; a teacher response of "All of the time" and a student response of "A lot like me" would be scored as "4".

**Table 1: Teacher Survey Questions, by Skill**

Skill	#	Question	Response Options
Persistence	1	Worked on tasks until they were finished.	1= None of the time; 2= A little of the time 3= Most of the time; 4= All of the time
Persistence	2	Kept working on an activity that was difficult.	1= None of the time; 2= A little of the time 3= Most of the time; 4= All of the Time
Self-Control	3	Waited in line patiently.	1= None of the time; 2= A little of the time 3= Most of the time; 4= All of the Time
Self-Control	4	Sat still when s/he was supposed to.	1= None of the time; 2= A little of the time 3= Most of the time; 4= All of the Time
Self-Control	5	Waited for what s/he wanted.	1= None of the time; 2= A little of the time 3= Most of the time; 4= All of the Time
Persistence	6	Focused on tasks until they were finished.	1= None of the time; 2= A little of the time 3= Most of the time; 4= All of the Time
Social Competence	7	Worked well with peers.	1= None of the time; 2= A little of the time 3= Most of the time; 4= All of the Time
Social Competence	8	Resolved problems with peers without becoming aggressive.	1= None of the time; 2= A little of the time 3= Most of the time; 4= All of the Time
Social Competence	9	Was thoughtful of the feelings of her/his peers.	1= None of the time; 2= A little of the time 3= Most of the time; 4= All of the Time
Social Competence	10	Cooperated with peers without prompting.	1= None of the time; 2= A little of the time 3= Most of the time; 4= All of the Time
Social Competence	11	Understood the feelings of her/his peers.	1= None of the time; 2= A little of the time 3= Most of the time; 4= All of the Time
Social Competence	12	Resolved problems with peers on her/his own.	1= None of the time; 2= A little of the time 3= Most of the time; 4= All of the Time

**Table 2: Student Survey Questions, by Skill**

Skill	#	Question	Response Options
Self-Control	1	I can wait in line patiently.	1 = Not at all like me; 2 = A little like me 3 = Somewhat like me; 4 = A lot like me
Self-Control	2	I sit still when I'm supposed to.	1 = Not at all like me; 2 = A little like me 3 = Somewhat like me; 4 = A lot like me
Self-Control	3	I can wait for my turn to talk in class.	1 = Not at all like me; 2 = A little like me 3 = Somewhat like me; 4 = A lot like me
Self-Control	4	I can easily calm down when excited.	1 = Not at all like me; 2 = A little like me 3 = Somewhat like me; 4 = A lot like me
Self-Control	5	I calm down quickly when I get upset.	1 = Not at all like me; 2 = A little like me 3 = Somewhat like me; 4 = A lot like me
Academic Self-Efficacy	6	I can do even the hardest homework if I try.	1 = Not at all like me; 2 = A little like me 3 = Somewhat like me; 4 = A lot like me
Academic Self-Efficacy	7	I can learn the things taught in school.	1 = Not at all like me; 2 = A little like me 3 = Somewhat like me; 4 = A lot like me
Academic Self-Efficacy	8	I can figure out difficult homework.	1 = Not at all like me; 2 = A little like me 3 = Somewhat like me; 4 = A lot like me
Persistence	9	If I solve a problem wrong the first time, I just keep trying until I get it right.	1 = Not at all like me; 2 = A little like me 3 = Somewhat like me; 4 = A lot like me
Persistence	10	When I do badly on a test, I work harder the next time.	1 = Not at all like me; 2 = A little like me 3 = Somewhat like me; 4 = A lot like me
Persistence	11	I always work hard to complete my school work.	1 = Not at all like me; 2 = A little like me 3 = Somewhat like me; 4 = A lot like me
Mastery Orientation	12	I do my school work because I like to learn new things.	1 = Not at all like me; 2 = A little like me 3 = Somewhat like me; 4 = A lot like me
Mastery Orientation	13	I do my school work because I'm interested in it.	1 = Not at all like me; 2 = A little like me 3 = Somewhat like me; 4 = A lot like me
Mastery Orientation	14	I do my school work because I enjoy it.	1 = Not at all like me; 2 = A little like me 3 = Somewhat like me; 4 = A lot like me

Once the responses are entered according to the numerical values, an average teacher- or student- reported score can be calculated for a student in a particular skill area. **Table 3** (on the following page) provides an example of a teacher's answers to questions about persistence for a fictional student (Student A) the first time the teacher completed the survey for that student (i.e., at baseline). As table 3 indicates, the persistence score based on teacher reports for Student A is 2.33 (out of a maximum of 4.00 and minimum of 1.00).

**Table 3: Baseline Teacher-Generated Persistence Score for Student A**

Teacher Question for Persistence	Teacher Response at Baseline
Worked on tasks until they were finished.	2
Kept working on an activity that was difficult.	3
Focused on tasks until they were finished.	2
<b>Sum of Teacher Ratings</b>	<b>7</b>
<b>Teacher-Generated Persistence Score<sup>3</sup></b>	<b>2.33</b>

### Interpreting Students' Scores

Teacher- and student-reported scores for all skills will range from 1.00 to 4.00. The higher the score, the better the student is showing the skill. **Table 4** (below) provides a benchmark guide for interpreting students' scores.

**Table 4: Scoring Benchmarks**

Scores	Skill Level
1.0-1.99	Low
2.0-2.99	Moderate
3.0-4.0	High

Student A in the above example received a persistence score based on teacher reports of 2.33, which indicates a moderate level of persistence

We recommend that schools/programs calculate scores based on teacher reports for **all students** for skills measured through the teacher survey (self-control, persistence, and social competence). For all **3<sup>rd</sup>-5<sup>th</sup> graders**, schools/programs should use this approach to calculate scores based on student reports for skills measured through the student survey (self-control, persistence, mastery orientation, and academic self-efficacy). Scores can be averaged across groups or classrooms within programs (e.g., within classrooms) or at the investee level to get a snapshot of each investee's outcomes for each life skill.

