Devereux Student Strengths Assessment K–8th Grade Edition

A measure of social-emotional competencies of children in kindergarten through eighth grade

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evidence-informed practice; and the development of community-based infrastructures to promote and sustain the use of such tools in practice environments.

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—Original About the Authors, 2009

TABLE OF CONTENTS

LIST OF TABLES AND FIGURES

TABLES

CHAPTER 2

CHAPTER 3

CHAPTER 5

FIGURES

CHAPTER 2

CHAPTER 3

CHAPTER 4

CHAPTER 5

FOREWORD

In 1996, after nearly 75 years of providing behavioral health, rehabilitation, and special education services to individuals with special needs, Devereux embarked on a new mission – primary prevention. Responding to the burgeoning numbers of children and adolescents with social and emotional problems, the President and CEO of Devereux began two initiatives that have evolved to become the Devereux Center for Effective Schools (CES) and the Devereux Center for Resilient Children (DCRC). Both centers have the goal of promoting the social-emotional competence and school success of at-risk children. The Center for Effective Schools strives to attain this goal through building the capacity of schools to better serve children with, or at risk for developing emotional and behavioral disorders. They accomplish this through training, consultation, new model program development, and applied research, often delivered within a three-tiered prevention framework. More information on CES can be found at its website, **www.centerforeffectiveschools.org**.

The Devereux Center for Resilient Children (DCRC) began by focusing on enhancing the social-emotional competence and resilience of preschool children through the Devereux Early Childhood Initiative. The mission of the DECI is to promote young children's social and emotional development, foster resilience, and build the skills for school and life success. The DECI staff developed the first nationally standardized assessment of behaviors related to resilience in preschool children, the Devereux Early Childhood Assessment or DECA (LeBuffe & Naglieri, 1999). The DECA and other resources developed by the DECI staff are now used in thousands of preschool and infant-toddler programs throughout the United States and Canada. With the completion of this instrument, the Devereux Student Strengths

Assessment (DESSA), the child-centered, social-emotional competence enhancing approach originating with the DECA is now extended upward to children in grades K–8. This expansion of the age range served is accompanied by the creation of the Devereux Center for Resilient Children (DCRC), which encompasses both the DECI and the DESSA. More information on the DCRC can be found at its website, **www.centerforresilientchildren.org**.

The efforts of the DCRC are guided by the following underlying principles:

Strength-Based – All of the assessments, programmatic resources, and services provided by the DCRC are focused on building the social-emotional strengths of children. Although we appreciate the importance of addressing the behavioral concerns and problematic behaviors of children already experiencing significant social-emotional problems, we also stress the importance of promoting competencies. We have described the many advantages of a strength-based approach elsewhere (LeBuffe & Shapiro, 2004), but perhaps the most important benefit is that these social-emotional competencies contribute to a child's resilience in the face of adversity.

Excellence in Assessment – Instruments used to guide practices that influence children's lives need to be constructed using the highest professional standards. This includes using well-established test development methods to ensure the highest psychometric qualities, especially a nationally representative sample for creation of norms and specific guidelines for use and interpretation of the scores that the rating scale provides. The DESSA has been developed to meet or exceed the standards for assessment instruments established by the American Educational Research Association and the American Psychological Association (APA, 1999). Information on the development and psychometric properties of the DESSA are presented in Chapters 2 and 3.

Parent-Professional Collaboration – The probability of a successful outcome for a child is enhanced when parents and professionals such as teachers, after-school staff and mental health and child-welfare professionals work in concert to support the child, ensuring a consistent approach across environments. The DESSA has been designed to support this collaboration. Both parents and professionals serve as informants and the rater comparison technique described in Chapter 5 can be very helpful in developing a shared understanding of the child's strengths and needs.

Support Effective Practice – We believe that assessments must support parents, teachers and other professionals in delivering effective services that will lead to improved outcomes for the child. The DESSA provides three key elements in this process. First, it provides valuable information about the child's social-emotional strengths and needs. Second, the DESSA findings can inform the selection and implementation of interventions to assist the child, as explained in Chapter 5. Third, the DESSA can be used to evaluate the effectiveness of interventions and thereby support data-driven practice, provide practice-based evidence of program efficacy, and promote professional accountability.

Promote Communities of Practice – Since the publication of the DECA in 1999, there has been increasing interest in empirically-supported approaches to enhancing social-emotional competence and resilience in at-risk children. The authors of the DESSA hope that the publication of this assessment will support and extend the current efforts of communities to recognize the importance of and promote these competencies. The authors of the DESSA as well as the staff of the Devereux Center for Resilient Children welcome the opportunities to collaborate with colleagues, students and organizations who share these goals. We can be reached through the DCRC website: **www.centerforresilientchildren.org**.

—Original Foreword, 2009

CHAPTER 1
Introduction

The challenge of nurturing the positive development of youth requires social scientists, policy-makers, community members, practitioners, educators, and parents to work together to promote the social-emotional competence of children and adolescents, and to reduce the impact and severity of stressful life experiences. These adults should provide both multiple opportunities in multiple environments for youth to learn and practice social-emotional competencies and reinforce these competencies when they are demonstrated. This suggests a multi-faceted prevention strategy, which includes schools, after-school programs, and, when necessary, social service and mental health programs. These programs should be (a) individualized and based upon the unique strengths and needs of each child, (b) implemented in a collaborative framework that stresses parent-professional and inter-agency partnerships, and (c) subjected to evaluations, so that the outcomes for each child are amply documented. The Devereux Student Strengths Assessment (DESSA) has been developed to assist school, after-school, social service, and mental health professionals in meeting these objectives, by providing a nationally standardized system of assessing social-emotional competencies.

The DESSA measures social-emotional competencies in children and youth in kindergarten through the eighth grade. By social-emotional competence, we refer to the ability of children to successfully interact with other children and adults in a way that demonstrates an awareness of, and ability to manage, emotions in an age-appropriate and context-appropriate manner. Although competence can connote being adequate or minimally sufficient (e.g., competent to stand trial, or a competent performance) in the context of the DESSA, we consider competence to be a

continuum ranging from incompetence to being fully proficient. We view the DESSA as measuring "How well the child has met, and continues to meet, the expectations explicitly or implicitly set in the society for children as they grow up." (Wright & Masten, 2005, p. 21). The goal should be not to support the attainment of minimally adequate social-emotional competency, but to assist the child in developing strengths in these areas.

We consider the social-emotional competencies measured by the DESSA to be critically important personal attributes that can benefit all children. For children exposed to significant risk factors, stress or adversity, social-emotional competencies serve as protective factors, moderating or buffering the impact of those negative factors and leading to more positive outcomes for the children than would have been expected in their absence (Masten & Garmezy, 1985; Sameroff & Gutman, 2004). Low scores on the social-emotional competency scales of the DESSA can help identify children who may be at risk for developing behavioral problems. For children already experiencing significant emotional and behavioral concerns, the DESSA can uncover strengths that can be nurtured and needs that should be addressed to increase the likelihood of more positive treatment outcomes. Even for children at low levels of risk, the social-emotional competencies measured by the DESSA are correlated with positive outcomes (see Chapter 3 for this validity evidence). A detailed description of the conceptual underpinnings of the DESSA and the utilization of the assessment within the context of Positive Youth Development, Resilience, and Social Emotional Learning are presented in Chapter 6.

Description of the DESSA

The DESSA is a 72-item standardized, norm-referenced behavior rating scale that assesses the social-emotional competencies that serve as protective factors for children in kindergarten through the eighth grade. The DESSA can be completed by parents, teachers, or staff at schools and child-serving agencies, including after-school, social service, and mental health programs. The assessment is entirely strength-based; meaning that the items query positive behaviors (e.g., get along with others) rather than maladaptive ones (e.g., annoy others).

The DESSA is organized into conceptually-derived scales that provide information about eight social-emotional competencies. Standard scores can be used to calibrate each child's competency in each of the eight dimensions and guide school/program-wide, class-wide, and individual strategies to promote those competencies. For each question, the rater is asked to indicate on a five-point scale how often the student engaged in each behavior over the past four weeks. The scale names, scale definitions, and sample scale items are as follows:

- ***Self-Awareness*** (7 items): A child's realistic understanding of her/his strengths and limitations and consistent desire for self-improvement.
  - give an opinion when asked?
  - describe how he/she was feeling?
  - ask somebody for feedback?
- ***Social-Awareness*** (9 items): A child's capacity to interact with others in a way that shows respect for their ideas and behaviors, recognizes her/his impact on them, and uses cooperation and tolerance in social situations.
  - get along with different types of people?
  - cooperate with peers or siblings?
  - forgive somebody that hurt or upset her/him?
- ***Self-Management*** (11 items): A child's success in controlling his or her emotions and behaviors, to complete a task or succeed in a new or challenging situation.
  - wait for her/his turn?
  - stay calm when faced with a challenge?
  - adjust well to changes in plans?
- ***Goal-Directed Behavior*** (10 items): A child's initiation of, and persistence in completing, tasks of varying difficulty.
  - keep trying when unsuccessful?
  - seek out additional information?
  - take steps to achieve goals?
- ***Relationship Skills*** (10 items): A child's consistent performance of socially acceptable actions that promote and maintain positive connections with others.
  - compliment or congratulate somebody?
  - offer to help somebody?
  - express concern for another person?
- ***Personal Responsibility*** (10 items): A child's tendency to be careful and reliable in her/his actions and in contributing to group efforts.
  - remember important information?
  - serve an important role at home or school?
  - handle his/her belongings with care?
- ***Decision Making*** (8 items): A child's approach to problem solving that involves learning from others and from her/his own previous experiences, using values to guide action, and accepting responsibility for decisions.
  - follow the example of a positive role model?
  - accept responsibility for what he/she did?
  - learn from experience?

- ***Optimistic Thinking*** (7 items): A child's attitude of confidence, hopefulness, and positive thinking regarding herself/himself and her/his life situations in the past, present, and future.
  - say good things about herself/himself ?
  - look forward to classes or activities at school?
  - express high expectations for himself/herself ?

Each of the eight DESSA scale scores is derived from the ratings of the items assigned to that scale. A Social-Emotional Composite score is also included, which is a combination of the above eight scales. This composite score provides an overall indication of the strength of the child's social-emotional competence. The separate scores on the eight DESSA scales are used to create Individual Student Profiles as well as Classroom/Program Profiles, to convey the strengths and needs of the student and/or groups of students as compared to national norms. This information can also be used to compare ratings across raters and/or environments and across time to monitor progress and evaluate outcomes. More information about these interpretation strategies will be presented in Chapter 5.

Uses of the DESSA

The DESSA has been developed to provide a measure of social-emotional competencies, which can be used to promote positive youth development. Specifically, the DESSA has been designed to:

- Provide a psychometrically sound, strength-based measure of social-emotional competence in children and youth.
- Identify children and youth at risk of developing social-emotional problems before those problems emerge.
- Identify the unique strengths and needs of individual children and youth who have already been identified as having social, emotional, and behavioral concerns.
- Provide meaningful information on child strengths for inclusion in individual education and service plans, as required by federal, state, and funder regulations.
- Facilitate parent-professional collaboration, by providing a means of comparing ratings on the same child to identify similarities and meaningful differences.
- Inform the selection and/or design of interventions for children needing various levels of support (universal, targeted, and indicated).
- Facilitate progress monitoring for individual children, by evaluating change over time at the individual scale level.

- Enable the evaluation of social-emotional learning and positive youth development programs, by rigorously evaluating outcomes at the child and classroom/program levels.
- Serve as a sound research tool to advance science and support public policy development.
- Provide a common language and approach to those adults involved in promoting positive youth development including: social scientists, policy makers, community members, mental health and social service professionals, teachers, and after-school staff.

Qualifications of DESSA Users and Raters

Qualifications of DESSA Users

For the purposes of this manual, DESSA *users* are those who not only administer the DESSA but also interpret its scores. The guidelines presented here should be considered a general description, rather than an exhaustive list, of those who may use the DESSA. In presenting these descriptions, we assume that the titles used by professionals in different settings vary, as do their levels of training and the regulations that govern professional practice in their states. In every case, however, the DESSA user has responsibility for the proper use and interpretation of DESSA results. Because DESSA results can be used to assess children and youth who are at risk of, or experiencing, significant emotional and behavioral disorders, to guide the development of intervention plans and educational plans, and to evaluate outcomes for children, DESSA users should have training in the proper administration, interpretation and utilization of the DESSA. This should include knowledge of the interpretation of standardized scores such as *T*-scores and percentiles, the interpretation of scale content and profiles, and how to communicate the results to parents, family caregivers and professionals. Typically, DESSA users will include administrators, counselors, educators, mental health consultants, nurses, program directors and evaluators, pediatricians, psychologists, researchers, school psychologists, and social workers.

Qualifications of DESSA Raters

A *rater* is any person who completes the items on the DESSA. There are two main qualifications of a rater: first, the rater must have had sufficient exposure to the child over the four weeks prior to completing the DESSA; and second, raters should also be able to read English at the 6th grade level. (Recommendations for using the DESSA with raters who have difficulty reading English are presented in Chapter 4). Because the scores are a function of the number of times specific behaviors have been

noted, a rater's insufficient opportunity to observe the child could yield an erroneously low rating. In general, raters should have contact with the child for two or more hours for at least three days per week for a four-week period.

Raters generally fall into two categories: 1) parents, guardians, or other adult caregivers who live with the child; and 2) teachers, after-school program staff or other professionals who interact directly with the child on a regular basis. The first group of raters is referred to as "parents" and the second group as "teachers" in the remainder of this manual and on the DESSA record form.

Restrictions for Use

DESSA users should follow both the instructions included in this manual and commonly accepted guidelines for test use and interpretation, such as the American Psychological Association's Standards for Educational and Psychological Testing (APA, 1999). It is the DESSA user's responsibility to ensure that completed DESSA protocols and reports remain secure and are released with parental consent only to professionals who will safeguard their proper use. Copyright law does not permit the DESSA user to photocopy or otherwise duplicate test items or record forms in any form, even for the purpose of sharing results with parents or multi-disciplinary teams. The completed DESSA Individual Student Profile may be copied and provided to parents after it has been reviewed with them. Because all DESSA items, norms, and other materials are copyrighted, no DESSA materials may be reproduced or transmitted in any form or by any means without written permission from Aperture Education.

CHAPTER 2

Development and Standardization

Development of the DESSA Items

The authors used a variety of approaches to develop the initial set of DESSA items. First, we carefully reviewed the literature on resilience (e.g., Werner & Smith, 1982, 1992), social-emotional learning (e.g., Payton et al., 2000), and positive youth development (e.g., Catalano, Berglund, Ryan, Lonczak, & Hawkins, 1998); and we noted behavioral descriptions of resilient children and youth. Second, we examined other strength-based assessments, such as the Devereux Early Childhood Assessment (DECA; LeBuffe & Naglieri, 1999a, 1999b). These approaches resulted in an initial set of 765 potential items. Next, we reduced this pool of potential items by combining statements with similar meanings, deleting those that were not measurable (e.g., references to non-observable subjective states or cognitions), and eliminating any that were overly value-laden or relatively unmodifiable, such as physical attractiveness.

The item-development phase resulted in a pool of 156 items, which served as the starting point in the construction of the DESSA. All the items were written to measure observable behaviors that would require little or no inference on the part of the observer. We carefully considered the reading level of the items so that the overall readability level of the DESSA would be as low as possible.

To investigate the usefulness of these initial items and their interrelationships, we conducted a national pilot study. Either parents or teachers completed ratings on 428 students in kindergarten through eighth grade. Of these students, 106 (25%) had already been identified as having significant emotional or behavioral disorders. We reduced the initial pool of 156 items by eliminating any items that showed less-than-satisfactory reliability (item-total correlations of < .60), did not differentiate between

those students with known emotional or behavioral disorders and those without by at least half a standard deviation, or were rated by 20% or more of the parents and teachers as unclear or not applicable. This resulted in a set of 81 items that we incorporated into the standardization edition of the DESSA.

National Standardization

We standardized the DESSA through a carefully prescribed method so that the sample would closely represent the United States population on several important dimensions. The data collection procedures also ensured that a wide variety of children and youth were included for the generation of norms. We collected data using both a paper form and an online, computerized version. Both samples were collected simultaneously from April 2005 through March 2006.

We collected ratings from two groups of individuals: (a) parents and other relatives living with the child, and (b) teachers and after-school program staff. We obtained teacher ratings from schools across the United States. We obtained parent ratings from these same schools; through recruitment posters at community locations, such as clinics and libraries; and through parenting listserves and Internet forums. Staff from 81 after-school programs participated in the development of the DESSA. To ensure confidentiality, the completed ratings were sent directly to the Devereux Foundation Institute of Clinical Training and Research (ICTR). No personally identifying information was included in the standardization protocols.

Representativeness of the DESSA Standardization Sample

A total of 2,494 children and youth who were in kindergarten through eighth grade at the time of the data collection comprised the DESSA standardization sample. Teachers and teacher aides provided ratings on 778 students; parents and other adult relatives living in the home provided ratings on 1,244 children and youth; and after-school and other program staff contributed the remaining 472 ratings.

A comparative analysis of responses obtained through paper and computerized versions utilizing hierarchical regression revealed that, when controlling for demographic variables, the administration format offered no additional predictive validity in explaining variation in DESSA scores (Berkley, 2008). Using the final norms tables, the mean DESSA Social-Emotional Composite *T*-scores were 50.6 and 49.3 (*d*-ratio of 0.1) for the Paper and Pencil and Online samples, respectively. The *d*-ratio indicates that the means of these two samples differed by approximately one-tenth of a standard deviation, which would be interpreted as a negligible effect size. Therefore, in all subsequent analyses we combined data obtained from both administration formats.

Similarly, there were minimal differences between the ratings provided by teachers and after-school staff, so these data sets were combined, as well. In all subsequent analyses and descriptions, "parent" refers to a parent or other adult relative living with the child; "teacher" refers to a teacher, teacher aide, or member of an after-school staff.