Third-5<sup>th</sup> grade students will have two sets of scores for self-control and persistence, since these skills are measured on both the teacher and students surveys. Ideally, the teacher and student-reported scores will corroborate each other. However, because self-perceptions of one's behavior can differ from others' perception of one's behavior, it is expected that the teacher and student reports of self-control and persistence may vary. As long as the ratings do not vary a great deal (no more than one whole point), and both teacher and student scores are changing in the same direction (or remaining static), discrepant scores could be used. If the teacher and students scores for a student vary by more than one whole point, we recommend that the teacher score be used since teachers are likely a *more* reliable reporter on these skills.

<sup>3</sup> To calculate the average of numerical values for questions 1, 2, & 6, divide the total numerical values for questions 1, 2, & 6 by the number of questions. In this case:  $7 \div 3 = 2.33$ .

## Measuring Change

By collecting multiple data points for each student, programs will also be able to measure student *change* in these skill areas. **Table 4** below provides an example of this analysis for Student A based on four teacher surveys completed throughout the academic school year.

**Table 4: Teacher-Generated Persistence Score for Student A over the School Year**

Question	Teacher Response at Baseline	Teacher Response at Time 2	Teacher Response at Time 3	Teacher Response at Time 4
Worked on tasks until they were finished.	2	2	3	3
Kept working on an activity that was difficult.	3	3	3	3
Focused on tasks until they were finished.	2	2	2	2
<b>Sum (total) of Teacher Ratings</b>	<b>7</b>	<b>7</b>	<b>8</b>	<b>8</b>
<b>Teacher Generated Persistence Score</b>	<b>2.33</b>	<b>2.33</b>	<b>2.67</b>	<b>2.67</b>

**Table 5** illustrates that Student A increased his or her teacher-reported persistence score from 2.33 (at Baseline) to 2.67 (at Time 4) over the course of the academic year. However, there was no change between data collection at baseline and Time 2, or between times 3 and 4. Investees can complete similar analyses for all students or for groups of students and ultimately determine how many children increased, decreased, or maintained their scores.



## Measures Development Resource

Source Table for Original Items Used in the Tauck Family Foundation  
Formative Assessment Tools

# Measures Development Resource

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Source Table for Original Items Used in the Tauck Family Foundation Formative Assessment Tools

Child Trends  
July 2014

This document shares the psychometric properties of the scales used to draw questions for each of the surveys. It also shows the evolution of each of the items from their original use in the research field to their current use in the surveys for the Tauck Family Foundation.

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Mastery Orientation ..... 8

Social Competence..... 9

## Self-Control

Construct / Report	Source	Psychometric Properties	Populations Tested With	Original Items <sup>1</sup>	Proposed Items <sup>2</sup>	Discussion of any changes
<p><b>Self Control</b> (Student and Teacher Surveys)</p>	<p>Rorhbeck, C. A., Azar, S. T., &amp; Wagner, P. E. (1991). Child Self-Control Rating Scale: Validation of a child self-report measure. <i>Journal of Clinical Child and Adolescent Psychology, 20</i>(2), 179-183.</p> <hr/> <p><u>Scale:</u> Child Self Control Rating Scale (CSCRS)</p>	<ul style="list-style-type: none"> <li>• Cronbach's alpha = .90 with test-retest reliability of .84, over 6 – 8 weeks. Please note that these psychometrics are for the full scale.</li> <li>• Significant relationship between teacher and student reports of self – control behaviors, (r = -.22, p&lt;.03)</li> <li>• Convergent validity statistics demonstrate a negative relation with external locus of control (as theoretically expected), (r = -.30, p&lt;.003)</li> </ul>	<p><u>N:</u> 103 <u>Mode:</u> Administered in class <u>Age:</u> Third and fifth grade <u>Gender:</u> 52% boys, 48% girls <u>Race/Ethnicity:</u> 62% White, 22% African [NOTE: the article reports African, not African American]; 7% Hispanic, 4% Asian, 5% other <u>SES:</u> Not reported [public school] <u>Geographic loc.:</u> Metropolitan Washington DC</p>	<p><u>Items:</u></p> <ol style="list-style-type: none"> <li>1. Keep my promises</li> <li>2. Wait to be asked to play</li> <li>3. Calm down when excited</li> <li>4. Schoolwork is always good</li> <li>5. Plan what I'm going to do</li> <li>6. Wait for answers to my questions</li> <li>7. Wait for my turn to talk</li> <li>8. Work on a project until it's done</li> <li>9. Follow parents' and teachers' instructions</li> <li>10. Wait for what I want</li> <li>11. Wait in line</li> <li>12. Sit still</li> <li>13. Work well in groups; listen to kids</li> <li>14. Remember what I'm supposed to do</li> <li>15. Listen when scolded</li> <li>16. Don't have many accidents</li> <li>17. Remember to do my chores</li> <li>18. Usually do my work</li> <li>19. Wait for a big toy tomorrow vs. a small toy today</li> <li>20. Ask to play with my friends' toys</li> <li>21. Don't bother others when they're busy</li> <li>22. Obey rules</li> <li>23. Look where I'm going</li> <li>24. Think before I answer a question</li> <li>25. Don't get distracted from my work</li> <li>26. Careful</li> <li>27. Take turns and follow rules</li> <li>28. Play with one thing at a time</li> <li>29. Ask for help if something is hard</li> <li>30. Wait to play, don't interrupt games</li> <li>31. Think before I act</li> <li>32. Schoolwork is good because I pay attention</li> <li>33. Do one thing at a time</li> </ol> <p><u>Sample Item and Response Options:</u></p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>REALLY TRUE FOR ME</p> <input type="checkbox"/> </div> <div style="text-align: center;"> <p>SORT OF TRUE FOR ME</p> <input type="checkbox"/> </div> <div style="text-align: center;"> <p>SOME KIDS FIND IT EASY TO SIT STILL</p> </div> <div style="text-align: center;"> <p>BUT</p> </div> <div style="text-align: center;"> <p>OTHER KIDS FIND IT HARD TO SIT STILL</p> </div> <div style="text-align: center;"> <p>SORT OF TRUE FOR ME</p> <input type="checkbox"/> </div> <div style="text-align: center;"> <p>REALLY TRUE FOR ME</p> <input type="checkbox"/> </div> </div> <p>Sample instructions: "1.First decide whether you are more like the kids on the left side who find it easy to sit still, or whether you are more like the kids on the right side who find it hard to sit still. 2. Now that you have decided which kind of kid you are most like, decide whether that is only sort of true for you or really true. If it's only sort of true, put an x in the box under 'sort of true.' If it's really true, put an X in that box under 'really true.'"</p>	<p><u>Revised Introduction for Student Survey:</u> These questions are about different ways students behave in school. Please mark the box that best describes you.</p> <p><u>Adapted items for Student Survey:</u> 11. <u>I can</u> wait in line <u>patiently</u>. 12. <u>I</u> sit still.</p> <p><u>Response Options:</u> Not at all like me, A little like me, Somewhat like me, A lot like me, Exactly like me</p> <p><u>Revised Introduction for Teacher Survey:</u> Please, think about the student's behavior in the last QUARTER (that is, since the last reporting period). On a scale from 1 to 4, how well do each of the statements describe the student's behavior? Would you say NONE OF THE TIME, A LITTLE OF THE TIME, MOST OF THE TIME, or ALL OF THE TIME?</p> <p><u>Adapted items for Teacher Survey:</u> 10. <u>Waited</u> for what <u>↑s/he</u> wanted<sup>2</sup></p> <p><u>Response Options for Teacher Survey:</u> None of the time, A little of the time, Most of the time, All of the time</p>	<p>Revised items slightly so that they could be used in a stand alone questionnaire.</p> <p>Revised response category since original was very complex and did not fit well with the other response categories being recommended.</p>

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<sup>2</sup> Track changes in "Proposed Items" are intended to highlight the changes in wording to the original items (these are the final versions of the items).

Construct / Report	Source	Psychometric Properties	Populations Tested With	Original Items <sup>1</sup>	Proposed Items <sup>2</sup>	Discussion of any changes
Self Control (Teacher Survey)	Child Trends developed				<u>New Item:</u> Focused on tasks until they were finished.  <u>Response Options:</u> None of the time, A little of the time, Most of the time, All of the time	Added item as a parallel to the student scale regarding sustained attention.

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Construct / Report	Source	Psychometric Properties	Populations Tested With	Original Items <sup>1</sup>	Proposed Items <sup>2</sup>	Discussion of any changes
<b>Self Control</b> (Teacher Survey)	Kendall, P. C., & Wilcox, L. E. (1979). Self-control in children: development of a rating scale. <i>Journal of Consulting and Clinical Psychology, 47</i> (6), 1020.  <u>Scale:</u> Self-Control Rating Scale (SCRS)	<ul style="list-style-type: none"> <li>The scale has a internal consistency (Cronbach's Alpha) of 0.98, with test-retest of 0.84 over 3 – 4 weeks. Please note that these psychometrics are for the full scale.</li> <li>Convergent validity statistics demonstrates that even when mental age and chronological age were partialled out, the scale positively correlated (i.e., .25, .31, .24) at the .005 significant level with conceptually similar constructs (i.e., Matching Familiar Figures test, the Q score from the Porteus mazes, and behavioral observations), respectively.</li> <li>Discriminant validity was demonstrated by a very low and nonsignificant correlation with IQ and mental age (&gt; .5).</li> <li>An orthogonal factor analysis resulted in one major factor, cognitive-behavioral self-control, which accounted for 71.7%. The second factor accounted for only 6.4%.</li> </ul>	<b>Study 1</b> <u>N:</u> 110 students <u>Mode:</u> Administered in class <u>Age:</u> Third – Sixth grade (mean age 126 months) <u>Gender:</u> 59 boys, 51 girls <u>Race/Ethnicity:</u> White <u>SES:</u> Middle class <u>Geographic loc.:</u> Minnesota  <b>Study 2</b> <u>N:</u> 64 32 referred, 32 non-referred <u>Mode:</u> Administered in class <u>Age:</u> Third – Sixth grade <u>Gender:</u> Of 32 referred: 24 boys, 8 girls <u>Race/Ethnicity:</u> White <u>SES:</u> Middle class <u>Geographic loc.:</u> Minnesota	<u>Items</u> 1. When the child promises to do something, can you count on him or her to do it? 2. Does the child butt into games or activities even when he or she hasn't been invited? 3. Can the child deliberately calm down when he or she is excited or all wound up? 4. Is the quality of the child's work all about the same or does it vary a lot? 5. Does the child work for long-range goals? 6. When the child asks a question, does he or she wait for an answer, or jump to something else (e.g., a new question) before waiting for an answer? 7. Does the child interrupt inappropriately in conversations with peers, or wait his or her turn to speak? 8. Does the child stick to what he or she is doing until he or she is finished with it? 9. Does the child follow the instructions of responsible adults? 10. Does the child have to have everything right away? 11. When the child has to wait in line, does he or she do so patiently? 12. Does the child sit still? 13. Can the child follow suggestions of others in group projects, or does he or she insist on imposing his or her own ideas? 14. Does the child have to be reminded several times to do something before he or she does it? 15. When reprimanded, does the child answer back inappropriately? 16. Is the child accident prone? 17. Does the child neglect or forget regular chores or tasks? 18. Are there days when the child seems incapable of settling down to work? 19. Would the child more likely grab a smaller toy today or wait for a larger toy tomorrow, if given the choice? 20. Does the child grab for the belongings of others? 21. Does the child bother others when they're trying to do things? 22. Does the child break basic rules? 23. Does the child watch where he or she is going? 24. In answering questions, does the child give one thoughtful answer, or blurt out several answers all at once? 25. Is the child easily distracted from his or her work or chores? 26. Would you describe this child more as careful or careless? 27. Does the child play well with peers (follows rules, waits turn, cooperates) ? 28. Does the child jump or switch from activity to activity rather than sticking to one thing at a time? 29. If a task is at first too difficult for the child, will he or she get frustrated and quit, or first seek help with the problem? 30. Does the child disrupt games? 31. Does the child think before he or she acts? 32. If the child paid more attention to his or her work, do you think he or she would do much better than at present? 33. Does the child do too many things at once, or does he or she concentrate on one thing at a time?  <u>Response Options:</u> 7-point Likert-type scale For every item a score of 1 indicates maximum self-control and a score of 7 maximum impulsivity	<u>Revised Introduction:</u> Please, think about the student's behavior in the last QUARTER (that is, since the last reporting period). On a scale from 1 to 4, how well do each of the statements describe the student's behavior? Would you say NONE OF THE TIME, A LITTLE OF THE TIME, MOST OF THE TIME, or ALL OF THE TIME?  <u>Adapted Items:</u> 11. <del>When the child has to wait</del> in line, <del>does he or she do so</del> patiently 12. <del>Does the child sit</del> <u>Sat</u> still  <u>Response Options:</u> None of the time, A little of the time, Most of the time, All of the time	Questions are numbered to facilitate discussion.  Items revised so that we refer to he/she instead of child. In addition to the items from the Self-Control Rating Scale, we adapted items from the Child Self-Control Rating Scale in order to increase comparability between student and teacher reports.