The DESSA standardization sample closely approximated the K–8 population of the United States with respect to age, gender, geographic region of residence, race, ethnicity, and socioeconomic status. We based the desired characteristics of the standardization sample on the *Statistical Abstract of the United States 2008: The National Data Book* published by the U.S. Census Bureau. In the tables that follow, the total numbers of children included may not sum to 2,494, due to missing data.

Grade and Gender

Table 2.1 presents the numbers and percentages of males and females in each grade from kindergarten through eighth grade. The number of children in each grade ranged from 104 in eighth grade to 492 in kindergarten. The overall mean number of students per grade was 275. These results show that each grade was well sampled. The data also show that the percentages of males and females in the standardization sample as a whole, as well as in each grade, closely approximated the proportions of the U.S. population.

TABLE 2.1
DESSA Standardization Sample Characteristics by Grade and Gender

	Males		Females		Total	
	n	%	*n*	%	*n*	%
Kindergarten	256	52.0	236	48.0	492	19.8
1st Grade	186	50.0	186	50.0	372	15.1
2nd Grade	161	50.0	161	50.0	322	13.1
3rd Grade	160	50.0	160	50.0	320	12.9
4th Grade	134	47.5	148	52.5	282	11.4
5th Grade	138	49.1	143	50.9	281	11.3
6th Grade	88	48.9	92	51.1	180	7.2
7th Grade	57	46.7	65	53.3	122	4.9
8th Grade	46	44.2	58	55.8	104	4.2
Total Sample	1,226	49.5	1,249	50.5	2,475	
U.S. %		51.2		48.8		

Note: The U.S. population data are based on the 2006 figures for 5- through 14-year-olds only in "Resident Population by Age and Sex: 1980 to 2006, Table No. 7," *Statistical Abstract of the United States 2008 (127th edition)*: U.S. Census Bureau, 2008.

Geographic Region

We collected data from parents and teachers of students attending 711 schools in all 50 states and the District of Columbia. Table 2.2 shows the numbers and percentages of students by grade level and location, according to the four geographic regions designated by the U.S. Census Bureau: Northeast, South, Midwest, and West. These data show that the DESSA standardization sample closely approximated the regional distribution of the U.S. population.

TABLE 2.2
DESSA Standardization Sample Characteristics by Geographic Region and Grade

	Northeast		South		Midwest		West		Total
	n	%	*n*	%	*n*	%	*n*	%	*n*
Kindergarten	128	26.0	148	30.1	125	25.4	91	18.5	492
1st Grade	73	19.5	143	38.2	76	20.3	82	21.9	374
2nd Grade	63	19.3	132	40.5	63	19.3	68	20.9	326
3rd Grade	62	19.4	155	48.6	69	21.6	33	10.3	319
4th Grade	79	27.8	99	34.9	48	16.9	58	20.4	284
5th Grade	62	22.1	97	34.5	57	20.3	65	23.1	281
6th Grade	28	15.6	44	24.6	45	25.1	62	34.6	179
7th Grade	27	22.1	43	35.2	29	23.8	23	18.9	122
8th Grade	19	18.3	30	28.8	30	28.8	25	24.0	104
Total Sample	541	21.8	891	35.9	542	21.8	507	20.4	2,481
U.S. %		17.4		36.3		22.2		24.0	

Note: The U.S. population data are based on the 2006 figures for 5- through 17-year-olds only in "Resident Population by Age and State: 2006, Table No. 16," *Statistical Abstract of the United States 2008 (127th edition)*: U.S. Census Bureau, 2008.

Race

Table 2.3 provides the DESSA standardization sample composition by race and geographic region. Based on information provided on the rating forms, we classified the children according to the five major race categories used by the U.S. Census Bureau: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White. The data in Table 2.3 indicate that the racial composition of the total standardization sample closely approximated that of the U.S. population.

TABLE 2.3

DESSA Standardization Sample Characteristics by Race and Geographic Region

	American Indian/Alaska Native		Asian		Black/ African American		Native Hawaiian/ Pacific Islander		White		
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	Total
Northeast	9	1.7	7	1.3	190	35.6	0	0	327	61.4	533
South	16	1.8	22	2.5	200	22.3	3	0.3	424	47.3	665
Midwest	3	0.6	12	2.2	71	13.0	2	0.4	453	83.1	541
West	13	2.6	24	4.7	20	3.9	9	1.8	354	69.8	420
Total	41	1.9	65	3.0	481	22.3	14	0.6	1,558	72.2	2,159
U.S. %[1]		1.2		4.0		15.4		0.2		76.3	

Note: The U.S. race data are based on the 2006 figures for 5- through 14-year-olds only in "Resident Population by Race, Hispanic Origin, and Age: 2000 and 2006, Table No. 8," *Statistical Abstract of the United States 2008 (127th edition)*: U.S. Census Bureau, 2008.

[1]U.S. figures do not add up to 100% due to "Two or more Races" not being included.

Hispanic Ethnicity

The proportions of children of Hispanic ethnicity included in the DESSA standardization sample are presented in Table 2.4. These data, based on the number of participants who reported Hispanic ethnicity, show that the composition of the standardization sample closely approximated that of the U.S. population.

TABLE 2.4

DESSA Standardization Sample Characteristics by Hispanic Ethnicity and Geographic Region

	Hispanic		Non-Hispanic		
	n	%	*n*	%	Total
Northeast	35	6.4	510	93.6	545
South	259	28.9	638	71.1	897
Midwest	23	4.2	522	95.8	545
West	133	26.2	374	73.8	507
Total	450	18.0	2,044	82.0	2,494
U.S. %		19.9		80.1	

Note: The U.S. total Hispanic population data are based on the 2006 figures for 5- through 14-year-olds only in "Resident Population by Race, Hispanic Origin, and Single Years of Age: 2006, Table No. 9," *Statistical Abstract of the United States 2008 (127th edition)*: U.S. Census Bureau, 2008.

Socioeconomic Status

To assess the socioeconomic status of the DESSA standardization sample, we determined the number of students eligible to receive either free or reduced-price lunches. Of the entire sample of 2,494 students, 550 (22%) were eligible to receive free or reduced-price lunches. This very closely approximated the 25% of children and youth living in poverty. This figure is slightly higher than the 19% of families in 2005 whose income was $25,000 or less (U.S. Census Bureau, 2008, Table 685) and would qualify for the free school lunch program.

Organization of DESSA Items into Scales

The primary purpose of the DESSA is to provide teachers, parents, after-school staff, and other professionals concerned with the mental health of children and youth with a useful and meaningful set of scales that both reflect current social-emotional functioning and lead to strategies and interventions to promote social-emotional competencies. The description of core social-emotional competencies provided by the Collaborative for Academic, Social, and Emotional Learning (CASEL; **www.casel.org**) seemed to fit our items well. In addition, this framework is increasingly reflected in state and school-district educational standards (e.g., Illinois State; New York State; Anchorage, Alaska) as well as social and emotional learning curricula; and it is, therefore, familiar to many teachers and administrators.

Utilizing the standardization data set, we organized DESSA items into logically derived and statistically validated scales based, in part, on the CASEL framework. We subdivided two of the five core social-emotional competencies suggested by CASEL into more specific and unitary constructs, and we added an eighth scale composed of items reflecting a sense of optimism or hopefulness. Although not included in the CASEL framework, the construct of optimistic thinking is well established in literature on resilience. This process yielded eight preliminary first-order scales.

We then used a series of statistical analyses to further refine and simplify the scales based on the following goals: 1) To identify the best scale solution, from both psychometric and interpretability perspectives; 2) To shorten the DESSA as much as possible without compromising breadth of coverage; 3) To simplify the administration, scoring, and interpretation of the DESSA; and 4) To ensure that the constructs were measured reliably by the scales. We examined the corrected item-total correlations to ensure that each item correlated highly with the scale to which it was assigned. To simplify the scales and avoid the necessity of age norms, we eliminated any item that evidenced age trends. Nine items were eliminated as a result of these steps, resulting in a final set of 72 items comprising the eight scales. Based upon the sum of the standard scores of all

eight scales, we also created a Social-Emotional Composite, which provides an overall estimate of a child's social and emotional competencies.

Norming Procedures

The first step in preparation of the norms was to determine if any trends existed in the data. We examined the DESSA scale raw scores for age, rater, and gender differences. Table 2.5 presents the raw-score means for the eight DESSA scales in three-grade intervals. These data are also presented in Figure 2.1. It is apparent that there is only minor variability across grades in these means, indicating an absence of age trends across the K–8 range; therefore, we constructed the norms for all grades combined.

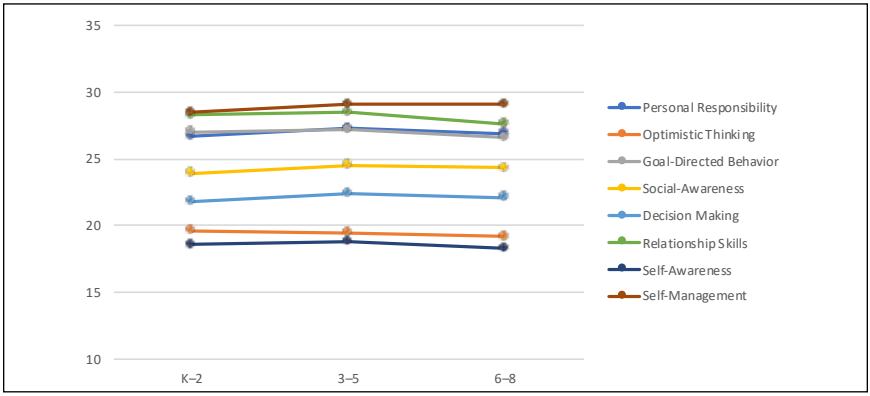
We also examined the Social-Emotional Composite raw scores for rater differences. There were significant differences between the ratings provided by parents and teachers. Consequently, we prepared separate norms for parents and teachers. This is to be expected, as behavior often differs across environments and in the presence of different adults.

TABLE 2.5
DESSA Raw Score Means by Age Group

	Scales	K–2	3–5	6–8
PR	Personal Responsibility	26.7	27.3	26.9
OT	Optimistic Thinking	19.6	19.5	19.2
GB	Goal-Directed Behavior	27.0	27.2	26.6
SO	Social-Awareness	23.9	24.5	24.3
DM	Decision Making	21.8	22.4	22.1
RS	Relationship Skills	28.3	28.5	27.6
SA	Self-Awareness	18.6	18.8	18.3
SM	Self-Management	28.5	29.1	29.1

FIGURE 2.1

DESSA Raw Score Means by Age Group



Mean-score differences also indicated gender differences, which reflect real disparities in how boys and girls behave. Table 2.6 presents the *T*-score means, standard deviations, and sample size by scale and by rater for boys and girls. For both parent and teacher raters, the mean-scale *T*-scores for girls are consistently two to four points higher than those for boys. To evaluate the practical significance of these mean-scale *T*-score differences, we calculated *d*-ratios, a measure of effect size, which are presented in Table 2.6. This statistic is computed by subtracting one mean from the other and dividing that difference by the average standard deviation for the two groups being contrasted. According to Cohen (1988), *d*-ratio values of less than .2 are negligible. Those between .2 and .5 reflect a small-effect size. Those between .5 and .8 indicate a medium-effect size, and *d*-ratios greater than .8 indicate a large-effect size. All of the *d*-ratios presented in Table 2.6 would be classified as small. The data in this table indicate that, as a group, girls consistently show more behaviors related to social and emotional competence than boys, but the magnitude of this difference is small.

Girls in the DESSA standardization sample earned higher scores than boys on each scale. In order to preserve these important differences in social-emotional competencies, we constructed the raw-score-to-*T*-score norms-conversion tables based on both genders. Consequently, it can be expected that girls will, on average, earn higher scores on the DESSA than boys. This reflects the natural differences between the genders and establishes a single set of social-emotional competency expectations that applies equally to both genders.

After determining that norms would be constructed by rater, we examined the distributions of raw scores for normality. The cumulative frequency distributions for the scales all approached normality, but they were slightly positively skewed. For this reason, we decided to compute norms using normalization procedures. This was accomplished by fitting the obtained frequency distribution for each scale to normal

probability standard scores, via the obtained percentile ranks. We eliminated minor irregularities in raw-score-to-standard-score progressions by smoothing, and we followed these procedures for all the scales. For the eight scales and the Social-Emotional Composite, we computed standard scores (*T*-scores with a mean of 50 and a standard deviation of 10) based on percentile score distributions separately, for teacher and parent raters. We based the Social-Emotional Composite *T*-score on the percentile distribution of the sum of the eight *T*-scores corresponding to the DESSA scales for each case. We selected the *T*-score metric because of its familiarity to professionals and because it facilitates interpretation of the results and comparison to scores obtained from other, similar scales.

TABLE 2.6
DESSA Standard Score Gender Differences by Scale

	Males			Male Female *d*-ratio	Females		
	Mean	*SD*	*n*		*Mean*	*SD*	*n*
TEACHER RATERS							
Personal Responsibility	48.23	9.98	631	–0.42	52.28	9.30	611
Optimistic Thinking	48.97	10.14	627	–0.30	51.88	9.47	612
Goal-Directed Behavior	48.60	10.05	631	–0.33	51.80	9.38	611
Social-Awareness	48.58	10.13	630	–0.31	51.66	9.64	612
Decision Making	48.44	10.08	631	–0.37	52.05	9.32	612
Relationship Skills	48.36	10.04	630	–0.41	52.33	9.30	612
Self-Awareness	49.05	10.28	631	–0.22	51.17	9.36	611
Self-Management	48.32	10.02	631	–0.39	52.02	9.18	612
Social-Emotional Composite	48.30	10.09	625	–0.38	51.93	9.02	609
PARENT RATERS							
Personal Responsibility	48.14	9.52	602	–0.36	51.66	9.87	641
Optimistic Thinking	48.37	9.86	602	–0.33	51.62	9.82	641
Goal-Directed Behavior	47.92	9.51	602	–0.41	51.90	9.96	641
Social-Awareness	48.71	9.75	602	–0.25	51.10	9.71	641
Decision Making	48.56	9.76	602	–0.29	51.41	9.62	641
Relationship Skills	48.40	9.72	602	–0.33	51.65	9.90	641
Self-Awareness	48.40	10.03	602	–0.32	51.54	9.51	641
Self-Management	48.80	9.98	602	–0.27	51.51	9.94	641
Social-Emotional Composite	48.24	9.51	602	–0.37	51.77	9.60	641

CHAPTER 3

Psychometric Properties

Reliability

The reliability of an assessment tool like the DESSA is defined as, "the consistency of scores obtained by the same person when reexamined with the same test on different occasions, or with different sets of equivalent items, or under other variable examining conditions" (Anastasi, 1988, p. 102). DESSA scale reliability was assessed using several methods. First, the internal reliability coefficient for each scale was computed. Second, test–retest reliability of each scale was assessed. Finally, interrater reliability (two raters evaluating the same student) for each scale was determined.

Internal Reliability

Internal reliability (or internal consistency) refers to the extent to which the items on the same scale or assessment instrument measure the same underlying construct. We determined internal consistency using Cronbach's alpha (Cronbach, 1951). The internal reliability coefficients were based on the individuals included in the DESSA standardization sample. The internal consistency estimates for each scale were calculated according to rater and are presented in Table 3.1. The results indicate that the DESSA scales have excellent internal reliability. The Social-Emotional Composite reliability was computed using the formula provided by Nunnally and Bernstein (1994) for the reliability of a linear combination. The Social-Emotional Composite coefficients for parent raters (.98) and teacher raters (.99) both well exceed the .90 value for a total score suggested by Bracken (1987) and also meet the "desirable standard" described by Nunnally (1978, p. 246).

The internal reliability coefficients for the eight social-emotional competence scales range from a low of .82 (Optimistic Thinking and Self-Awareness – Parent Raters) to a high of .94 (Relationship Skills – Teacher Raters). The median reliability coefficient across these eight scales was .855 for parent raters and .92 for teacher raters. These median values well exceed the .80 minimum suggested by Bracken (1987).

TABLE 3.1
Internal Reliability (Alpha) Coefficients for the DESSA Scales by Rater

Scales	Raters	
	Parents	Teachers
Social-Emotional Composite	.98	.99
Personal Responsibility	.86	.92
Optimistic Thinking	.82	.89
Goal-Directed Behavior	.88	.93
Social-Awareness	.84	.91
Decision Making	.85	.92
Relationship Skills	.89	.94
Self-Awareness	.82	.89
Self-Management	.86	.92

Standard Errors of Measurement

The standard error of measurement (SE_M) is an estimate of the amount of error in observed scores, expressed in standard score units (i.e., *T*-scores). We obtained the SE_M for each of the DESSA scale *T*-scores directly from the internal reliability coefficients using the formula,

$$SE_M = SD\sqrt{1 - reliability}$$

where SD is the theoretical standard deviation of the *T*-score (10) and the appropriate reliability coefficient is used. The SE_Ms for each DESSA scale are presented in Table 3.2 according to rater. Note that the values of the SE_M vary with the size of the reliability coefficient — the higher the reliability, the smaller the standard error of measurement. The values presented in Table 3.2 were calculated with reliability coefficients with three decimal places. These coefficients in Table 3.1 are rounded to two decimal places.

TABLE 3.2

Standard Errors of Measurement for the DESSA Scale *T*-Scores by Rater

Scales	Raters	
	Parents	Teachers
Social-Emotional Composite	1.55	1.11
Personal Responsibility	3.78	2.76
Optimistic Thinking	4.29	3.30
Goal-Directed Behavior	3.39	2.61
Social-Awareness	4.00	3.03
Decision Making	3.85	2.88
Relationship Skills	3.27	2.53
Self-Awareness	4.18	3.38
Self-Management	3.70	2.74

Test–Retest Reliability

The correlation between scores obtained for the same child on two separate occasions is another indicator of the reliability of an assessment instrument. The correlation of this pair of scores is the test–retest reliability coefficient (r), and the magnitude of the obtained value informs us about the degree to which random changes influence the scores (Anastasi, 1988).