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## Academic Self-Efficacy

Construct / Report	Source	Psychometric Properties	Populations Tested With	Original Items <sup>1</sup>	Proposed Items <sup>2</sup>	Discussion of any changes
<b>Academic Self-Efficacy</b> (Student Survey)	Hoover-Dempsey, K.V., & Sandler, H.M. (2005). <i>Final Performance Report for OERI Grant # R305T010673: The Social Context of Parental Involvement: A Path to Enhanced Achievement</i> . Presented to Project Monitor, Institute of Education Sciences, U.S. Department of Education, March 22, 2005.	<ul style="list-style-type: none"> <li>Alpha reliability for the scale with the study sample was .71.</li> </ul>	N: 358 Mode: Not reported Age: Fourth – Sixth grade Gender: 52.5% male; 47.5% female Race/Ethnicity: 27.4% African American, 3.9% Asian American; 6.4% Hispanic; 57.3% White; 4.2% Other SES: Predominantly low-middle income Geographic loc.: Not reported	<u>Items</u> 1. I can do even the hardest homework if I try. 2. I can learn the things taught in school. 3. I can figure out difficult homework.  <u>Response Options:</u> All items in the scale use a four-point response format (not true to very true): Not true = 1, A little true = 2, Pretty true = 3, Very true = 4	<u>Revised Introduction:</u> These next questions are about how you get your school work done. Mark the box that best describes you.  <u>Adapted Items:</u> 1. I can do even the hardest homework if I try. 2. I can learn the things taught in school. 3. I can figure out difficult homework.  <u>Response Options:</u> Not at all like me, A little like me, Somewhat like me, A lot like me, Exactly like me	No changes made to items.  Revised the response scale in line with findings from cognitive testing with similar populations.

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## Persistence

Construct / Report	Source	Psychometric Properties	Populations Tested With	Original Items <sup>1</sup>	Proposed Items <sup>2</sup>	Discussion of any changes
<b>Persistence</b> (Student Survey)	Butler-Barnes, S. T., Chavous, T. M., Hurd, N., & Varner, F. (2013). African American Adolescents' Academic Persistence: A Strengths-Based Approach. <i>Journal of youth and adolescence</i> , 1-16.  Scale: Scale for Academic Engagement (Adapted)	<ul style="list-style-type: none"> <li>Scale was adapted for this study from <i>Scale for Academic Engagement</i>.</li> <li>Cronbach's alpha for the adapted persistence scale is .76.</li> </ul>	<p><u>N</u>: 220  <u>Mode</u>: Administered in classroom.  <u>Age</u>: Seventh, eighth, and ninth grades (Age range: 12-16, Mean = 13.59)  <u>Gender</u>: 42% boys, 58% girls  <u>Race/Ethnicity of SUBJECTS</u>: All African-American  <u>Race/Ethnicity of SCHOOLS</u>:  <i>School 1</i>: 46 % White students, 36 % African American students, 14 % Asian students and 4 % Other  <i>School 2</i>: 93% African American  <i>School 3</i>: 63 % White, 21 % African American, 8 % Asian, 7 % Hispanic, and 1 % Other.  <u>SES</u>: SES diverse school districts. Of the 3 districts, 21%, 71%, and 21% qualified for free or reduced lunch.  <u>Geographic loc.</u>: Midwestern metropolitan area.</p>	<p><u>Items</u>:</p> <ol style="list-style-type: none"> <li>If I can't get a problem right the first time, I just keep trying</li> <li>When I do badly on a test, I work harder next time</li> <li>If I don't understanding something right away, I stop trying</li> <li>When I have trouble understanding something, I give up</li> </ol> <p><u>Response Options</u>: 4-point scale: 1 (not at all true) to 4 (very true)</p>	<p><u>Revised Introduction</u>: These next questions are about how you get your school work done. Mark the box that best describes you.</p> <p><u>Adapted Items</u>:</p> <ol style="list-style-type: none"> <li>If I <del>can't get</del> <u>right wrong</u> solve a problem the first time, I just keep trying <u>until I get it right</u>.</li> <li>When I do badly on a test, I work harder the next time.</li> </ol> <p><u>Response Options</u>: Not at all like me, A little like me, Somewhat like me, A lot like me, Exactly like me</p>	<p>Questions are numbered to facilitate discussion.</p> <p>1: Revised to avoid using the word "can't". Revised to show persistence.</p>
<b>Persistence</b> (Student Survey)	Child Trends developed				<p><u>New Item</u> I always work hard to complete my school work.</p> <p><u>Response Options</u>: Not at all like me, A little like me, Somewhat like me, A lot like me, Exactly like me</p>	Item developed to be age appropriate, general, and positive.