To investigate the test–retest reliability of the DESSA, a group of teachers (n = 38) and a group of parents (n = 54) rated the same child on two different occasions separated by an interval of four to eight days. Demographic information on this diverse convenience sample is provided in Table 3.3.

TABLE 3.3
Sample Characteristics for the DESSA Test–Retest Reliability Study

	Parent Sample		Teacher Sample	
	n	%	*n*	%
Size of Sample	54		38	
Age (grade)				
Mean	3.6		4.2	
SD	2.6		2.6	
Gender				
Boys	31	57	17	45
Girls	23	43	20	53
Missing	0	0	1	2
Race				
American Indian/Alaskan Native	0	0	1	3
Asian	2	4	0	0
Black/African American	3	6	11	29
Native Hawaiian/Pacific Islander	0	0	1	3
White	51	94	22	58
Other	2	4	1	3
Hispanic Ethnicity	2	4	2	5
Region of Residence				
Northeast	19	35	5	13
South	15	28	0	0
Midwest	15	28	23	60
West	2	4	10	27
Other/Missing	3	5	0	0

The results of this study are shown in Table 3.4. All of the correlations are significant ($p < .01$) and high in magnitude ranging from $r = .79$ (Social-Awareness – Parent Raters) to $r = .94$ (Personal Responsibility and Decision Making Scales – Teacher Raters). The median test–retest reliability coefficients are .86 and .925 for parent and teacher raters respectively. These findings indicate that the DESSA scales have good test–retest reliability.

TABLE 3.4

Test–Retest Reliability Coefficients for Two DESSA Ratings by the Same Teacher or Same Parent for the Same Child over a 4- to 8-Day Interval

Scales	Raters	
	Parents	Teachers
Social-Emotional Composite	.90*	.94*
Personal Responsibility	.86*	.94*
Optimistic Thinking	.88*	.88*
Goal-Directed Behavior	.86*	.90*
Social-Awareness	.79*	.93*
Decision Making	.88*	.94*
Relationship Skills	.90*	.92*
Self-Awareness	.85*	.86*
Self-Management	.84*	.93*

*$p < .01$

Interrater Reliability

The correlation between scores obtained for the same child at the same time by two different raters is an indicator of the interrater reliability of an assessment instrument. The magnitude of the correlations between these scores tells us about the degree of similarity in the different raters' perception of the child's behavior. The optimal condition for evaluating the interrater reliability of an assessment is to have two raters observing the same child in the same environment at the same time. Therefore, we examined the interrater reliability of the DESSA by comparing ratings obtained from two parents who live in the same household with the child ($n = 51$) or two teachers, or a teacher and teacher aide, who either work in the same classroom or see the same child in different classrooms for core academic subjects ($n = 51$). In these studies, the sample size (n) refers to the number of unique pairs of adults rating a child. Demographic information on these two samples is presented in Table 3.5.

The correlations of a set of ratings obtained for the same children by two parents or two teachers (or a teacher and a teacher aide) are provided in Table 3.6. These results indicate that pairs of parents or pairs of teachers who saw the children in the same environment at the same time rated the children very similarly. All the correlations are significant ($p < .01$) and moderate to high in magnitude. The Social-Emotional Composite correlations are .78 for parent raters and .80 for teacher raters. For the eight individual scales, the values range from .63 (Self-Management – Parent Raters) to .84

(Decision Making – Teacher Raters). The median correlation coefficients are .725 and .735 for parent and teacher raters, respectively.

TABLE 3.5
Sample Characteristics for the DESSA Interrater Reliability Study

	Parent Sample		Teacher Sample	
	n	%	*n*	%
Size of Sample	51		51	
Age (Grade)				
Mean	3.2		2.5	
SD	2.6		2.3	
Gender				
Boys	26	51	29	57
Girls	25	49	22	43
Race				
American Indian/Alaskan Native	2	4	1	2
Asian	2	4	1	2
Black/African American	3	6	16	31
Native Hawaiian/Pacific Islander	0	0	0	0
White	47	92	29	57
Other	0	0	1	2
Hispanic Ethnicity	7	14	6	12
Region of Residence				
Northeast	13	25	28	55
South	14	27	0	0
Midwest	12	24	10	20
West	12	24	13	25

TABLE 3.6

Interrater Reliability Coefficients for Two DESSA Ratings by Two Parents or Two Teachers for the Same Child

Scales	Raters	
	Parents	Teachers
Social-Emotional Composite	.78*	.80*
Personal Responsibility	.80*	.77*
Optimistic Thinking	.69*	.69*
Goal-Directed Behavior	.77*	.77*
Social-Awareness	.76*	.70*
Decision Making	.68*	.84*
Relationship Skills	.78*	.71*
Self-Awareness	.66*	.72*
Self-Management	.63*	.75*

*$p < .01$

Stability of DESSA Ratings

The correlation coefficients reported for the test–retest and interrater reliability studies indicate that the pairs of raters in each study ranked the children similarly. However, the coefficients do not indicate the actual similarity in the scores. Tables 3.7A and 3.7B provide the pretest and posttest mean scale scores and standard deviations received by the children in the test–retest study by parents and teachers respectively.

For parent raters, on average, the absolute value of the test–retest difference on the eight social-emotional competence scales was less than one *T*-score point (0.82). The Social-Emotional Composite test–retest absolute value difference for parents was also less than one *T*-score point (0.8). The results for teacher raters were very similar. On the eight social-emotional competence scales, the mean absolute value of the test–retest difference was less than one *T*-score point (0.51) as was the absolute value of the test–retest difference for the Social-Emotional Composite (0.6). These results demonstrate that the DESSA ratings are very stable across a four- to eight-day interval for both parent and teacher raters.

TABLE 3.7A

Pretest and Posttest Mean Scale Scores and Standard Deviations — Parent Raters

Scales	Pretest	Posttest
Social-Emotional Composite	46.9 (9.5)	46.9 (10.1)
Personal Responsibility	45.6 (9.7)	46.3 (9.4)
Optimistic Thinking	45.5 (9.7)	46.4 (10.9)
Goal-Directed Behavior	46.3 (9.0)	46.7 (9.4)
Social-Awareness	46.5 (9.1)	46.9 (10.2)
Decision Making	46.3 (9.9)	47.7 (10.1)
Relationship Skills	48.3 (10.8)	48.9 (10.8)
Self-Awareness	46.9 (9.4)	48.4 (9.0)
Self-Management	47.0 (8.9)	47.6 (9.6)

TABLE 3.7B

Pretest and Posttest Mean Scale Scores and Standard Deviations — Teacher Raters

Scales	Pretest	Posttest
Social-Emotional Composite	46.7 (10.6)	46.1 (11.4)
Personal Responsibility	47.2 (11.1)	46.8 (11.2)
Optimistic Thinking	46.5 (11.1)	45.3 (11.5)
Goal-Directed Behavior	47.0 (10.1)	46.7 (10.9)
Social-Awareness	48.2 (11.8)	47.7 (12.4)
Decision Making	46.8 (11.2)	47.1 (12.2)
Relationship Skills	47.0 (10.4)	46.0 (10.5)
Self-Awareness	46.7 (8.9)	47.0 (9.1)
Self-Management	47.7 (10.6)	47.5 (11.7)

Tables 3.8A and 3.8B present the interrater reliability study mean scale scores and standard deviations for parent and teacher raters respectively. Pairs of parent raters differed, on average, by about one *T*-score point (0.9) across the eight social-emotional competence scales, and by half a *T*-score point (0.5) on the Social-Emotional Composite. Teachers were even more consistent in their ratings, differing by an

average of 0.32 *T*-score points on the eight social-emotional competency scales and 0.4 *T*-score points on the Social-Emotional Composite.

TABLE 3.8A
Interrater Reliability Study Mean Scale Scores and Standard Deviations — Parent Raters

Scales	Parent 1	Parent 2
Social-Emotional Composite	46.9 (10.5)	46.4 (10.9)
Personal Responsibility	44.8 (10.4)	45.8 (10.0)
Optimistic Thinking	48.8 (11.1)	47.7 (11.2)
Goal-Directed Behavior	47.8 (10.0)	46.8 (11.0)
Social-Awareness	47.2 (9.9)	46.2 (10.5)
Decision Making	47.1 (10.2)	47.2 (10.4)
Relationship Skills	47.7 (10.7)	46.8 (10.4)
Self-Awareness	49.1 (10.2)	48.0 (10.3)
Self-Management	46.8 (10.8)	45.8 (10.8)

TABLE 3.8B
Interrater Reliability Study Mean Scale Scores and Standard Deviations — Teacher Raters

Scales	Teacher 1	Teacher 2
Social-Emotional Composite	49.3 (10.4)	48.9 (11.4)
Personal Responsibility	49.4 (10.2)	49.4 (11.2)
Optimistic Thinking	49.0 (10.4)	48.5 (11.6)
Goal-Directed Behavior	48.6 (10.2)	48.2 (11.0)
Social-Awareness	50.1 (11.0)	50.4 (11.5)
Decision Making	49.7 (11.2)	49.0 (11.1)
Relationship Skills	50.2 (10.5)	50.5 (11.6)
Self-Awareness	48.5 (10.4)	48.2 (11.8)
Self-Management	49.5 (10.8)	49.1 (11.0)

Reliability Study Summary

The results of the several reliability studies of the DESSA indicate that the instrument is reliable for assessing children's social-emotional competencies. The results of the internal consistency data demonstrate that the DESSA meets standards suggested by Bracken (1987). The test–retest study shows that raters rank the children's scores on the DESSA similarly over time. The results of the interrater reliability study show that different parents and teachers also rank children's scores similarly. The stability studies further indicate that not only the rankings, but also the actual mean scale scores received by the children at different points in time or by different raters, are quite similar.

Validity

The validity of a test "concerns what the test measures and how well it does so" (Anastasi, 1988, p. 139). More specifically, validity "is the degree to which all the accumulated evidence supports the intended interpretation of test scores for the proposed purpose" (APA, 1999, p. 11). According to the *Standards for Educational and Psychological Testing* (APA, 1999), the sources of validity evidence can be conceptualized in various ways. We investigated the validity of the DESSA in regard to *test content* (content validity), *internal structure* (presented in Chapter 2 on the development of the DESSA), *relations to other variables* (construct validity), and *test-criterion relationships* (criterion validity).

Content-Related Validity

This type of validity assesses the degree to which the domain measured by the test is represented by the test items. With respect to the DESSA, content-related validity addresses how well the 72 items represent the domain of behavioral characteristics related to social-emotional competence and resilience.

As detailed in Chapter 2, we based the items on the DESSA on a thorough review of the literature on social-emotional competence, positive youth development and resilience in school-aged children. We also based the items on the DESSA, in part, on our earlier publication, the Devereux Early Childhood Assessment (DECA; LeBuffe & Naglieri, 1999a, 1999b), which has its own research base.

Criterion-Related Validity

This type of validity measures the degree to which the scores on the assessment predict either an individual's performance on an outcome or criterion measure, or the status or group membership of the individual. As a measure of behaviors related to social-emotional competence, scores on the DESSA should predict social-emotional functioning of school-aged children. To test this hypothesis, we obtained DESSA ratings on two samples of students. First, we obtained a sample of children who were reported by their parent or teacher to be receiving special education services under the "seriously emotionally disturbed" (SED) classification. The children in this SED sample ($n = 78$) were matched to a comparison group (referred to as the Regular Education [RE] sample [$n = 78$]) selected from the national standardization sample. Matching variables included: type of rater, gender of the child and age of the child. Table 3.9 provides descriptive information on both samples and shows that the two groups were demographically similar.

We compared the RE and SED groups using multivariate analysis of variance (MANOVA) procedures to contrast the eight social-emotional competence scale scores. An independent t-test was used to compare the Social-Emotional Composite scores for the two groups. The results of these analyses are provided in Table 3.10, which documents that there were large and significant differences between the mean scores of the SED and RE samples on all DESSA scales. The mean standard score differences and other results reported in Table 3.10 clearly show that the ratings of the two groups differed significantly, despite the similarity in demographic characteristics. All scale comparisons were significant ($p < .01$).

In addition to being statistically significant, the means of the two groups on each scale differed by at least 80% of a standard deviation or more (*d*-ratios range from .83 to 1.36). The *d*-ratio is a measure of the size of the difference between the mean scores of two groups, expressed in standard deviation units. According to commonly accepted guidelines for interpreting *d*-ratios (Cohen, 1988), *d*-ratios of .2, .5 and .8 are interpreted as small, medium and large, respectively. Therefore, all of the effect sizes reported in Table 3.10 would be characterized as large. The Social-Emotional Composite also differentiated between the two samples in this study (t (155) = 8.12, $p < .01$; $d = 1.31$). These results provide strong evidence of the validity of the DESSA scales in discriminating between groups of students identified as seriously emotionally disturbed and their regular education peers.

TABLE 3.9
Sample Characteristics for the DESSA Criterion Validity Study

	SED Sample		Regular Education Sample	
	n	%	*n*	%
Size of Sample	78		78	
Rater				
Parent	38	49	38	49
Teacher	40	51	40	51
Age (Grade)				
Mean	3.36		3.36	
SD	2.58		2.58	
Gender				
Boys	51	65	51	65
Girls	27	35	27	35
Race				
American Indian/Alaskan Native	0	0	2	2.6
Asian	1	1.3	0	0
Black/African American	16	20.5	16	20.5
Native Hawaiian/Pacific Islander	0	0	0	0
White	54	69.2	54	69.2
Other	3	3.8	0	0
Hispanic Ethnicity	9	11.5	9	11.5
Region of Residence				
Northeast	19	24.4	27	34.6
South	18	23.1	21	26.9
Midwest	27	34.6	14	17.9
West	14	17.9	14	17.9
Other	0	0	2	2.6

TABLE 3.10

Mean *T*-Scores, Standard Deviations, and Difference Statistics for the DESSA Criterion Validity Study

	SED Sample		Regular Education Sample
Personal Responsibility			
Mean	37.1		48.9
SD	7.9		9.9
F Value		67.2*	
d-ratio		1.33	
Optimistic Thinking			
Mean	37.9		48.8
SD	8.3		10.4
F Value		52.1*	
d-ratio		1.17	
Goal-Directed Behavior			
Mean	37.9		49.0
SD	8.3		9.8
F Value		58.2*	
d-ratio		1.23	
Social-Awareness			
Mean	36.6		48.1
SD	7.7		10.3
F Value		61.7*	
d-ratio		1.28	
Decision Making			
Mean	37.6		48.2
SD	8.2		9.1
F Value		58.8*	
d-ratio		1.23	

Table 3.10 Continued

	SED Sample		Regular Education Sample
Relationship Skills			
Mean	39.2		48.3
SD	8.2		10.6
F Value		36.7*	
d-ratio		.97	
Self-Awareness			
Mean	40.6		48.6
SD	9.0		10.2
F Value		27.0*	
d-ratio		.83	
Self-Management			
Mean	36.3		48.4
SD	8.1		9.6
F Value		71.6*	
d-ratio		1.37	
Social-Emotional Composite			
Mean	36.4		48.2
SD	7.9		10.1
t Value[a]		8.12*	
d-ratio		1.31	

*$p < .01$

[a]*t* test for independent samples

Examination of Racial and Ethnic Differences

The contrasted group approach can also be used to examine group differences on a variable thought to be irrelevant to the construct being assessed. Messick (1995) calls this construct irrelevant variance. This strategy can be utilized to examine the appropriateness of the DESSA for use with children from diverse racial and ethnic groups. In this initial study, we compared the mean scores of the Black and White children and of the Hispanic and non-Hispanic White children included in the standardization sample. The goal was to determine if these groups of children received similar ratings on the DESSA.

To assess the differences in the DESSA ratings we compared the means using the *d*-ratio statistic. Table 3.11 presents the results of these analyses. The results in Table 3.11 indicate that the DESSA scores earned by Black, White, and Hispanic children were similar. The differences between Black and White children when rated by teachers were negligible (*d*-ratio of less than .20) for five of the nine comparisons, and small (*d*-ratio of .20 to .49) for the remaining four comparisons according to Cohen's interpretive guidelines. In fact, the largest *d*-ratio was .24. For parent raters, seven of the nine comparisons were negligible and the remaining two were small. Again, the highest *d*-ratio was .24.

For teachers, non-Hispanic White children were rated slightly more positively than Hispanic children, but all of the *d*-ratios would be categorized as small, ranging from .20 to .39. The median *d*-ratio was .26. For parent raters, eight of the nine comparisons yielded negligible differences in mean scale scores. Only one comparison yielded a *d*-ratio in the small range, and in that case, the parents rated the Hispanic children somewhat higher than their non-Hispanic White peers.

When all raters are considered together, the median effect size for Black compared to White children was .185. When Hispanic and non-Hispanic White children are compared, the median effect size was .20. These results indicate that these groups of children receive very similar mean scale scores on the DESSA, despite the demographic differences noted above. Further research is needed to explore the complex moderators and mediators of these small relationships, where they exist (e.g., child socio-economic status, immigration and acclimation status, racial and ethnic consistency of child and rater).

TABLE 3.11

DESSA Scale Scores: *d*-Ratios Comparing Minority and Non-Minority Children

	Blacks			Black/White *d*-ratio	Whites			Hispanic/White *d*-ratio	Hispanics		
	Mean	*SD*	*n*		*Mean*	*SD*	*n*		*Mean*	*SD*	*n*
TEACHER RATERS											
Personal Responsibility	49.50	8.81	356	–.21	51.46	9.92	539	.27	48.80	9.47	285
Optimistic Thinking	49.93	8.12	356	–.18	51.62	9.99	537	.29	48.80	9.39	284
Goal-Directed Behavior	49.69	8.17	357	–.17	51.08	8.09	539	.25	49.00	9.03	284
Social-Awareness	49.27	8.24	357	–.19	51.05	9.92	538	.20	49.12	9.82	285
Decision Making	49.39	8.19	357	–.22	51.38	9.73	539	.24	48.99	9.82	285
Relationship Skills	49.63	8.03	356	–.23	51.45	8.03	539	.31	48.85	9.22	285
Self-Awareness	49.66	8.24	357	–.13	50.88	9.87	539	.20	48.98	9.60	284
Self-Management	49.12	8.21	357	–.24	51.34	9.64	539	.26	48.84	9.31	285
Social-Emotional Composite	49.34	10.12	354	–.19	51.24	9.69	536	.26	48.74	9.38	282
PARENT RATERS											
Personal Responsibility	50.63	10.93	88	.07	49.91	9.65	927	–.03	50.18	10.33	98
Optimistic Thinking	51.80	11.48	88	.21	49.72	9.68	927	–.09	50.63	10.10	98
Goal-Directed Behavior	51.50	11.63	88	.19	49.57	9.78	927	–.23	51.87	9.86	98
Social-Awareness	50.52	11.42	88	.08	49.74	9.49	927	–.05	50.23	11.15	98
Decision Making	51.05	10.87	88	.12	49.88	9.49	927	.00	49.92	11.08	98
Relationship Skills	51.06	10.83	88	.11	49.99	9.81	927	.06	49.43	10.49	98
Self-Awareness	51.88	10.81	88	.24	49.52	9.63	927	–.14	50.88	10.29	98
Self-Management	50.48	11.64	88	.03	50.15	9.82	927	.03	49.90	11.07	98
Social-Emotional Composite	51.18	11.55	88	.14	49.83	9.40	927	–.06	50.45	10.59	98

Individual Prediction

The criterion validity of an assessment can also be determined by examining the ability of scale scores to predict accurately group membership. The extent to which the Social-Emotional Composite scores accurately predicted membership in either the SED or the RE samples was, therefore, examined.

For the Social-Emotional Composite, we predicted that individuals with a *T*-score of less than or equal to 40 would be members of the SED sample, and those with scores above 40 would be members of the RE sample. (As explained in Chapter 5, *T*-scores of 40 and below on DESSA scales indicate areas of concern.) We then compared these predictions with actual group membership. Table 3.12 presents the results of this study.

As shown in Table 3.12, low Social-Emotional Composite scores correctly predicted group membership for 68% of the SED sample. Similarly, average to high Social-Emotional Composite scores correctly predicted 76% of the RE sample. Overall, the Social-Emotional Composite scores correctly predicted group membership for 72% of the 156 children in this study. Significant chi-square analysis results (X^2 (4, N = 156) = 29.8, p < .001; *phi* coefficient = .44) indicate that the Social-Emotional Composite scores were significantly related to group membership.

TABLE 3.12

Actual and Predicted Group Membership for the DESSA Criterion Validity Study

	SED Sample		Regular Education Sample	
	n	%	*n*	%
Actual Group Membership	78		78	
Predicted Group Membership Social-Emotional Composite				
SEC ≤ 40	53	67.9	19	24.4
SEC > 40	25	32.1	59	75.6

It should be noted that the classification accuracy of any assessment is determined both by the psychometric properties of the assessment and the decision rules (i.e., cut scores) used to make these decisions. A less stringent decision rule will result in more children being identified as having significant social-emotional needs. A more stringent decision rule will result in fewer children being identified. In the case of the DESSA, we have chosen a relatively stringent decision rule to minimize the chances of children being overidentified as having social-emotional concerns.

Construct-Related Validity

This type of validity examines the degree to which the assessment instrument measures the theoretical construct of interest. In the case of the DESSA, two types of construct validity were investigated. The first concerns the relationships between DESSA scale scores and scores on other widely used measures of behavioral strengths and problematic behaviors in children. This study is discussed below in the "convergent validity" section. The second study pertains to the assertion that the DESSA measures behaviors related to resilience in children. This study is discussed below in the "protective factor study" section.

Convergent Validity

One common approach to establishing the construct validity of an assessment is to demonstrate that scores on the assessment in question correlate positively with scores of similar constructs on other well-developed measures. This is referred to as convergent validity. To provide evidence of convergent validity, we correlated *T*-scores on the DESSA with standard scores from the Behavioral and Emotional Rating Scale-Second Edition (BERS-2; Epstein, 2004) and the Behavior Assessment System for Children-Second Edition (BASC-2; Reynolds & Kamphaus, 2004). Parents ($n = 133$) and teachers ($n = 94$) completed the DESSA and the BERS-2 and/or BASC-2 in one session. More details about this study are reported by Nickerson and Fishman (2009).

The demographic characteristics of the children involved in this study are presented in Table 3.13. Because some raters completed both a BERS-2 and a BASC-2, as well as the DESSA, the sum of the four individual samples exceeds the total sample sizes reported above. Regardless, Table 3.13 indicates that this was a varied sample.

The results of this study, which are presented in Table 3.14, indicate that the DESSA has strong convergent validity with the total scale scores for both the BERS-2 and the BASC-2. The DESSA Social-Emotional Composite (SEC) correlated significantly ($r = .80$, $p < .01$) with the BERS-2 Strength Index for both parent and teacher raters. Similarly, the DESSA SEC correlated significantly with the Adaptive Skills Scale on the BASC-2 for both parents ($r = .77$, $p < .01$) and teachers ($r = .92$, $p < .01$). Furthermore, as would be expected, the SEC correlated negatively with Behavioral Symptoms Index of the BASC-2 for both parents ($r = –.64$, $p < .01$) and teachers ($r = –.72$, $p < .01$). Finally, the SEC was negatively correlated with the School Problems Scale of the BASC-2, which is completed only by teachers ($r = –.70$, $p < .01$). The full array of correlation results for all scales on the DESSA, BERS-2 and BASC-2 is presented in Nickerson and Fishman (2009).

TABLE 3.13

Demographic Characteristics of the DESSA Construct Validity Sample

	Parent BERS-2 *(n=89)*		Teacher BERS-2 *(n=59)*		Parent BASC-2 *(n=75)*		Teacher BASC-2 *(n=65)*	
Variable	*n*	%	*n*	%	*n*	%	*n*	%
Age (years)	M=9.7	SD=3.0	M=9.6	SD=3.2	M=9.7	SD=2.4	M=9.4	SD=3.1
Gender								
Male	54	60.7	33	56.9	47	63.5	39	60.0
Female	35	39.3	25	43.1	27	36.5	26	40.0
Race/Ethnicity								
White	70	78.7	34	59.6	53	71.6	32	50.0
Black	12	13.5	17	29.8	13	17.6	21	32.8
American Indian/ Alaskan Native	1	1.1			1	1.4	2	3.1
Asian	4	4.5			5	6.8		
Hispanic	7	7.9	6	10.5	8	10.8	7	10.9
Native Hawaiian/ Pacific Islander	1	1.1			1	1.4	1	1.6
Other					2	2.7	1	1.6
Region								
Northeast	44	51.2	38	64.4	36	50.0	31	47.7
South	30	34.9	9	15.3	22	30.6	9	13.8
Midwest	6	7.0	10	16.9	9	12.5	14	21.5
West	4	4.7	2	3.4	5	6.9	11	16.9
Eligibility	11	12.4	18	31.6	8	10.8	19	30.2

Note: Eligibility = Eligibiity for free or reduced lunch. BERS-2 = Behavioral and Emotional Rating Scales — Second Edition. BASC-2 = Behavior Assessment System for Children — Second Edition.

TABLE 3.14

Results of the DESSA Construct Validity Study Correlation of the DESSA Social-Emotional Composite with BERS-2 and BASC-2 Summary Scales

Scale	Raters	
	Parents	Teachers
BERS-2		
Strength Index	.80*	.80*
BASC-2		
Adaptive Skills	.77*	.92*
Behavioral Symptoms Index	–.64*	–.72*
School Problems	N/A	–.70*

*$p < .01$

Protective Factor Study

As presented in Chapter 6, the social-emotional competencies measured by the DESSA are conceptualized within a broader risk and resilience framework. As such, these competencies represent one important category of within-child protective factors. Consequently, the social-emotional competencies measured by the DESSA should be associated with a decrease in the impact of risk in children's lives. This study was conducted to test that assertion and to provide evidence that the DESSA scales can be considered to be measures of within-child protective factors.

We collected the data for this analysis from a convenience sample of parents and caregivers living in the United States ($N = 146$). The demographic characteristics of this sample are presented in Table 3.15 and indicate that this was a diverse group of children.

Risk was measured through two caregiver questionnaires, summed to determine a Total Risk Index. The first questionnaire, the Major Life Events Checklist, contained 30 items and was adapted with permission from Work, Cowen, Parker, and Wyman (1990). The second questionnaire, the 40-item Daily Hassles Checklist was adapted with permission from Kanner, Coyne, Schaefer, and Lazarus (1981). We collected item level information through dichotomous variables. We then summed the number of endorsed items on each scale to create a scale raw score. This variable was then transformed to a linear *T*-score. Students were classified as "high risk" if their score was one or more standard deviations above the mean (> 60) and otherwise classified as "average or low risk."

TABLE 3.15
Demographic Characteristics of the DESSA Protective Factor Study

	Parent Sample	
	n	%
Size of Sample	146	
Age (Grade)		
Mean	3.5	
SD	2.7	
Gender		
Boys	69	47
Girls	77	53
Race		
American Indian/Alaskan Native	1	1
Asian	3	2
Black/African American	28	19
Native Hawaiian/Pacific Islander	0	0
White	110	75
Hispanic Ethnicity	26	18
Region of Residence		
Northeast	73	50
South	41	28
Midwest	15	10
West	17	12

We assessed protective factors with the DESSA Social-Emotional Composite (SEC). Students were classified as "low competence" if their *T*-score on the SEC was one or more standard deviations below the mean (< 40). These students would be classified on the DESSA as in "need of instruction." Otherwise, students were classified as "average or high competence." This process resulted in four groups: High Risk – Low Competence, High Risk – Average/High Competence, Average/Low Risk-Low Competence and Average/Low Risk – Average/High Competence.

The Devereux Behavioral Rating Scales – School Form (DSF; Naglieri, LeBuffe, & Pfeiffer, 1993) measures behaviors related to mental health diagnoses observed in the school context and was used as the dependent variable in this study. This 40-item behavior rating scale is consistent with the four-part definition of serious emotional

disturbance found in the federal special education legislation (IDEA, 2004). The Total Scale (mean = 100, *SD* = 15) was used in this study. On the DSF, higher scores indicate greater problem behaviors.

Table 3.16 and Figure 3.1 present the results of this study. We analyzed the results using a two-way factorial ANOVA (2 risk × 2 competence) comparing the four groups of students using the DSF Total Scale score as the dependent variable. Main effects exist for both the Risk (F (1) = 16.62, $p < .001$, $d = .93$) and Competence (F (1) = 18.71, $p < .001$, $d = 1.11$) variables. No interaction effect is detected ($p = .054$). These results indicate that social-emotional competence, as measured by the DESSA, reduces negative outcomes for both the high risk and the average/low risk groups, meeting the definition of protective factor. In addition, analyses reveal that DSF scores for the High Risk – Average/High Competence and the Average/Low Risk – Low Competence groups are quite similar, with means of 116.4 and 117.2, respectively.

FIGURE 3.1

Behavioral Concerns by Risk and Social-Emotional Competence Category

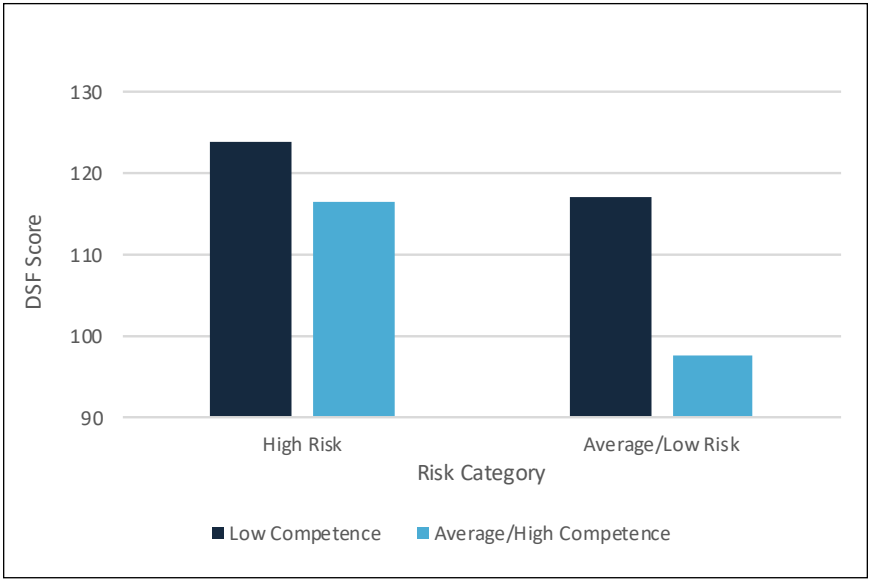


TABLE 3.16

Results of the DESSA Protective Factor Study

Risk	Competence	*n*	*Mean*	*SD*
High Risk	Low Competence	14	123.86	15
	Average/High Competence	17	116.41	18
Average/Low Risk	Low Competence	37	117.19	18
	Average/High Competence	78	97.58	13

Validity Study Summary

The content-related evidence provided in this chapter related the DESSA items to both the research and practice literatures on social-emotional competence in children. The results of the criterion-related validity studies demonstrated that DESSA scores do differentiate between groups of children with and without the special education designation of serious emotional disturbance. The construct-related evidence established that the DESSA scales do show strong convergent validity with similar, albeit clinically-oriented, measures and that the Social-Emotional Composite can be considered a measure of within-child protective factors.

The authors of the DESSA welcome any opportunities to assist other researchers in further exploring the validity and utility of the DESSA in assessing and ultimately helping to promote the social-emotional competence of children. The authors can be reached through the Devereux Foundation's Center for Resilient Children in Villanova, Pennsylvania.

CHAPTER 4

Administration and Scoring

General Administration Guidelines

The DESSA can be completed by a parent or family member (this includes parents, stepparents, foster parents, guardians, other relatives who live with the child) a teacher (this includes teachers, teacher aides, instructional assistants, etc.), after-school program staff, and staff from social service, mental health or child welfare programs. The person who actually completes the DESSA and provides the ratings is referred to as the "rater." The person who administers, scores and interprets the DESSA ratings is referred to as the "user." The qualifications of raters and users were described in Chapter 1. The following general guidelines for completing the DESSA should be reviewed with the rater:

- First, the rater should complete the DESSA during a quiet time when there are few distractions.
- Second, the rater should base the ratings on direct observations of the child, considering only behaviors that he/she has actually seen. The rater should not consider behaviors that were reported to occur in other classrooms or settings.
- Third, the rater should consider only those behaviors that have occurred in the past four weeks.
- Fourth, when completing the DESSA, the rater should avoid comparing the child being rated to other children. The rating should be based solely on the number of times the child being rated exhibited the behaviors, not how frequently the child exhibits the behavior in comparison to other children in the classroom.

- Fifth, the rater should answer every item. An inability to complete the items indicates that the rater may not know the child well, and another rater should be used.

Specific Directions for Completing the DESSA Record Form

The DESSA Record Form is used for the administration and scoring of the rating scale. There is one form, which is used for all children in kindergarten through the eighth grade. The same form is used for all raters.

A ballpoint pen works best when completing the DESSA Record Form. The DESSA is a multi-part, carbonless form, and the rater should be told to press firmly, so that the information provided on pages 2 and 3 will transfer to the inside pages.

Demographic Information

The top of pages 2 and 3 (see Figure 4.1) provides spaces (A) to record demographic information about the child being rated, including name, gender, date of birth, age, school/organization, classroom/program, and grade. There are also spaces to record the rater's name, relationship to the child (teacher, mother, etc.), and the date of the rating. Raters should complete all of the information at the top of pages 2 and 3 of the DESSA Record Form.