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<p><b>Persistence</b> (Teacher Survey)</p>	<p>Temperament Assessment Battery for Children (TABC) Martin, R. P. (1988). <i>The temperament assessment battery for children: A manual</i>. Brandon, VT: Clinical Psychology Publishing Company.</p> <hr/> <p>Scale: TABC</p>	<p>Because of the significant changes to the item pulled from this scale, previously researched psychometric properties and information about populations it was tested with are not appropriate for making assumptions and are not listed here.</p>	<p>See note in psychometric properties.</p>	<p><u>Items:</u></p> <ol style="list-style-type: none"> <li>1. My child is shy with adults he/she does not know.</li> <li>2. When my child starts a project such as a model, puzzle, painting, he/she works at it without stopping until completed, even if it takes a long time.</li> <li>3. My child can sit quietly through a family meal without fidgeting in his/her chair or getting out of his/her chair.</li> <li>4. When a new family rule is made for my child, he/she adjusts fairly quickly to it.</li> <li>5. My child cries and screams so hard he/she gets red in the face and short of breath.</li> <li>6. If my child is in a bad mood, he/she can easily be joked out of it.</li> <li>7. When fist meeting new children, my child is bashful.</li> <li>8. When my child is read a story, he/she becomes bored or distracted in a half hour or less.</li> <li>9. My child is uncomfortable showing off or performing in front of new visitors to the home.</li> <li>10. My child is at ease within a few visits when visiting someone else's home.</li> <li>11. When upset or annoyed with a task, my child whines briefly rather than yelling or crying.</li> <li>12. If my child wants a toy or candy (while shopping), he/she will easily accept something else offered instead.</li> <li>13. When my child moves about in the house or outdoors, he/she runs rather than walks.</li> <li>14. If desired outdoor activity must be postponed due to bad weather, my child stays disappointed for most of the day.</li> <li>15. My child prefers active games involving running and jumping, etc., rather than games in which he/she must sit.</li> <li>16. If my child resists some procedure, such as having hair cut, brushed, or washed, he/she will continue to resist it for at least several months.</li> <li>17. When taken away from an activity my child enjoys, he/she tends to protest strongly, by intense fussing.</li> <li>18. When my child is promised something in the future, he/she constantly keeps reminding parents.</li> <li>19. When in the park, at a party, or visiting, my child will go up to strange children and join in their play.</li> <li>20. If my child is shy with a strange adult, he/she quickly (within a half hour or so) gets over this.</li> <li>21. My child sits still to have a story told or read, or a song sung.</li> <li>22. When scolded or reprimanded by parents, my child reacts mildly, such as whining or complaining, rather than strongly, with crying or screaming.</li> <li>23. When my child becomes angry about something, it is difficult to sidetrack him/her.</li> <li>24. When learning a new physical activity (such as hopping, skating, bike riding), my child will spend long periods of time practicing.</li> <li>25. When my child and a playmate are together, the other child gets more upset about things (sharing toys, taking turns, etc.) than my child.</li> <li>26. When my family takes a trip, my child immediately makes himself/herself at home in the new surroundings.</li> <li>27. When shopping together and mother does not buy candy, toys, or clothing that child wants, he/she cries and yells.</li> <li>28. If my child is upset, it is hard to comfort him/her.</li> <li>29. When the weather is bad and my child is confined to the house, he/she runs around and cannot be entertained by quiet activities.</li> <li>30. My child is immediately friendly with and approaches unknown adults who visit our home.</li> <li>31. When in the doctor's office for some uncomfortable procedure, my child is difficult to manage despite reassurance or promises of regards for good behavior.</li> <li>32. When a toy or game is difficult, my child will quickly turn to another activity.</li> <li>33. In a new situation such as a nursery school, my child is still uncomfortable even after a few days.</li> <li>34. Although my child dislikes some procedures (such as nail cutting or hair brushing), he/she will easily allow it if watching television or being entertained while it is done.</li> <li>35. My child can sit quietly through an entire children's movie, baseball game, or a long TV program.</li> <li>36. When my child objects to wearing certain clothing, he/she argues loudly, yells, cries.</li> <li>37. My child tends to give up when faced with a puzzle or a block structure that is difficult.</li> <li>38. When there is a change of daily routine, such as not being able to go to school, change of usual daily activities, etc., my child easily goes along with the new routine.</li> <li>39. When sitting, my child swings his/her legs, fidgets, or generally has his/her hands in constant motion.</li> <li>40. The first time my child is left in a new situation without mother (such as school, nursery), he/she gets upset.</li> <li>41. If my child starts to play with something and I want him/her to stop, it is hard to turn his/her attention to something else.</li> <li>42. My child gets involved in quiet activities such as crafts, watching television, reading, or looking at picture books.</li> </ol>	<p><u>Revised Introduction:</u> Please, think about the student's behavior in the last QUARTER (that is, since the last reporting period). On a scale from 1 to 4, how well do each of the statements describe the student's behavior? Would you say NONE OF THE TIME, A LITTLE OF THE TIME, MOST OF THE TIME, or ALL OF THE TIME?</p> <p><u>Adapted Items:</u> 2. <del>When my child starts a project such as a model, puzzle, painting, he/she works</del> <u>worked at it without stopping on tasks until completed, even if it takes a long time they were finished.</u></p> <p>Worked on tasks until they were finished.</p> <p>37. <del>My child tends to give up when faced with a puzzle or a block structure that is</del> <u>Kept working on an activity that was</u> difficult.</p> <p>Kept working on an activity that was difficult.</p> <p><u>Response Options:</u> None of the time, A little of the time, Most of the time, All of the time</p>	<p>Rewrote item 37 to capture underlying concept, but used wording that was applicable to students and that fit the format of the other items.</p>