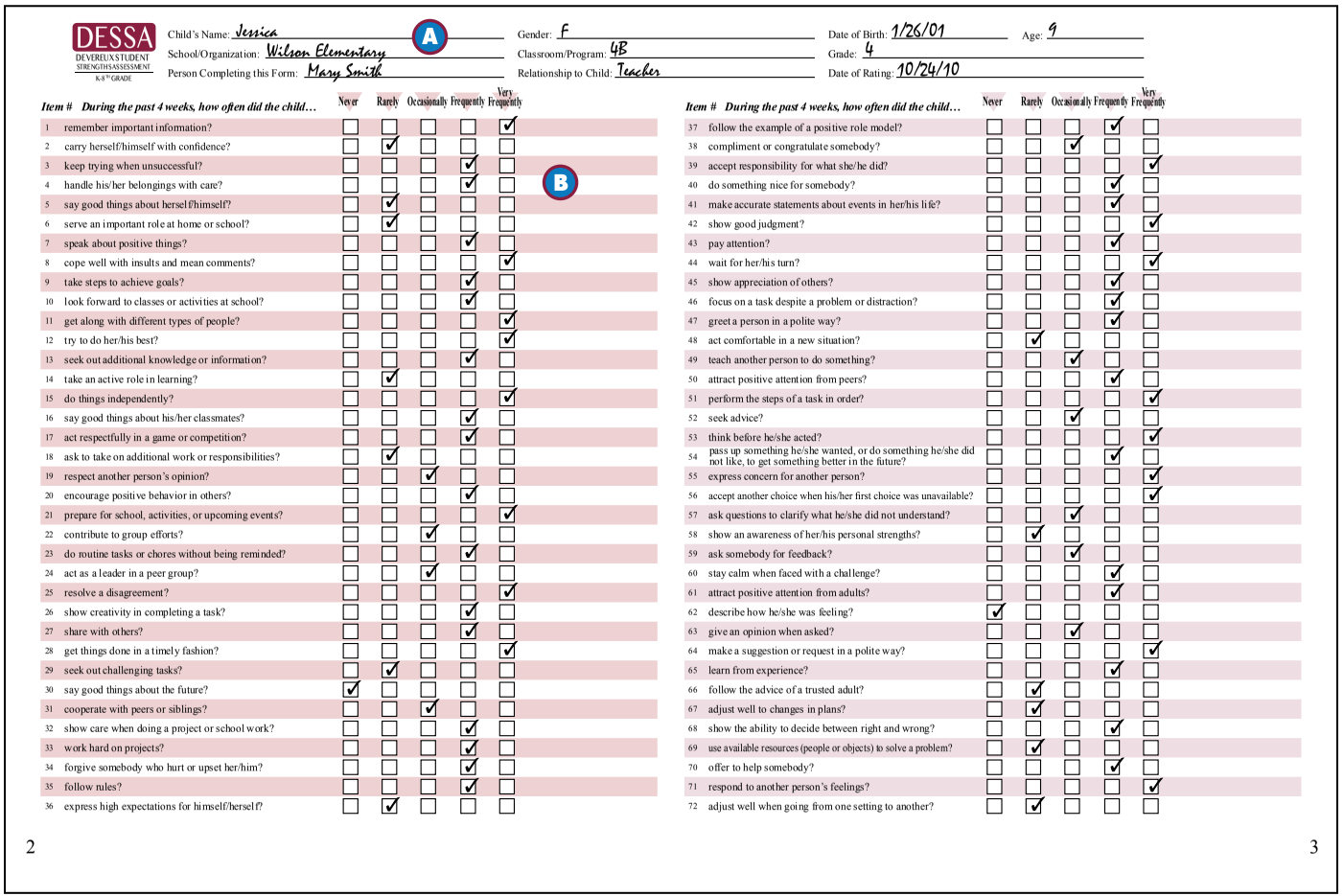
Completing the Ratings

Page 1 of the DESSA Record Form contains the following directions to the rater:

> This form describes a number of behaviors seen in some children. Read the statements that follow the phrase: ***During the past 4 weeks, how often did the child . . .*** and place a check mark in the box underneath the word that tells how often you saw the behavior. Please answer each question carefully.

FIGURE 4.1

DESSA Record Form Pages 2 and 3



DESSA
DEVEREUX STUDENT STRENGTHS ASSESSMENT
K-8TH GRADE

Child's Name: Jessica (A) Gender: F Date of Birth: 1/26/01 Age: 9
School/Organization: Wilson Elementary Classroom/Program: 4B Grade: 4
Person Completing this Form: Mary Smith Relationship to Child: Teacher Date of Rating: 10/24/10

Item #	During the past 4 weeks, how often did the child…	Never	Rarely	Occasionally	Frequently	Very Frequently
1	remember important information?					✓
2	carry herself/himself with confidence?		✓			
3	keep trying when unsuccessful?				✓	
4	handle his/her belongings with care?				✓	
5	say good things about herself/himself?		✓			
6	serve an important role at home or school?		✓			
7	speak about positive things?				✓	
8	cope well with insults and mean comments?					✓
9	take steps to achieve goals?				✓	
10	look forward to classes or activities at school?				✓	
11	get along with different types of people?					✓
12	try to do her/his best?					✓
13	seek out additional knowledge or information?				✓	
14	take an active role in learning?		✓			
15	do things independently?					✓
16	say good things about his/her classmates?				✓	
17	act respectfully in a game or competition?				✓	
18	ask to take on additional work or responsibilities?		✓			
19	respect another person's opinion?			✓		
20	encourage positive behavior in others?				✓	
21	prepare for school, activities, or upcoming events?					✓
22	contribute to group efforts?			✓		
23	do routine tasks or chores without being reminded?				✓	
24	act as a leader in a peer group?			✓		
25	resolve a disagreement?					✓
26	show creativity in completing a task?				✓	
27	share with others?				✓	
28	get things done in a timely fashion?					✓
29	seek out challenging tasks?		✓			
30	say good things about the future?	✓				
31	cooperate with peers or siblings?			✓		
32	show care when doing a project or school work?				✓	
33	work hard on projects?				✓	
34	forgive somebody who hurt or upset her/him?				✓	
35	follow rules?				✓	
36	express high expectations for himself/herself?		✓			

(B)

Item #	During the past 4 weeks, how often did the child…	Never	Rarely	Occasionally	Frequently	Very Frequently
37	follow the example of a positive role model?				✓	
38	compliment or congratulate somebody?			✓		
39	accept responsibility for what she/he did?					✓
40	do something nice for somebody?				✓	
41	make accurate statements about events in her/his life?				✓	
42	show good judgment?					✓
43	pay attention?				✓	
44	wait for her/his turn?					✓
45	show appreciation of others?				✓	
46	focus on a task despite a problem or distraction?				✓	
47	greet a person in a polite way?				✓	
48	act comfortable in a new situation?		✓			
49	teach another person to do something?			✓		
50	attract positive attention from peers?				✓	
51	perform the steps of a task in order?					✓
52	seek advice?			✓		
53	think before he/she acted?					✓
54	pass up something he/she wanted, or do something he/she did not like, to get something better in the future?				✓	
55	express concern for another person?					✓
56	accept another choice when his/her first choice was unavailable?					✓
57	ask questions to clarify what he/she did not understand?			✓		
58	show an awareness of her/his personal strengths?		✓			
59	ask somebody for feedback?			✓		
60	stay calm when faced with a challenge?				✓	
61	attract positive attention from adults?				✓	
62	describe how he/she was feeling?	✓				
63	give an opinion when asked?			✓		
64	make a suggestion or request in a polite way?					✓
65	learn from experience?				✓	
66	follow the advice of a trusted adult?		✓			
67	adjust well to changes in plans?		✓			
68	show the ability to decide between right and wrong?				✓	
69	use available resources (people or objects) to solve a problem?		✓			
70	offer to help somebody?				✓	
71	respond to another person's feelings?					✓
72	adjust well when going from one setting to another?		✓			

2 3

There are no right or wrong answers. If you wish to change your answer, put an X through it and fill in your new choice as shown below. Please do not skip any items.

The 72 items that comprise the DESSA are on pages 2 and 3. The rater responds to each item by placing a checkmark in the appropriate box (B) underneath the words "Never," "Rarely," "Occasionally," "Frequently," or "Very Frequently."

Use of the DESSA with Raters Who Have Limited English Proficiency

If the rater has difficulty reading and completing the DESSA because of limited English proficiency, the DESSA items may be read to him/her. The person reading the DESSA for the rater should try not to influence the ratings. The items should be read in an even, calm tone and explanations of the items or examples should not be given. The person reading the DESSA should also not provide any feedback or react in any way to the rater's responses.

Scoring the DESSA

Once the form is completed, scoring the DESSA is simple. All of the scoring is done on the DESSA Record Form. Complete scoring directions are given below and also on page 8 of the Record Form.

Step 1: Recording the DESSA Item Raw Scores

The DESSA user should review the Record Form and make sure that all of the demographic information was provided and that all 72 items were completed. If any information or items were left blank, the rater should be asked to complete the information. When the information on the Record Form is complete, the DESSA user tears off the perforated strip at the top of the form, and opens the form downward. All of the scoring is performed on the inside pages of the DESSA Record form as described below.

When the rater places a checkmark in a box on page 2 or 3 to indicate the rating for a given item, that checkmark transfers to a corresponding box on page 4 or 5 of the Record Form (see (C) on Figure 4.2). The boxes on pages 4 and 5 contain numbers that are the raw score values associated with each rating as follows:

Never = 0
Rarely = 1
Occasionally = 2
Frequently = 3
Very Frequently = 4

The first step in scoring the DESSA is to copy the raw score value (0–4) from the box that was checked to the empty box on the same line (D).

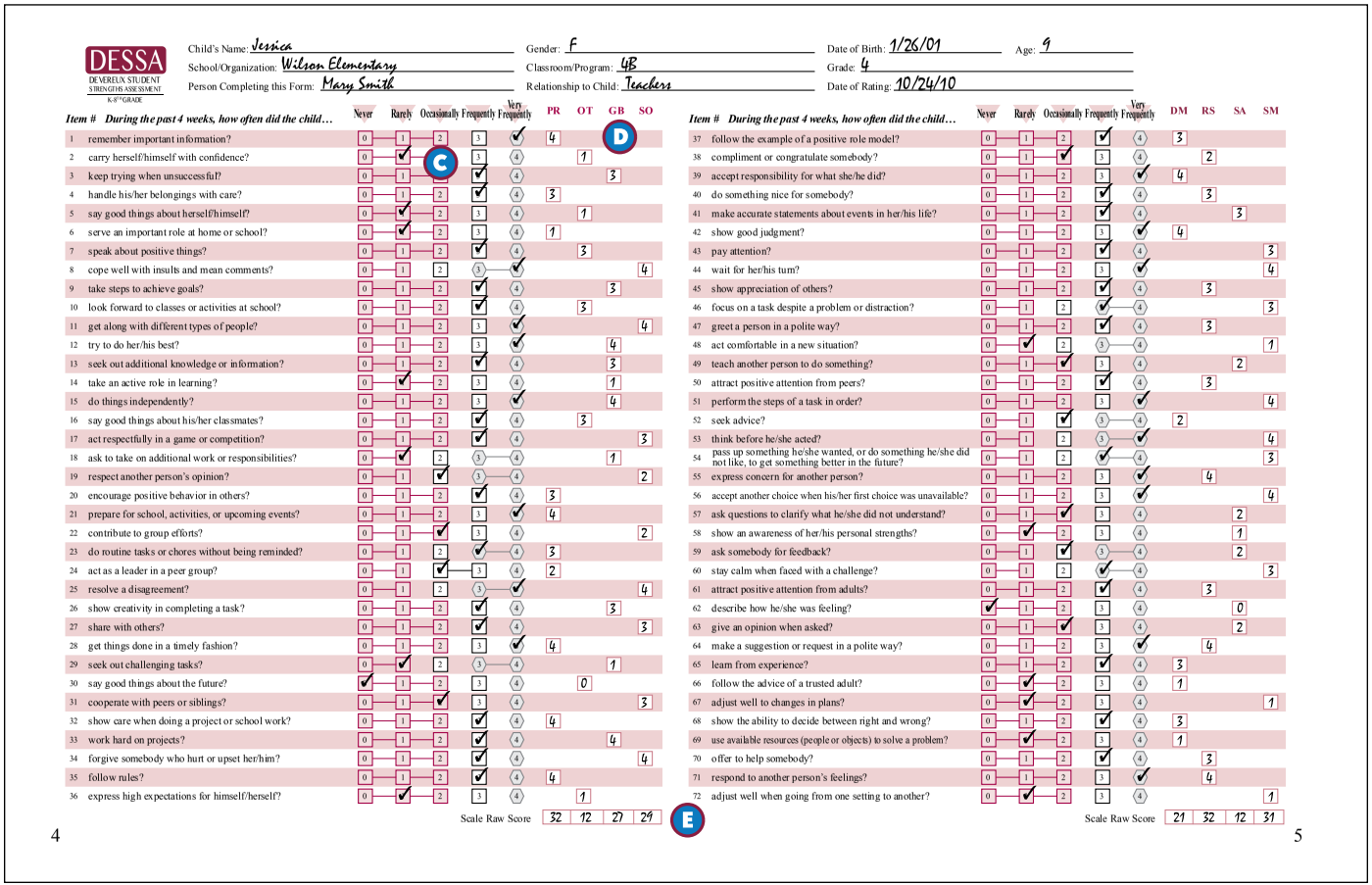
Treatment of Missing Items

As indicated above, the rater should be encouraged to complete all of the DESSA items. Although the DESSA items were developed so that they could be rated by parents, teachers and after-school staff, there may be some unusual instances in which a rater cannot rate a specific behavior. For instance, a rater may be unable to provide a rating for item #8 – "cope well with insults and mean comments," if the rater has never observed the child being teased or bullied. In circumstances such as these, the following guidelines apply:

1. There can be no more than three (3) items left blank on the entire DESSA.
2. There can be no more than one (1) item left blank on any individual scale.
3. If the above two conditions are met, the value that appears in the rectangular box with a black border on pages 4 and 5 of the Record Form should be used as the item raw score for that item. As explained in the next chapter, this is the typical or most common score for this item. Using this score minimizes biasing the scale either up or down. The user should circle the rating on pages 4 or 5 of the Record Form to note that the rating was not provided by the rater and was originally left blank.
4. If there are four (4) or more blank items in total, or two (2) or more blank items on any individual scale, the DESSA should be discarded and another rater found.

FIGURE 4.2

DESSA Record Form Pages 4 and 5



DESSA
DEVEREUX STUDENT STRENGTHS ASSESSMENT
K-8TH GRADE

Child's Name: Jessica
Gender: F
Date of Birth: 1/26/01
Age: 9
School/Organization: Wilson Elementary
Classroom/Program: 4B
Grade: 4
Person Completing this Form: Mary Smith
Relationship to Child: Teacher
Date of Rating: 10/24/10

Item #	During the past 4 weeks, how often did the child…	Never	Rarely	Occasionally	Frequently	Very Frequently	PR	OT	GB	SO
1	remember important information?	0	1	2	3	✓	4		D	
2	carry herself/himself with confidence?	0	✓	C	3	4		1		
3	keep trying when unsuccessful?	0	1		✓	4			3	
4	handle his/her belongings with care?	0	1	2	✓	4	3			
5	say good things about herself/himself?	0	✓	2	3	4		1		
6	serve an important role at home or school?	0	✓	2	3	4	1			
7	speak about positive things?	0	1	2	✓	4		3		
8	cope well with insults and mean comments?	0	1	2	3	✓				4
9	take steps to achieve goals?	0	1	2	✓	4			3	
10	look forward to classes or activities at school?	0	1	2	✓	4		3		
11	get along with different types of people?	0	1	2	3	✓				4
12	try to do her/his best?	0	1	2	3	✓			4	
13	seek out additional knowledge or information?	0	1	2	✓	4			3	
14	take an active role in learning?	0	✓	2	3	4			1	
15	do things independently?	0	1	2	3	✓			4	
16	say good things about his/her classmates?	0	1	2	✓	4		3		
17	act respectfully in a game or competition?	0	1	2	✓	4				3
18	ask to take on additional work or responsibilities?	0	✓	2	3	4			1	
19	respect another person's opinion?	0	1	✓	3	4				2
20	encourage positive behavior in others?	0	1	2	✓	4	3			
21	prepare for school, activities, or upcoming events?	0	1	2	3	✓	4			
22	contribute to group efforts?	0	1	✓	3	4				2
23	do routine tasks or chores without being reminded?	0	1	2	✓	4	3			
24	act as a leader in a peer group?	0	1	✓	3	4	2			
25	resolve a disagreement?	0	1	2	3	✓				4
26	show creativity in completing a task?	0	1	2	✓	4			3	
27	share with others?	0	1	2	✓	4				3
28	get things done in a timely fashion?	0	1	2	3	✓	4			
29	seek out challenging tasks?	0	✓	2	3	4			1	
30	say good things about the future?	✓	1	2	3	4		0		
31	cooperate with peers or siblings?	0	1	✓	3	4				3
32	show care when doing a project or school work?	0	1	2	✓	4	4			
33	work hard on projects?	0	1	2	✓	4			4	
34	forgive somebody who hurt or upset her/him?	0	1	2	✓	4				4
35	follow rules?	0	1	2	✓	4	4			
36	express high expectations for himself/herself?	0	✓	2	3	4		1		
	Scale Raw Score						32	12	27	29

Item #	During the past 4 weeks, how often did the child…	Never	Rarely	Occasionally	Frequently	Very Frequently	DM	RS	SA	SM
37	follow the example of a positive role model?	0	1	2	✓	4	3			
38	compliment or congratulate somebody?	0	1	✓	3	4		2		
39	accept responsibility for what she/he did?	0	1	2	3	✓	4			
40	do something nice for somebody?	0	1	2	✓	4		3		
41	make accurate statements about events in her/his life?	0	1	2	✓	4			3	
42	show good judgment?	0	1	2	3	✓	4			
43	pay attention?	0	1	2	✓	4				3
44	wait for her/his turn?	0	1	2	3	✓				4
45	show appreciation of others?	0	1	2	✓	4		3		
46	focus on a task despite a problem or distraction?	0	1	2	✓	4				3
47	greet a person in a polite way?	0	1	2	✓	4		3		
48	act comfortable in a new situation?	0	✓	2	3	4				1
49	teach another person to do something?	0	1	✓	3	4			2	
50	attract positive attention from peers?	0	1	2	✓	4		3		
51	perform the steps of a task in order?	0	1	2	3	✓				4
52	seek advice?	0	1	✓	3	4	2			
53	think before he/she acted?	0	1	2	3	✓				4
54	pass up something he/she wanted, or do something he/she did not like, to get something better in the future?	0	1	2	✓	4				3
55	express concern for another person?	0	1	2	3	✓		4		
56	accept another choice when his/her first choice was unavailable?	0	1	2	3	✓				4
57	ask questions to clarify what he/she did not understand?	0	1	✓	3	4			2	
58	show an awareness of her/his personal strengths?	0	✓	2	3	4			1	
59	ask somebody for feedback?	0	1	✓	3	4			2	
60	stay calm when faced with a challenge?	0	1	2	✓	4				3
61	attract positive attention from adults?	0	1	2	✓	4		3		
62	describe how he/she was feeling?	✓	1	2	3	4			0	
63	give an opinion when asked?	0	1	✓	3	4			2	
64	make a suggestion or request in a polite way?	0	1	2	3	✓		4		
65	learn from experience?	0	1	2	✓	4	3			
66	follow the advice of a trusted adult?	0	✓	2	3	4	1			
67	adjust well to changes in plans?	0	✓	2	3	4				1
68	show the ability to decide between right and wrong?	0	1	2	✓	4	3			
69	use available resources (people or objects) to solve a problem?	0	✓	2	3	4	1			
70	offer to help somebody?	0	1	2	✓	4		3		
71	respond to another person's feelings?	0	1	2	3	✓		4		
72	adjust well when going from one setting to another?	0	✓	2	3	4				1
	Scale Raw Score						21	32	12	31

E

4

5

Step 2: Calculating the DESSA Scale Raw Scores

The Scale Raw Scores for the eight scales (Personal Responsibility, Optimistic Thinking, Goal-Directed Behavior, Social-Awareness, Decision Making, Relationship Skills, Self-Awareness, and Self-Management) are obtained by adding the raw scores for all of the items that comprise each scale. On pages 4 and 5 of the Record Form, the boxes where the item raw score values were copied are arranged in eight columns, one for each scale (see Figure 4.2). To compute the Scale Raw Scores for the eight scales, add the item raw scores in each column and enter the sums in the boxes (E) provided at the bottom of pages 4 and 5. Then, copy these Scale Raw Scores on the first row of the Scale Score Summary Table (F) as shown in Figure 4.3.

Step 3: Determining DESSA *T*-Scores and Percentiles

The norms tables found on page 6 of the record form (G), and also in Appendix A of this manual, are used to determine the *T*-scores and percentile scores for each scale. To determine the *T*-score and percentile score for each scale, first determine the appropriate norms table (parent or teacher rater) to use. It is very important that the correct table is used. In Appendix A, Table 1 is for ratings obtained from a parent, and Table 2 is for ratings obtained from a teacher, after-school or program staff. On page 6 of the DESSA Record Form, the top norms table is for parent raters and the bottom table is for teacher raters. These norms tables are also available on a norms table card that is provided with the DESSA kit.

Then, using the appropriate table, find the Scale Raw Score in the column of numbers under the appropriate scale name. The corresponding *T*-score is found on the same row in the far left column labeled "*T*-scores." Similarly, the percentile score is found on the same row in the far right column. For example, in the Parent norms table, the Personal Responsibility Scale Raw Score of 32 corresponds to a *T*-score of 57, and a percentile score of 76. (The meaning of these scores is explained in Chapter 5.) The *T*-score and percentile score for each scale should be recorded on the second and third lines of the Scale Score Summary Table.

FIGURE 4.3

DESSA Record Form Pages 6 and 7

RATINGS BY PARENT

T-Score	Personal Responsibility	Optimistic Thinking	Goal-Directed Behavior	Social Awareness	Decision Making	Relationship Skills	Self-Awareness	Self-Management	Social-Emotional Composite		Percentile Score
72	40	28	40	36	32	40	28	44	558	576	99
71	39			35				43	534	557	98
70				34				42	510	533	98
69	38		39		31			41	539	547	97
68		27		33			27	40	529	537	96
67	37		38			39		39	523	528	96
66					30				516	522	95
65	36		37	32			26	38	509	515	93
64		26							500	507	92
63	35		36		29	38		37	492	499	90
62				31			25		484	491	88
61	34		35		28	37		36	476	483	86
60		25		30				35	467	473	84
59	33		34			36	24		459	466	82
58					27			34	452	458	79
57	32	24	33	29		35	23	33	443	451	76
56					26	34			435	442	73
55	31		32	28			22	32	428	434	69
54		23			25	33			422	427	66
53	30		31	27				31	416	421	62
52		22	30		24	32	21		408	414	58
51	29			26		31		30	402	407	54
50	28		29			30	20		392	401	50
49		21	28	25	23			29	386	391	46
48	27					29	19		381	385	42
47		20	27	24	22			28	375	380	38
46	26		26			28			370	374	34
45		19		23	21		18	27	364	369	31
44	25		25			27		26	357	363	27
43	24	18	24	22		26	17		348	356	24
42					20			25	341	348	21
41	23	17	23	21		25	16	24	337	340	19
40	22		22		19	24			327	336	16
39		16		20	18		15	23	319	326	14
38	21		21			23		22	313	318	12
37	20	15	20	19	17		14	21	308	312	10
36	19		19			22		20	299	307	8
35		14	18	18	16	21	13	20	292	298	7
34	18		17					19	288	291	6
33	17	13		17	15	20	12		282	287	4
32			16			19	11	18	276	281	4
31	16	12	15	16	14	18			272	275	3
30	15	11		15		17	10	17	265	271	2
29	14		14	14	13	16	9	16	260	264	2
28	0 to 13	0 to 10	0 to 13	0 to 13	0 to 12	0 to 15	0 to 8	0 to 15	0	259	1
T-Score	Personal Responsibility	Optimistic Thinking	Goal-Directed Behavior	Social Awareness	Decision Making	Relationship Skills	Self-Awareness	Self-Management	Social-Emotional Composite		Percentile Score

G

RATINGS BY TEACHER

T-Score	Personal Responsibility	Optimistic Thinking	Goal-Directed Behavior	Social Awareness	Decision Making	Relationship Skills	Self-Awareness	Self-Management	Social-Emotional Composite		Percentile Score
72	40	28	40	36	32	40	28	44	561	576	99
71				35				43	559	560	98
70							27		554	558	98
69	39	27	39	34	31	39		42	545	553	97
68				33				41	540	544	96
67	38		38		30		26		533	539	96
66		26		32		38		40	528	532	95
65	37		37		29		25		519	527	93
64		25	36	31		37		39	511	518	92
63	36				28	36	24	38	501	510	90
62	35	24	35	30		35			493	500	88
61	34		34		27		23	37	486	492	86
60		23		29		34		36	476	485	84
59	33		33		26	33	22	35	466	475	82
58	32		32	28		32		34	458	465	79
57		22	31		25		21		448	457	76
56	31			27		31		33	439	447	73
55		21	30				20		433	438	69
54	30			26	24	30		32	425	432	66
53	29	20	29			29		31	416	424	62
52			28	25	23	28	19	30	408	415	58
51	28	19	27	24					402	407	54
50	27				22	27	18	29	394	401	50
49	26	18	26	23				28	387	393	46
48	25		25		21	26	17	27	379	386	42
47	24	17	24	22	20	25			374	378	38
46	23		23		19	24	16	26	367	373	34
45	22	16	22	21	18	23		25	361	366	31
44	21		21	20		22	15	24	353	360	27
43		15	20	19	17	21		23	347	352	24
42	20	14	19		16	20	14	22	339	346	21
41	19		18	18	15		13	21	332	338	18
40	18	13	17	17		19	12	20	325	331	16
39	17	12		16	14	18		19	316	324	14
38	16		16	15	13	17	11	18	310	315	12
37	15	11	15	14	12	16		17	303	309	10
36	14		14			15	10	16	297	302	9
35	13	10	13	13	11	14	9	15	290	296	7
34		9	12	12	10	13	8	14	281	289	5
33	12		11	11		12	7	13	276	280	4
32	11	8	10	10	9	11		12	271	275	4
31	10	7	9	9	8	10	6	11	267	270	3
30	9	6	8	8		9	5	10	259	266	2
29			7	7	7	8	4	9	247	258	2
28	0 to 8	0 to 5	0 to 6	0 to 6	0 to 6	0 to 7	0 to 3	0 to 8	0	246	1
T-Score	Personal Responsibility	Optimistic Thinking	Goal-Directed Behavior	Social Awareness	Decision Making	Relationship Skills	Self-Awareness	Self-Management	Social-Emotional Composite		Percentile Score

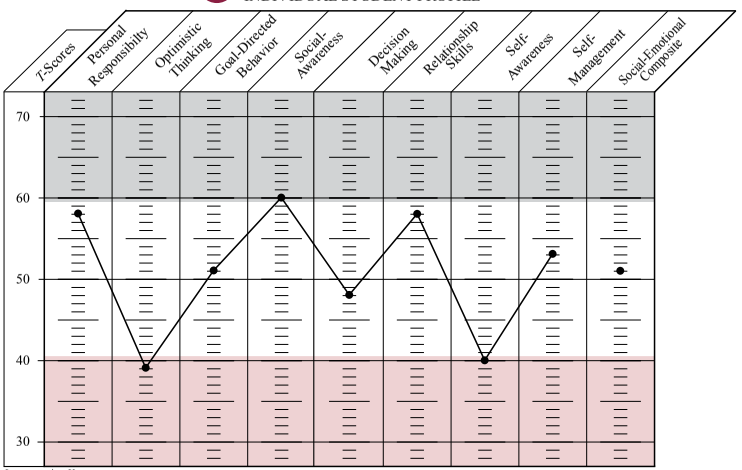
F

	PR	OT	GB	SO	DM	RS	SA	SM	Social-Emotional Composite	
	Personal Responsibility	Optimistic Thinking	Goal-Directed Behavior	Social-Awareness	Decision Making	Relationship Skills	Self-Awareness	Self-Management		
Scale Raw Score	32	12	27	29	21	32	12	31		
T-Score	58	+ 39	+ 51	+ 60	+ 48	+ 58	+ 40	+ 53	= 407	Scale Raw Score
Percentile Score	79	14	54	84	42	79	16	62	51	*T*-Score
Description	Typical	Need	Typical	Strength	Typical	Typical	Need	Typical	54	Percentile Score
									Typical	Description

SCALE SCORE SUMMARY TABLE

H

INDIVIDUAL STUDENT PROFILE



Interpretation Key

T-scores that fall within the gray shaded box indicate a *strength*.
T-scores that fall in the non-shaded area are described as *typical*.
T-scores that fall within a red shaded box indicate a *need for instruction*.

I

Step 4: Determining the *T*-Score and Percentile Score for the Social-Emotional Composite

To calculate the *T*-score and percentile score for the Social-Emotional Composite, begin by adding the *T*-scores for eight scales as indicated by the "+" and "=" signs on the Scale Score Summary Table. The sum of these eight *T*-scores is treated as the Scale Raw Score for the Social-Emotional Composite. The corresponding *T*-score and percentile score are determined in exactly the same way as described for the eight scales in Step 3. On the appropriate norms table, find the Social-Emotional Composite raw score (that is the sum of the eight scale *T*-scores) in the column of numbers under "Social-Emotional Composite." The corresponding *T*-score and percentile score are found on the same row in the far left and far right columns, respectively. Record these values on the Scale Score Summary Table. The sum of the eight scale *T*-scores is used to determine the Social-Emotional Composite Scale Raw Score so that each scale has an equal contribution to or influence on this summary scale.

Step 5: Creating the Individual Student Profile

The DESSA Individual Student Profile (H) is used to graphically display the child's scores on the nine DESSA scales. To create the DESSA Individual Student Profile, mark the appropriate *T*-score for each scale. Then connect the eight scale *T*-scores to create the child's scale score profile. Do not connect the score for the Social-Emotional Composite to the other eight scales.

Step 6: Determining the Description for Each Scale

An interpretation key is provided at the bottom of the Individual Student Profile (I). This key indicates the preferred terminology for describing various DESSA scores. For each scale, high scores (*T*-scores of 60 and above) are referred to as *strengths*. This range of scores is indicated by gray shading on the Individual Student Profile. *T*-scores that fall between 41 and 59 inclusive are described as *typical*. Low scores (*T*-scores of 40 and below) are described as a *need for instruction*. This range of scores is indicated by red shading on the Individual Student Profile. The appropriate description for each scale should be recorded on the Scale Score Summary Table. When the Individual Student Profile has been created, and all of the information on the Scale Score Summary Table provided, the scoring of the DESSA is completed.

CHAPTER 5

Interpretation

Effective interpretation of any scale demands that the user be familiar with what is being measured, the scores that are provided, and how these scores should be interpreted. When interpreting DESSA scores, the DESSA user should always consider the following general guidelines. First, the DESSA user should have a thorough understanding of the meanings and appropriate uses of the various standard scores and profiles. These topics are discussed later in this chapter.

Second, in accordance with the NAEYC Position Statement, *Standardized Testing of Young Children through 8 Years of Age* (NAEYC, 1987), the *Standards for Educational and Psychological Testing* of the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education (APA, 1999), and federal special education law, a measure like the DESSA should always be used as part of a multi-faceted assessment of the child, involving multiple sources and types of information. This is especially important when making significant decisions about the child. Each set of DESSA scores is based on the ratings provided by a single adult. Therefore, the scores reflect the unique interactions between the child and that adult. A different rater who sees the child in a different context may well provide somewhat different ratings. Therefore, we recommend that DESSA users interpret DESSA scores in light of other information (observations, interviews with caregivers, developmental and social histories, and results from other assessment instruments) obtained on the child. We also strongly recommend the evaluation of the consistency of the child's behavior across environments, using multiple raters and the comparison across raters technique explained later in this chapter.

Third, always consider the child and family's cultural heritage and family background when interpreting DESSA findings. Although we took many steps during the development of the DESSA to avoid items that might elicit different responses from various racial and ethnic groups, cultural differences in the prevalence and meaning of specific DESSA items might exist, as they would with any assessment. Therefore, the DESSA user should be sensitive to cultural differences when interpreting the DESSA.

The Center for Mental Health Services of the federal Substance Abuse and Mental Health Services Administration has published Cultural Competence Standards (Center for Mental Health Services, 2001). Among the provider competencies, the following are particularly relevant to DESSA users:

- An understanding of psychosocial stressors and traumas such as war, immigration, socioeconomic status, racism and discrimination for various groups.
- Differences in the meaning of specific behaviors across different groups.
- Nuances of language and the meaning of items.
- Differences between "culturally acceptable" behaviors and behavioral concerns across different groups.
- Who constitutes the family in various groups.

Knowledge of the child and family's culture will result in more sensitive interpretations of DESSA findings, and more useful recommendations to both parents and teachers. More specific issues regarding interpretation of the DESSA are provided in the remainder of this chapter. This will include a summary of the types of scores the scale yields, the mechanics of how these scores should be examined, and methods for their interpretation.

Types of Scores Given

Raw Scores

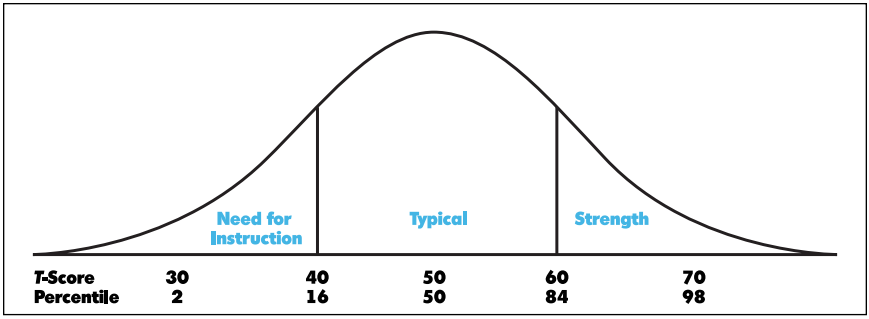
The raw score for each DESSA scale provides little information about the overall level of the child's performance. Because the number of items comprising the various scales differs, raw scores cannot be directly compared. For instance, the Self-Management Scale has 11 items. Therefore, an average rating of "Occasionally," which has an item raw score value of 2 would result in a Scale Raw Score of 22. In contrast, an average rating of "Occasionally" on the 7-item Self-Awareness Scale would result in a Scale Raw Score of only 14.

Raw scores are converted to standard scores so that the separate scales of the DESSA can be directly compared. Standard scores also enable the comparison of a given child's behavior to that of the other children in the standardization sample. The

DESSA provides two standard scores, percentile scores and *T*-scores. Figure 5.1 shows the relationships between percentile scores, *T*-scores, the normal distribution, and the *T*-score range descriptions for the DESSA scales. These standard scores and descriptions are described below.

FIGURE 5.1

Relationship of DESSA *T*-Scores, Percentile Scores, and the Normal Curve



Percentile Scores

DESSA raw scores are converted to percentile scores using Appendix A–Table 1 (for parent raters) and Table 2 (for teacher raters). These tables can also be found on page 6 of the DESSA Record Form and on the norms card. Percentile scores compare the child's behavior to that of other children who have been rated using the DESSA. The percentile score indicates the percentage of children in the standardization sample who earned the same or lower raw score. For example, if a child earns a percentile score of 65 that means that 65% of the children in the standardization sample earned the same or a lower raw score. DESSA percentile scores range from a minimum of 1 to a maximum of 99.

Percentile scores are easy to understand, but they do have a significant disadvantage – they cannot be easily compared and cannot be used in mathematical computations. The principal problem with percentile scores is that differences between the scores do not have the same meaning across the 1-99 scale. That is, a five-point difference between percentile ranks of 90 and 95 is a much greater distance on the normal curve than a five-point difference between percentile ranks of 50 and 55. This means that comparing two DESSA scales using percentile scores might lead the practitioner to conclude that a significant difference exists when it does not. Consequently, although percentile scores are useful for describing the relative standing of a child versus the other children in the standardization sample, they should not be used to compare a

child's scores across DESSA scales, because their meaning changes at different points on the normal distribution. It is important to remember that these scores should ***never*** be averaged or used in mathematical computations. Only DESSA *T*-scores should be used for that purpose.

T-Scores

Each DESSA *T*-score is a standard score set to have a mean of 50 and standard deviation of 10. Like the percentile scores, *T*-scores are based on the ratings received by the children in the standardization sample. In contrast to percentile scores, however, DESSA *T*-scores have the same meaning throughout their range. The five-point difference between the *T*-scores of 50 and 55 is equivalent to the five-point difference between *T*-scores of 40 and 45. In both cases, the difference between these sets of scores is one half of a standard deviation. For this reason, *T*-scores should always be used when reporting the DESSA results and when comparing scores earned on the various scales. On the DESSA, *T*-scores range from 28 to 72.

T-Score Range Descriptions for the DESSA Scales

The DESSA raw score, and the corresponding percentile and *T*-score reflect strengths related to social and emotional competence in children, and therefore, high scores are desirable. For example, when rating how often a child "keeps trying when unsuccessful" or "acts as a leader in a peer group" the higher the score the better. Consequently, high scale scores are desirable as well.