			<p>43. My child feels free to smile and laugh when around people for the first time.</p> <p>44. When away from home (for example, on vacation), my child has difficulty in adjusting to routines and schedules that are different from those at home.</p> <p>45. My child seems to take things matter-of-factly, accepts events in stride without getting very excited.</p> <p>46. When playing with a friend, my child gets bored with one activity sooner than the other child.</p> <p>47. My child can be stopped from pestering if he/she is given something else to do.</p> <p>48. My child can be happy for a car ride of an hour or more if he/she has a favorite toy or game to play with.</p> <p><u>Response Options:</u> 7-point scale: (1) hardly ever, (2) infrequently, (3) once in a while, (4) sometimes, (5) often, (6) very often, (7) almost always</p>		
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## Mastery Orientation

Construct / Report	Source	Psychometric Properties	Populations Tested With	Original Items <sup>1</sup>	Proposed Items <sup>2</sup>	Discussion of any changes
<p><b>Mastery Orientation</b> (Student Survey)</p>	<p>Midgely, C., Kaplan, A., Middleton, M., &amp; Maehr, M. L. (1998). The development and validation of scales assessing students' achievement goal orientations. <i>Contemporary Education Psychology</i>, 23, 113-131.</p> <p>Nicholls, J. G., Cheung, P. C., Lauer, J., &amp; Patashnick, M. (1989). Individual differences in academic motivation: Perceived ability, goals, beliefs, and values. <i>Leaning and Individual Differences</i>, 1, 63–84.</p> <hr/> <p><u>Scale:</u> Patterns of Adaptive Learning Survey-PALS</p>	<ul style="list-style-type: none"> <li>Cronbach's alpha for task goal orientation (mastery) was greater than .70 and often greater than .80.</li> <li>Alphas were generally lower for elementary students than middle school students.</li> <li>Longitudinal study following students from 5<sup>th</sup> to 6<sup>th</sup> grade found moderate stability of the task goal orientation scale over time, with stability coefficients averaging 0.41 in both math and English and for both girls and boys and higher and lower ability students. In a sample of students assessed in the fall and spring of 5<sup>th</sup> grade, the stability coefficient was 0.63.</li> <li>The scale established convergent validity when correlated, coefficients ranging from 0.6 - .63, with conceptually similar (i.e., ego-orientation, ability-approach goal orientation, task-orientation) scales with established psychometric soundness (see: Nicholls, 1989)</li> </ul>	<p><b>Sample 1:</b> <u>N:</u> Not reported <u>Mode:</u> Administered in classroom <u>Age:</u> Elementary and middle school <u>Gender:</u> Not reported <u>Race/Ethnicity:</u> 80% of students were European American, 15% were African American, and 5% were other. <u>SES:</u> About 15% received Free and Reduced Lunch. <u>Geographic loc.:</u> Community near a major Midwestern city</p> <p><b>Sample 2:</b> <u>N:</u> Not reported <u>Mode:</u> Administered in classroom <u>Age:</u> Sixth and Eighth Graders <u>Gender:</u> Not reported <u>Race/Ethnicity:</u> 55% of these students were European American, 45% were African American <u>SES:</u> 50% qualified for Free and Reduced Lunch. <u>Geographic loc.:</u> Community near the University of Michigan</p> <p><b>Sample 3 (most recent):</b> <u>N:</u> 850 students <u>Mode:</u> Administered in classroom <u>Age:</u> Fifth – Seventh Grades (data collected in waves) <u>Gender:</u> Not reported <u>Race/Ethnicity:</u> 46% African American, 43% European American, 8% Hispanic, 2% Asian American, and 1% American Indian. <u>SES:</u> About 45% received Free and Reduced lunch. <u>Geographic loc.:</u> Southeastern Michigan</p>	<p><u>Items:</u> <i>Task-Goal Orientation</i></p> <ol style="list-style-type: none"> <li>I like school work that I'll learn from, even if I make a lot of mistakes.</li> <li>An important reason why I do my school work is because I like to learn new things.</li> <li>I like school work best when it really makes me think.</li> <li>An important reason why I do my work in school is because I want to get better at it.</li> <li>I do my school work because I'm interested in it.</li> <li>An important reason I do my school work is because I enjoy it.</li> </ol> <p><u>Response Options:</u> 5-point Likert-type scale 1 = "Not at all true," 3 = "Somewhat true," and 5 = "Very true"</p> <p>These scales are now included in the Patterns of Adaptive Learning Survey (PALS) (Midgley et al, 1997).</p>	<p><u>Revised Introduction:</u> The last set of questions will ask you how you feel about school. Please mark the box that best describes you.</p> <p><u>Adapted Items:</u></p> <ol style="list-style-type: none"> <li><del>An important reason why</del> I do my school work <del>is</del>-because I like to learn new things.</li> <li>I do my school work because I'm interested in it.</li> <li><del>An important reason</del> I do my school work <del>is</del>-because I enjoy it..<sup>3</sup></li> </ol> <p><u>Response Options:</u> Not at all like me, A little like me, Somewhat like me, A lot like me, Exactly like me</p>	<p>Changes made to make items shorter and more age-appropriate.</p> <p>Response scale revised in line with findings from cognitive testing with similar populations.</p>

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<sup>2</sup>Track changes in "Proposed Items" are intended to highlight the changes in wording to the original items (these are the final versions of the items)

<sup>3</sup> Items were not recommended in the February 2013 suggested scale, but we are recommending adding them now because they were part of the original scale.