For clarity and consistency, and to aid in the communication of results, we recommend using the following *T*-score range descriptions when reporting DESSA results. The term "need for instruction" should be used to describe DESSA scale *T*-scores of 28 to 40 inclusive. Scores of 40 or less mean that the child was rated as showing few behaviors associated with the particular social-emotional strength. Children with scores in this range can be considered at risk for exhibiting or developing social-emotional problems. On each scale, approximately 16% of the children in the standardization sample received scores in the need for instruction range. If a child receives a scale score in the need for instruction range, a plan should be developed and implemented to assist the child in developing these important skills.

Scale scores of 41 to 59 inclusive should be described as "typical." Children who receive scores in the typical range will likely benefit from universal strategies designed to promote the social and emotional competence of all children (see Chapter 6).

DESSA scale *T*-scores of 60 to 72 inclusive should be described as "strengths." Approximately 16% of the children in the standardization sample received scale scores in the strength range. Parents, teachers and staff should consider and implement

strategies to support and sustain social-emotional competencies that are rated in the strength range.

The various descriptions and their relationship to DESSA *T*-scores are summarized in Table 5.1. The DESSA user should keep in mind that these are guidelines for the categorization and interpretation of DESSA scores and should not be rigidly applied, over-interpreted or reified. Although the DESSA scales have very high internal reliability (see Table 3.1), and consequently minimal standard errors of measurement (see Table 3.2), DESSA users should take measurement error into account when interpreting DESSA scores. This is particularly important when the *T*-score obtained by the child is close to the thresholds presented above.

TABLE 5.1

Descriptive Categories and Interpretations of DESSA *T*-Scores

60 and above	Strength
41–59	Typical
40 and below	Need for instruction

The Meaning and Interpretation of the DESSA Scales

The DESSA Scales

The following brief descriptions are to aid in the interpretation of the DESSA scales. More thorough information on the content and meaning of these scales is presented in Chapter 1.

Personal Responsibility. A child's tendency to be careful and reliable in her/his actions and in contributing to group efforts.

Optimistic Thinking. A child's attitude of confidence, hopefulness, and positive thinking regarding herself/himself and her/his life situations in the past, present, and future.

Goal-Directed Behavior. A child's initiation of, and persistence in completing, tasks of varying difficulty.

Social-Awareness. A child's capacity to interact with others in a way that shows respect for their ideas and behaviors, recognizes her/his impact on them, and uses cooperation and tolerance in social situations.

Decision Making. A child's approach to problem solving that involves learning from others and from previous experiences, using values to guide action, and accepting responsibility for decisions.

Relationship Skills. A child's consistent performance of socially acceptable actions that promote and maintain positive connections with others.

Self-Awareness. A child's realistic understanding of her/his strengths and limitations and consistent desire for self-improvement.

Self-Management. A child's success in controlling his or her emotions and behaviors to complete a task or succeed in a new or challenging situation.

The Social-Emotional Composite

This scale gives an overall indication of the child's social and emotional competencies. This scale is the most reliable and valid overall indicator of strengths within the DESSA. Because it characterizes the child's social and emotional strengths with a single number, the Social-Emotional Composite is particularly useful in outcome measurement and program evaluation.

Basic Interpretation of the DESSA

Interpretation of the DESSA results proceeds in a step-wise fashion from the most general indicator of the child's social and emotional status to increasingly more specific information. This process should include the following three steps:

Step 1: The Social-Emotional Composite

First, examine the Social-Emotional Composite *T*-score and note the corresponding range description (i.e., Strength, Typical, Need for Instruction). This is the broadest and the most reliable index of the child's social and emotional well-being. Research with the analogous Total Protective Factors Scales from the Devereux Early Childhood Assessment (DECA; LeBuffe & Naglieri, 1999) and the Devereux Early Childhood Assessment-Clinical Form (DECA-C; LeBuffe & Naglieri, 2003) indicates that high scores on these strength-based summary scales are associated with children who are functioning well in academic and other environments. These children tend to have few behavioral concerns and are likely to be resilient when faced with risk and adversity. In summary, the Social-Emotional Composite *T*-score is a highly reliable indicator of the child's overall social and emotional functioning and serves as the starting point in interpreting the DESSA. The score a child receives on the Social-Emotional Composite Scale also provides a frame of reference for the remaining interpretive steps.

Step 2: Examining Scale Scores

Examine the eight separate DESSA scales, and note the *T*-scores and corresponding strength, typical, and need for instruction ranges. Examination of the separate DESSA scale *T*-scores provides useful information about the specific strengths and needs of the child. For instance, the scores can suggest whether a child's strengths or needs are primarily intrapersonal (as evidenced by high or low scores on the Self-Awareness and Self-Management Scales) or interpersonal (as shown by high or low scores on Social-Awareness and Relationship Skills). Examination of the DESSA Individual Student Profile on the DESSA Record Form is particularly useful at this step, as the visual depiction of the scale scores can make patterns easier to discern.

An examination of the variability of scale scores can also be useful. Table 5.2 provides the cumulative frequency of the difference between the highest and lowest DESSA *T*-scores across the eight scales in the standardization sample. Comparing the obtained *T*-score difference between the highest and lowest scales, with the frequency of that difference presented in Table 5.2, can indicate whether the child is showing an expected or unusual amount of intra-scale variability.

There are several important points to consider when examining the variability of DESSA Scale scores. First, the average difference between all children's highest and lowest *T*-score is 10.59 (SD = 4.71) for teacher raters and 14.31 (SD = 5.47) for parent raters. This means that the average child shows a difference of about 11-14 *T*-score points between the highest and lowest of the eight DESSA scales. Second, the cumulative percentages of DESSA Scale *T*-score differences reported in Table 5.2 tells us that few children (8.7%) rated by a teacher had a difference of 17 points or more between their highest and lowest DESSA *T*-score. For parents, the value is similar; 8.1% of children rated by a parent had a difference of 22 points or more between their highest and lowest DESSA *T*-score. This, along with the mean differences reported at the bottom of the Table, indicates that (a) typically, the eight DESSA scales do differ from one another, and (b) there is typically more intrascale variability with parent raters than teacher raters. When using this information it is, of course, most important to focus on the actual numerical value of the rating because it provides information about the degree to which the child is similar to, or not similar to, the normative group.

TABLE 5.2

Cumulative Frequencies of the *T*-Score Difference Between the Highest and Lowest Scale Scores

Scale Difference	Parents	Teachers
0	0.2	0.3
1	0.4	0.7
2	0.5	1.4
3	0.6	3.1
4	1.8	5.9
5	3.1	10.5
6	5.1	17.6
7	8.4	26.3
8	12.7	37.0
9	17.4	45.4
10	24.0	56.3
11	32.1	63.8
12	40.4	71.3
13	48.0	77.0
14	57.2	82.6
15	64.6	86.6
16	70.8	89.4
17	75.1	91.3
18	79.2	93.5
19	83.4	95.3
20	87.0	96.5
21	89.5	97.3
22	91.9	98.0
23	93.2	98.4
24	95.3	98.8
25	96.7	99.4
26	97.2	99.6
27	97.9	99.6
28	98.4	99.6
29	98.8	99.7
30	99.2	99.8
31	99.6	99.8
32	99.7	99.9
33	99.7	99.9
34	99.9	99.9
35	99.9	99.9
36	99.9	99.9
37	100.0	100.0
Mean	14.31	10.59
SD	5.47	4.71

Step 3: Identifying Specific Strength and Need for Instruction Items

Each of the eight DESSA scales represents a group of items that share a common description (e.g., Goal-Directed Behavior, Personal Responsibility, etc.). However, these categories encompass different specific social-emotional competencies. For example, a child with a need for instruction on the Goal-Directed Behavior scale may have difficulties showing persistent effort in accomplishing a goal (e.g., item # 3 – keep trying when unsuccessful; item # 33 – work hard on projects) or in gathering information to guide goal directed behavior (e.g., item # 13 – seek out additional knowledge or information; item # 14 – take an active role in learning). Step 3 enables the DESSA user to move beyond scale scores to gain an understanding of the specific behaviors that are strengths or needs for instruction for the child.

Identification of specific strengths and needs for instruction involves a method called Individual Item Analysis. Any item can represent a need for instruction if the rating the child received is substantially lower than the rating given to children who have typical scores. Similarly, any item can represent a strength if the rating is substantially higher than that given to children with typical scores. The approach is similar to the Problem Item Analysis technique used by Naglieri, McNeish, and Bardos (1991), Naglieri, LeBuffe & Pfeiffer (1994), and LeBuffe & Naglieri (2003), who suggested that an individual item score that exceeds the mean normative item score minus one standard deviation is outside the typical range and therefore can be considered problematic.

Less than 16% of the children in the standardization sample would receive scores in this problem range. Such a score on an individual item indicates that the rater has reported that the child is experiencing difficulty with this particular behavior, to an extent that would not be considered typical. With the DESSA, we expand this approach to encompass items receiving exceptional scores (+/– 1 *SD*) in either direction. This approach can be used to identify specific, focal strengths (greater than or equal to one *SD* above the mean) as well as specific needs for instruction (less than or equal to one *SD* below the mean).

The primary advantage of this method is that it allows for identification of specific behaviors that can be leveraged (strengths) or remediated (needs for instruction) by specific interventions. Individual item identification facilitates the development of intervention/lesson plans that are individualized and behaviorally grounded. For instance, if the child's rating on item # 25 – "resolve a disagreement," was in the need for instruction range, then developing or improving conflict resolution skills can become a goal, and each component skill can become an objective on the intervention plan. Conversely, if item # 20, "encourage positive behavior in others," is a strength for the child, then involving this individual as a leader in a peer group would be an appropriate way of supporting and further developing this desired behavior. The

identification of specific strengths and needs is an important step in linking DESSA assessment results to interventions.

Another advantage of the Individual Item Analysis method is that it allows the DESSA user to identify behaviors of concern even if the child's overall scale scores are not extreme. This enables the user to provide meaningful and useful feedback that supports and clarifies the teacher's or parent's concerns, even if the child's scale scores do not warrant special services or placement.

The individual item scores for both strengths and needs are provided on pages 4 and 5 of the DESSA Record Form. On those pages, the item raw score boxes that are square, shaded in red, and connected by horizontal lines are in the need for instruction range. Item raw score boxes that are square and have a black border are in the typical range. Item raw score boxes that are hexagons and shaded in gray are in the strength range. These exceptional item score values are also found in Table 5.3.

TABLE 5.3
Individual Item Analysis Values

DESSA Items	-1SD	+1SD
1. remember important information	2	4
2. carry herself/himself with confidence	2	4
3. keep trying when unsuccessful	2	4
4. handle his/her belongings with care	2	4
5. say good things about herself/himself	2	4
6. serve an important role at home or school	2	4
7. speak about positive things	2	4
8. cope well with insults and mean comments	1	3
9. take steps to achieve goals	2	4
10. look forward to classes or activities at school	2	4
11. get along with different types of people	2	4
12. try to do her/his best	2	4
13. seek out additional knowledge or information	2	4
14. take an active role in learning	2	4
15. do things independently	2	4
16. say good things about his/her classmates	2	4
17. act respectfully in a game or competition	2	4
18. ask to take on additional work or responsibility	1	3
19. respect another person's opinion	1	3
20. encourage positive behavior in others	2	4
21. prepare for school, activities, or upcoming events	2	4
22. contribute to group efforts	2	4

23. do routine tasks or chores without being reminded	1	3
24. act as a leader in a peer group	1	4
25. resolve a disagreement	1	3
26. show creativity in completing a task	2	4
27. share with others	2	4
28. get things done in a timely fashion	2	4
29. seek out challenging tasks	1	3
30. say good things about the future	2	4
31. cooperate with peers or siblings	2	4
32. show care when doing a project or school work	2	4
33. work hard on projects	2	4
34. forgive somebody who hurt or upset her/him	2	4
35. follow rules	2	4
36. express high expectations for himself/herself	2	4
37. follow the example of a positive role model	2	4
38. compliment or congratulate someone	2	4
39. accept responsibility for what she/he did	2	4
40. do something nice for somebody	2	4
41. make accurate statements about events in her/his life	2	4
42. show good judgment	2	4
43. pay attention	2	4
44. wait for her/his turn	2	4
45. show appreciation of others	2	4
46. focus on a task despite problem or direction	1	3
47. greet a person in a polite way	2	4
48. act comfortable in a new situation	1	3
49. teach another person to do something	2	4
50. attract positive attention from peers	2	4
51. perform the steps of a task in order	2	4
52. seek advice	1	3
53. think before he/she acted	1	3
54. pass up something he/she wanted, or do something he/she did not like, to get something better in the future	1	3
55. express concern for another person	2	4
56. accept another choice when his/her first choice was unavailable	2	4
57. ask questions to clarify what he/she did not understand	2	4
58. show an awareness of her/his personal strengths	2	4
59. ask somebody for feedback	1	3
60. stay calm when faced with a challenge	1	3

Table 3.10 Continued

61. attract positive attention from adults	2	4
62. describe how he/she was feeling	2	4
63. give an opinion when asked	2	4
64. make a suggestion or request in a polite way	2	4
65. learn from experience	2	4
66. follow the advice of a trusted adult	2	4
67. adjust well to changes in plans	2	4
68. show the ability to decide between right and wrong	2	4
69. use available resources (people or objects) to solve a problem	2	4
70. offer to help somebody	2	4
71. respond to another person's feelings	2	4
72. adjust well when going from one setting to another	2	4

Advanced Interpretation of the DESSA

Comparisons Across Raters

Comparison of DESSA *T*-scores on the same child, on the same scale, but obtained from different raters (for example a parent and a teacher) can be very useful. Such comparisons can demonstrate the consistency of the child's behavior across environments and adults, or can show how the child's behavior differs under various circumstances. This information can help the DESSA user more fully understand the child's behavior and plan more effective strategies for strengthening social and emotional competencies within these different contexts.

Comparing scores obtained from different raters must take measurement error into consideration. Essentially, the user has to determine if the differences in DESSA scores exceeds the amount of variation that would be expected due to chance. Table 5.4 provides the differences needed for significance at the 95% and 99% level of significance, when comparing ratings on the same scale obtained from different raters. Table 5.4 is used to compare the ratings obtained from two parents, from two teachers, or from a parent and a teacher. The values in these tables are based on the standard error of the difference between the scores, calculated using the formula provided by Anastasi and Urbina (1997), a *z* value of 1.96 or 2.57 for the 95% and 99% level of significance respectively, and the standard errors of measurement provided in this manual in Table 3.2.

TABLE 5.4

Differences Required for Significance When Comparing DESSA *T*-Scores Between Raters

	Personal Responsibility	Optimistic Thinking	Goal-Directed Behavior	Social-Awareness	Decision Making	Relationship Skills	Self-Awareness	Self-Management	Social-Emotional Composite
$p = .01$									
Parent vs. Parent	14	16	12	15	14	12	15	13	6
Teacher vs. Teacher	10	12	9	11	10	9	12	10	4
Parent vs. Teacher	12	14	11	13	12	11	14	12	5
$p = .05$									
Parent vs. Parent	10	12	9	11	11	9	12	10	4
Teacher vs. Teacher	8	9	7	8	8	7	9	8	3
Parent vs. Teacher	9	11	8	10	9	8	11	9	4

The 95% level of significance should be used when comparing two raters. To control for the increase in the probability of a Type I error when making multiple comparisons, the 99% level of significance should be used when comparing three or more raters. For example, when comparing the rating obtained from a mother, a father and a teacher, three pair-wise comparisons can be made (mother-father, mother-teacher, father-teacher). The 99% level of significance values should be used for each pair-wise comparison, so that across all three comparisons, the probability of a Type I error is less than five percent ($p < .05$).

To use this table, first determine if the comparison is to be made using the 95% (.05) or 99% (.01) level of significance. The .01 values are presented in the top half of Table 5.4, and the .05 values in the bottom half. Next, find the row of the table for the appropriate pair of raters (parent vs. parent, teacher vs. teacher, or parent vs. teacher). Then, reading to the right, find the column for the scale that is being compared. To be significant, the difference between the two raters' *T*-scores on this scale must be equal to or greater than the tabled value.

For example, if a mother and father both rate the same child and the Social-Emotional Composite Scale *T*-score is 60 when rated by the mother and 54 when rated by the father, the six-point difference is compared to the value in Table 5.4. Because we are only making one comparison involving one pair of raters, we would use the values for the .05 level of significance. In this example, the difference is significant (Table 5.4

shows that a difference of 4 or more points is needed). This result would be interpreted as meaning that the mother and father provided reliably different ratings. The next step would be to gain an understanding of this difference within the context of the interactions between the child and each parent. For instance, do the parents' ratings differ because they see the child at different times of the day, when the child's behavior may be very different? This same type of comparison may be made using the ratings obtained from two different teachers or a parent and a teacher. A rater comparison worksheet is provided on page 8 of the DESSA record form to facilitate this analysis.

Pretest-Posttest Comparisons

Changes in a child's *T*-scores over time can also be evaluated when a period of at least 4 weeks between the ratings has elapsed, so that the latter rating represents a new sample of behaviors. Whenever possible, the same rater should be used for both the pretest and the posttest rating. It is essential, however, that the same type of rater (parent or teacher) be used at both administrations.

The statistical significance of the difference between pretest and posttest scores can be determined using the method described by Atkinson (1991). This approach involves the comparison of the obtained posttest score with a range of scores that represents the variability expected by both regression to the mean and measurement error based on the pretest score. To obtain the values needed to assess the significance of the pretest-posttest score differences, we calculated the standard error of prediction (SEp). The standard error of prediction is used instead of the standard error of measurement because we are concerned about the predictability (or consistency) between the pretest and posttest scores. See Atkinson (1991) for more details or Naglieri, LeBuffe, and Pfeiffer (1993) for more discussion.