## Social Competence

Construct / Report	Source	Psychometric Properties	Populations Tested With	Original Items <sup>1</sup>	Proposed Items <sup>2</sup>	Discussion of any changes
<b>Social Competence</b> (Teacher Survey)	Conduct Problem Prevention Research Group (CPPRG) (1995). Psychometric properties of the social competence scale – teacher and parent ratings (Fast Track Project technical report). University Park, PA: Pennsylvania State University.  Bierman, K. L., Coie, J. D., Dodge, K. A., Foster, E. M., Greenberg, M. T., Lochman, J. E., ... & Pinderhughes, E. E. (2004). The effects of the Fast Track program on serious problem outcomes at the end of elementary school. <i>Journal of Clinical Child and Adolescent Psychology</i> , 33(4), 650-661.	<ul style="list-style-type: none"> <li>Chronbach’s alpha for total scale were .98 for normative sample and .97 for control sample</li> <li>Chronbach’s alphas for the Prosocial/Communication skills subscale were .96 for the normative sample and .94 for the control sample</li> </ul>	N: normative (387) and high-risk (155) – total N=463 Mode: Administered in classroom Age: Grades K-3 (3 longitudinal cohorts) Gender: High risk group: 69% male; 31% female Race/Ethnicity: (a) Durham: predominantly African American school population; (b) Nashville: African American and European American families; (c) Seattle: ethnically diverse population; and (d) central Pennsylvania: predominantly European American population Across all sites: the high risk sample was 51% African American, 47% European American, and 2% of other ethnicity (e.g., Pacific Islander and Hispanic) SES: High risk: 35% lowest SES Geographic loc.: Durham, Nashville, rural Pennsylvania, Washington	Items: 1. Functions well even with distractions 2. Can accept things not going his/her way 3. Copes well with failure 4. Is a self-starter 5. Works/plays well without adult support 6. Accepts legitimate imposed limits 7. Expresses needs and feelings appropriately 8. Thinks before acting 9. Resolves peer problems on his/her own 10. Stays on task 11. Can calm down when excited or all wound up 12. Can wait in line patiently when necessary 13. Very good at understanding other people’s feelings 14. Is aware of the effect of his/her behavior on others 15. Works well in a group 16. Plays by the rules of the game 17. Pays attention 18. Controls temper when there is a disagreement 19. Shares materials with others 20. Cooperates with peers without prompting 21. Follows teacher’s verbal directions 22. Is helpful to others 23. Listens to others’ points of view 24. Can give suggestions and opinions without being bossy 25. Acts friendly toward others  Response Options: 5-point Likert-type response scale: Not at all (0), A little (1), Moderately well (2), Well (3), Very well (4).	Revised Introduction: Please, think about the student’s behavior in the last QUARTER (that is, since the last reporting period). On a scale from 1 to 4, how well do each of the statements describe the student’s behavior? Would you say NONE OF THE TIME, A LITTLE OF THE TIME, MOST OF THE TIME, or ALL OF THE TIME?  Items: 9. Resolves <del>peer</del> problems <u>with peers</u> on his/her own. 13. <del>Very good at understanding other people’s the feelings of his/her own peers.</del> 15. <del>Works</del> <u>ed</u> well <del>in a group</del> <u>with peers</u> . 20. <del>Cooperates</del> <u>ed</u> with peers without prompting.  Response Options: None of the time, A little of the time, Most of the time, All of the time	Tense was changed to past in order to fit with introduction and be consistent with the rest of the survey.  “Person” was changed to “peer” to match definition of construct, which stresses student’s interactions with peers as opposed to just any individual.  Response options changed to match the rest of the survey and to remove the middle option which may be difficult to interpret.

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Construct / Report	Source	Psychometric Properties	Populations Tested With	Original Items <sup>1</sup>	Proposed Items <sup>2</sup>	Discussion of any changes
<b>Social Competence</b> (Teacher Survey)	<p>Greenberg, M., McMahon, B., &amp; Mason, C. (1994). Parent Daily Report (Fast Track Project technical report). University Park, PA: Pennsylvania State University.</p> <p>Chamberlain, P (1980). <i>Standardization of a Parent Report Measure</i> (Doctoral Dissertation). Retrieved from ProQuest Dissertations and Theses. (Accension Order No. 8024845)</p> <hr/> <p><u>Scale:</u> Parent Report Daily Checklist (Positive Behaviors)</p>	<p>Because only one item is used from the scale and because of the differences in respondent, psychometric properties about the internal consistency are not appropriate for making assumptions and are not listed here.</p>	<p><u>N:</u> normative (387) and high-risk (155) – total N=463 <u>Mode:</u> Administered at home. <u>Age:</u> Grades K-12 (longitudinal) <u>Gender:</u> High risk: 69% male; 31% female</p> <p><u>Race/Ethnicity:</u> (a) Durham: predominantly African American school population; (b) Nashville: African American and European American families; (c) Seattle: ethnically diverse population; and (d) central Pennsylvania: predominantly European American population. <i>Across all sites:</i> the high risk sample was 51% African American, 47% European American, and 2% of other ethnicity (e.g., Pacific Islander and Hispanic)</p> <p><u>SES:</u> High risk: 35% lowest SES <u>Geographic loc.:</u> Durham, Nashville, rural Pennsylvania, Seattle</p> <p><u>1980 study</u> N: 85 families Age: 4-10 years Mode: Telephone survey Gender; 62% male, 38% female</p>	<p><u>Introduction:</u> Now go through this list of positive behaviors and circle the numbers in front of those that your child is <u>not doing often enough</u>. In other words, circle the numbers of those behaviors that you would like to see your child doing more often.</p> <p><u>Items:</u></p> <ol style="list-style-type: none"> <li>1. Accepting disappointment well</li> <li>2. Accepting punishment</li> <li>3. Offering gifts to others</li> <li>4. Complying with all requests (minding)</li> <li>5. Saying something to make another person feel good</li> <li>6. Doing homework without prodding</li> <li>7. Having pleasant talks or sharing feelings with others</li> <li>8. Getting chores done on time</li> <li>9. Telling parent where she/he will be</li> <li>10. Playing nicely with brother(s), sister(s) or other children</li> <li>11. Being prompt, getting home on time</li> <li>12. Showing happiness, smiling a lot, hugging</li> <li>13. Showing affection, hugging, kissing</li> <li>14. Showing enthusiasm about school</li> <li>15. Being thoughtful or considerate of another person's feelings</li> <li>16. Volunteering to help or work</li> <li>17. Waiting for his/her turn to speak, listening attentively</li> <li>18. Telling the truth when confronted</li> <li>19. Willingly sharing something</li> <li>20. Staying dry at night</li> <li>21. Keeping pants clean</li> <li>22. Speaking nicely</li> <li>23. Having a positive attitude</li> <li>24. Eating meals without picking or throwing food</li> <li>25. Being happy</li> <li>26. Being quiet</li> <li>27. Going to bed without trouble</li> <li>28. Putting toys away</li> <li>29. Other: _____</li> <li>30. Other: _____</li> </ol> <p><u>Response Options:</u> 0-1 scale (did or did not occur)</p>	<p><u>Revised Introduction:</u> Please, think about the student's behavior in the last QUARTER (that is, since the last reporting period). On a scale from 1 to 4, how well do each of the statements describe the student's behavior? Would you say NONE OF THE TIME, A LITTLE OF THE TIME, MOST OF THE TIME, or ALL OF THE TIME?</p> <p><u>Items:</u> 15. <del>Being Was</del> thoughtful <del>or considerate of another person's</del> <u>the</u> feelings <u>of his/her peers</u>.</p> <p><u>Response Options:</u> None of the time, A little of the time, Most of the time, All of the time</p>	<p>Tense was changed to past in order to fit with introduction and be consistent with the rest of the survey.</p> <p>"Considerate" was removed because question was double barreled and thought to be unobservable.</p> <p>"Person" was changed to "peer" to match construct definition, which stresses student's ability to take peers' perspective as opposed to that of any individual.</p> <p>Response options changed to match the rest of the survey, and increase ease of reporting compared with original response scale.</p>

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<b>Social Competence</b> (Teacher Survey)	McConnell, S., Strain, P., Kerr, M. Stagg, V., Lenker, D., Lambert, D. (1984). An empirical definition of elementary school adjustment: selection of target behaviors for a comprehensive treatment program. <i>Behavior Modification</i> 8(4), 451-473.  Found in: Dahlberg, L. L., Toal, S. B., Swahn, M. H., & Behrens, C. B. (2005). Measuring violence-related attitudes, behaviors, and influences among youths: A compendium of assessment tools. <i>Centers for Disease Control and Prevention</i> . <a href="http://www.cdc.gov/ncipc/pub-res/pdf/YV/YV_Compndium.pdf">http://www.cdc.gov/ncipc/pub-res/pdf/YV/YV_Compndium.pdf</a>	Because of the significant changes to the item pulled from this scale, previously researched psychometric properties and information about populations it was tested with are not appropriate for making assumptions and are not listed here.	See note in psychometric properties.	<u>Items:</u> 1. Other children seek the child out to involve him/her in activities. 2. The child uses free time appropriately. 3. The child shares laughter with peers. 4. The child has good work habits (e.g., is organized, makes efficient use of class time). 5. The child compromises with peers when a situation calls for it. 6. The child responds to teasing or name calling by ignoring, changing the subject, or some other constructive means. 7. The child accepts constructive criticism from peers without becoming angry. 8. The child plays or talks with peers for extended periods of time. 9. The child initiates conversation with peers in informal situations. 10. The child listens carefully to teacher instructions and directions for assignments. 11. The child displays independent study skills (e.g., can work adequately with minimum teacher support). 12. The child appropriately copes without aggression from others (e.g., tries to avoid a fight, walks away, seeks assistance, defends self). 13. The child interacts with a number of different peers. 14. The child can accept not getting his/her own way. 15. The child attends to assigned tasks. 16. The child keeps conversations with peers going. 17. The child invites peers to play or share activities. 18. The child does seatwork assignments as directed. 19. The child produces work of acceptable quality given her/his skill level.  <u>Response Options:</u> Never (1), Rarely (2), Sometimes (3), Often (4), Frequently (5)	<u>Revised Introduction:</u> Please, think about the student's behavior in the last QUARTER (that is, since the last reporting period). On a scale from 1 to 4, how well do each of the statements describe the student's behavior? Would you say NONE OF THE TIME, A LITTLE OF THE TIME, MOST OF THE TIME, or ALL OF THE TIME?  <u>Items:</u> 12. <del>The child appropriately copes without aggression from others (e.g., tries to avoid a fight, walks away, seeks assistance, defends self).</del>  Resolved problems with peers without becoming aggressive.  <u>Response Options:</u> None of the time, A little of the time, Most of the time, All of the time	Item and response options completely reworded to improve clarity of item and avoid leading/limiting respondents' thoughts (i.e. by removing examples)

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