Posttest confidence ranges were calculated for each DESSA scale and are presented in Appendix B, Tables 1 (for parents) and 2 (for teachers). To determine if significant change has occurred, the pretest and posttest scores should be compared using the following method:

Step 1: Using the appropriate table based on the rater, find the pretest DESSA *T*-score in the first column labeled "Pretest Obtained Score."

Step 2: Read across the table to the column that corresponds to the DESSA scale being evaluated.

Step 3: If the posttest DESSA *T*-score falls within the posttest range provided in the table, there has been no significant change in the child's score. If, however, the posttest score falls above the posttest range, we can conclude that the child's score has shown significant improvement. If the posttest score falls below the range provided, then we conclude that the score has shown significant worsening.

For example, if a child's rating by a teacher on the Personal Responsibility Scale was a *T*-score of 39 on the pretest and 50 on the posttest, then this change is considered significant and the child's posttest score reflects reliable improvement in Personal Responsibility. We reach this conclusion because the posttest score of 50 exceeds the posttest range of 32–47. If that same child's rating by a teacher was initially a *T*-score of 35 in Decision Making with a posttest *T*-score of 44, then the change is not significant, and more intervention may be needed (a score of 45 or more is required). A pretest-posttest comparison worksheet is provided on page 8 of the DESSA Record Form to facilitate this analysis.

Treatment Outcome/Program/Curriculum Evaluation

The evaluation of changes in DESSA scores before and after intervention is a way to determine the effectiveness of the strategies that were applied. It is important, however, to consider two issues when comparing differences over time. As recommended by Jacobson and Truax (1991), treatment outcome or program evaluation should incorporate the dual criteria of statistically reliable change and clinically meaningful change. The first criterion, statistically reliable change, is addressed through the use of the pretest-posttest comparison technique explained in the previous section.

When statistically reliable change has occurred, the second criterion, the clinical meaningfulness of the change, is determined by the examination of the value of the posttest *T*-scores. Clinically meaningful improvement can be further divided into optimal outcomes and favorable outcomes.

An optimal outcome is found when a child with a pretest score in the need for instruction or typical range shows reliable change in a positive direction, as determined using Appendix B, Tables 1 and 2, and the posttest *T*-score falls in the strength range. A favorable outcome occurs when a child with a pretest *T*-score in the need for instruction or typical range shows reliable improvement, but the posttest *T*-score is below 60.

Ultimately, the best possible outcome for a child is that he or she has all of the DESSA social and emotional competency scales rated in the strength range. Conversely, the worst outcome for a child is to have all of the DESSA scales rated in the need for instruction range.

This dual criteria approach to examining the effectiveness of interventions and strategies to help children develop social and emotional competencies is a very flexible and powerful tool. This approach enables the DESSA user to look at the effectiveness of interventions on a scale-by-scale and child-by-child basis. By using this method, we can determine which children benefited from which interventions in which areas. This child-specific information is especially useful to quality improvement efforts as well as quality care. By aggregating findings across children, classrooms, schools, etc., this approach can also be used for program evaluation purIses.

Interpretation Example

The following interpretation example illustrates the interpretation of the DESSA and how results facilitate intervention planning. This example concerns a nine-year-old girl, Jessica, who is in the fourth grade. Jessica is well above grade level in reading, is slightly below grade level in math and does not have a history of behavioral concerns. Jessica is reported by the teacher to be an "average" fourth grader with no particular strengths or needs. The DESSA was completed by the teacher as part of a classroom-wide administration of the DESSA.

Step 1: Examination of the Social-Emotional Composite. Jessica received a *T*-score of 51 on the Social-Emotional Composite. This is equivalent to a percentile score of 54 and is consistent with the teacher's perception of Jessica as an average fourth grader.

Step 2: Examining Scale Scores. Although the composite score was squarely in the typical range, an examination of the eight scale scores does reflect some strengths and needs for instruction. Jessica's DESSA rating indicates a strength on the Social-Awareness Scale with a *T*-score of 60. This score is a full standard deviation above the mean and places Jessica in the 84th percentile. The DESSA results also indicated that Jessica has a need for instruction on the Optimistic Thinking Scale (*T*-score = 39, percentile score = 14) and the Self-Awareness Scale (*T*-score = 40, percentile score = 16). In addition, the difference between her highest and lowest scale scores is 21 *T*-score points, which is quite unusual and found in only 3% of teacher ratings. The remainder of her DESSA scale scores were in the typical range.

Step 3: Individual Item Analysis. To gain a better understanding of the specific social and emotional competencies that Jessica is good at, and those that need additional development, the teacher examined the individual items on the three scales that were not scored in the typical range (the other five scales should be reviewed for exceptional items as well, but in the interest of brevity and simplicity are omitted here).

Items endorsed as strengths on the Social-Awareness Scale included:

- Cope well with insults and mean comments
- Get along with different types of people
- Forgive somebody who hurt or upset her/him
- Resolve a disagreement

Items endorsed as needs for instruction on the Optimistic Thinking and Self-Awareness Scales included:

- Carry herself/himself with confidence
- Say good things about herself/himself
- Express high expectations for himself/herself

- Say good things about the future
- Show an awareness of her/his personal strengths
- Describe how he/she was feeling
- Give an opinion when asked

Consideration of these items suggests that Jessica may be a somewhat conciliatory and reticent young woman. She placates others and perhaps strives to avoid conflict. In addition, she does not express her feelings or her opinions. She may also have difficulties with self-esteem, in that she does not say good things about herself, doesn't express high expectations of herself or express a positive view of the future.

Although Jessica has not presented behavioral problems in the classroom, the two scales in the need for instruction range, as well as the item-level review above, suggest that she is at risk of developing social and emotional problems. If her sense of self-confidence, self-esteem, and assertiveness is not addressed, she may become increasingly withdrawn and, given her appeasing interpersonal style, even victimized.

A useful next step would be to obtain a DESSA rating from one or both of Jessica's parents. Utilizing the rater comparison technique described above, the teacher could determine if these characteristics are evident at home, as well, or specific just to the school setting. This would have implications both for understanding Jessica's behavior and selecting appropriate interventions. For instance, if these behaviors were seen only in school, the teacher might consider whether Jessica is being bullied by other children.

Jessica would likely benefit from additional support and instruction from her teacher. Utilizing her strengths in social awareness and reading, Jessica might be involved in a carefully structured and supervised peer-mediated learning program. This would also provide an opportunity for the teacher to provide praise to Jessica and to ask her about her feelings, her opinions and her effectiveness as a peer leader. She might also be involved in age-appropriate assertiveness or bullying prevention programs. The effectiveness of these and other targeted interventions and strategies should be evaluated using the pretest-posttest comparison procedure outlined above.

This is a simplified case example developed to illustrate the basic interpretation of the DESSA. In practice, the DESSA results would be supplemented by additional information available to the teacher and the interventions would be more detailed.

CHAPTER 6

The Rationale and Use of the DESSA in a Unified Model of Prevention

The past quarter century has witnessed a burgeoning interest in the promotion of social-emotional competence and resilience in the face of adversity. Many different fields of research and various communities of practice have influenced this shift in orientation toward strength-based and preventative approaches, and each has guided the development and envisioned uses of the DESSA in specific ways. Four schools of thought have had a direct influence on the development of the DESSA. The Positive Youth Development movement represents our broadest overarching conceptual influence. The Risk and Protective Factor Framework for Resilience, Social Emotional Learning Initiatives, and the Public Health Model of Prevention have also heavily influenced the development and intended uses of the DESSA, and will be reviewed in turn below.

Positive Youth Development

The DESSA is a strength-based behavior rating scale that can be used as part of a comprehensive program to promote positive youth development. Positive Youth Development (PYD), as defined by the United States Department of Health and Human Services, is an orientation of a community toward providing services and opportunities to support all young people in developing a sense of competence, usefulness, belonging, and empowerment (National Clearinghouse on Families & Youth, 2007). The federal government clarifies that PYD is not a single intervention, but a policy perspective that uses both prevention and intervention strategies in an integrated fashion, to provide opportunities, develop skills, and reinforce pro-social

behavior. The United States has embraced PYD since the 1960s as a means to deal with increasing rates of crime and poverty. When such programs are aligned with the science of human development and behavior change, PYD has been shown to improve mental health outcomes, prevent violence and delinquency, and reduce the onset of early sexual activity (Committee on Community-Level Programs for Youth, 2002; Catalano, Hawkins & Toumbourou, 2008).

How is PYD theorized to work? Although many theories have been proposed, the Social Development Model (Catalano & Hawkins, 1996) is one example that has guided preventative interventions for nearly thirty years. This theory suggests that youth first need opportunities for involvement in pro-social activities. Once provided with opportunities for involvement, youth need the skills to make the most of the opportunities. When skills are demonstrated, the behavior needs to be reinforced. Youth bond to the source of the reinforcement, and then internalize the values of the person or institution to which they are bonded. This same theory can explain why some youth feel bonded to their families and their schools, while other youth develop a sense of attachment to neighborhood gangs. Gangs can also provide leadership opportunities, skill training, and tangible rewards to youth, but result in quite different, and almost always anti-social, expectations for behavior. The DESSA fits into this theory as a tool that will help practitioners identify what competencies a youth already has and which ones need development. The teaching of DESSA social-emotional competencies ideally occurs within an environment that is abundant with engaging opportunities and plentiful in recognition, so as to promote bonding and the internalization of pro-social values. In summary, the tasks of DESSA-informed PYD programs, practices, and policies are to:

1. Create opportunities for children and adolescents to become deeply involved and engaged with pro-social mechanisms of socialization.
2. Use the DESSA as an assessment and goal-setting tool to give children and adolescents the skills that they need in order to cope with set-backs and make the most of provided opportunities.
3. Ensure that successful engagement in pro-social opportunities are rewarding and reinforcing, to promote bonding and the internalization of pro-social values.

When a PYD model is put into place within a school building, it is often called *School-wide Positive Behavior Support* (PBS) (Sawka-Miller & Miller, 2007). PBS involves the "careful assessment and re-engineering of whole school environments to effect positive and lasting behavior change in the student population." (McCurdy, Mannella, & Eldridge, 2003, p.160). This is done through the implementation of school-wide pro-active behavior management strategies (i.e., rule and procedure clarification), prosocial skill instruction, and behavior modification techniques to reinforce pro-social behavior. The aspect of PYD in which children and adolescents

receive direct skill instruction, to promote social-emotional competencies, is often referred to as *Social Emotional Learning* (SEL), the topic of a later section in this chapter. While the DESSA could be used to indirectly inform strategies for creating opportunities and supporting engagement, it has been primarily designed as a tool to support the implementation and progress monitoring of SEL programs. Although PBS and SEL have not been as rigorously studied or legislatively mandated outside of school settings, attempts are underway to adapt and study these approaches by other organizations providing direct service to children and adolescents outside the school environment (Nelson, Sprague, Jolivette, Smith, & Tobin, 2008).

The PYD movement influenced the DESSA to be strength-based, or more specifically, a measure of the frequency of desirable or positive behaviors in children. This reflects a recent clarification of the goal of PYD, to not only be the reduction of problem behavior, mental illness, and delinquency, but to also promote mental health and engagement in a way that expands upon our vision for health and quality of life. This has been reflected in the movement of many human service disciplines towards positive psychology (Seligman et al., 2005; Keyes, 2007), strength-based practice (Clark & Whitaker, 2002; Nickerson, 2007), asset building (Benson, Scales, Hamilton & Sesma, 2006), and whole-child education (ASCD Commission on the Whole Child, 2007).

Risk Factors, Protective Factors, and Resilience

The DESSA utilizes a risk and protective factor framework. This emphasis reflects the field's improved understanding of the etiology of health and behavior problems, which gave PYD coalitions a refined ability to identify and target the predictors and precursors of problem behavior and, therefore, enhance the effectiveness of their prevention and early intervention work (Catalano et al., 2008). The identified predictors of developmental outcome came to be commonly called risk and protective factors.

Risk Factors are those environmental or individual attributes that make a negative developmental outcome (e.g., truancy, mental illness, delinquency) more likely. Risk factors of children in contemporary American society may include a history of abuse and neglect, a developmental disability, experiences of poverty or discrimination, academic failure, neighborhood crime, or perceptions of peer substance use. Children that have numerous risk factors, in the absence of protective factors, are described as *vulnerable* (Masten et al., 1999).

Protective Factors are those environmental or individual attributes that counter the impact of risk and make a positive developmental outcome (e.g., academic achievement, emotional well-being, pro-social behavior) more likely. Protective factors for children in contemporary American society are things such as consistent caregivers, a positive school climate, social skills competency, and a bond with a pro-social

adult. Children who have strong protective factors that help them to overcome risk and adversity are known as *resilient* (Werner, 1984).

The implementation of programs that promote protective factors within a resilience framework requires the ability to reliably assess protective factors in children. The DESSA provides users with a practical and psychometrically sound means of assessing protective factors as part of evaluation efforts. Risk and protective factors exist on societal, communal, familial, and individual levels, and although the DESSA targets malleable protective factors within the child, child serving agencies will best serve their target populations by reducing risk and promoting protection simultaneously on as many levels as pragmatically possible, within the scope of their organization's mission. By building protective factors, we may be able to prevent or minimize the negative outcomes caused by unmediated stressors and achieve a more positive developmental trajectory for our children (see Chapter 3).

Social Emotional Learning

Social Emotional Learning (SEL) programs and practices are instructional modules and techniques that promote the development of social-emotional competencies, such as those measured by the DESSA. The National Registry of Evidence-Based Programs and Practices (**http://nrepp.samhsa.gov**) serves as an independent scientific review team that assists the public in identifying such efficacious approaches to promote social-emotional well-being and positive functioning. The site currently lists eighteen programs that have demonstrated the achievement of these goals in populations of children aged 6–12, through a randomized control trial with at least one replication. In the context of Positive Youth Development, SEL is an effort to give students the individual capacities to moderate stress and make the most of opportunities, and it has been demonstrated to impact a broad array of important outcomes (Greenberg et al., 2003).

The Collaborative for Academic, Social and Emotional Learning (CASEL) has grouped these capacities into five categories: Self-Awareness, Social-Awareness, Self-Management, Relationship Skills, and Responsible Decision-Making (Devaney, O'Brien, Tavegia & Resnik, 2005). A review of after-school programs teaching these skills reported that SEL programs have the potential to (1) improve feelings of self-confidence and self-esteem, (2) promote school bonding (positive feelings and attitudes toward school), (3) improve school grades, (4) reduce aggression, non-compliance, and conduct problems, and (5) reduce recreational drug use (Durlak & Weissberg, 2007).

A second meta-analysis reported that when SEL programs were implemented in schools, they were found to (1) increase social and emotional skills, (2) improve student attitudes about themselves, others, and the school, (3) enhance social and

classroom behavior, (4) reduce emotional distress related to stress and depression, and (5) promote academic achievement. Durlak and colleagues further connected SEL to academic achievement by reporting that, when SEL programs were well implemented, students experienced meaningful increases on standardized high-stakes achievement tests as compared to students uninvolved in the SEL programming (Zins, Bloodworth, Weissberg, & Wallberg, 2004; Durlak, Weissberg, Dymnicki, Taylor & Schellinger, 2008).

Noting the impact of SEL programs on students' capacities for learning (Abbott et al, 1998; Domitrovich, Cortes, & Greenberg, 2007), policy-makers have begun to recognize SEL as an important part of the curriculum. In 2004, Illinois adopted SEL learning standards at the state level, requiring each school district to develop an instructional plan, and other states (e.g., New York) and local educational agencies (e.g., Anchorage, Alaska) have followed suit. The need for user-friendly, scientifically-sound, child-centered measurement tools to assess the individual and aggregate social emotional capacities of students has hindered the implementation of SEL programs to their full potential. The DESSA has been designed for this purpose and thus supports the widespread adoption of social-emotional learning programs and practices.

The Use of the DESSA Within a Three-Tiered Prevention Model

The DESSA is designed to serve a large variety of needs of professionals working in schools and after-school, social service, and mental health agencies. The scale can be used to evaluate the social and emotional competencies of individuals and groups of children, determine if individual or classroom-wide strategies are needed to promote social and emotional development, and evaluate the success of those strategies. A useful way to organize these various uses is to consider them within the context of a three-tiered prevention model such as that promulgated by the Public Health Service or the US Department of Education. The remainder of this chapter will provide guidance on the uses of the DESSA within a multi-tiered service delivery model. The context used in this discussion is schools, but the principles and techniques could be easily translated into after-school, social service, and mental health programs.

Uses of the DESSA at a Tier 1/Universal Level

The DESSA can be used at a Tier 1/Universal Level to assess the social-emotional competencies of all children in a given population. This could include a classroom, school or district whose administrators are concerned with ascertaining the social-emotional competence of the students, perhaps in response to educational standards in this domain. Other uses might be conducting a community needs assessment as part of

efforts to support positive youth development programs. The use of the DESSA classroom profile (available at **www.studentstrengths.org**) is helpful at this stage, by indicating areas where many students have either a need for instruction or a strength. The classroom profile is a matrix in which each student is a row and each DESSA scale a column. Each cell is color coded red, blue or green to represent need for instruction, typical or strength ratings on each scale for each student. Visual inspection can quickly indicate common areas of strength and need. These results could then inform the selection of a research-based social-emotional learning program, or community wide intervention targeting these common needs.

The effectiveness of a social-emotional learning curriculum or intervention can be determined using the DESSA pretest-posttest technique described in Chapter 5. For this purpose, you would collect DESSA pretests as early as possible in the fall semester, and collect posttests from the same informants once or twice during the year and again as late as feasible in the spring semester. Comparing scores before, during and after intervention can indicate how many children showed significant improvement in which social-emotional competencies over the school year. This information can be aggregated and analyzed at the individual student, classroom, school, district, or even state level. Because the DESSA is a nationally normed assessment with established reliability, it is ideally suited for evaluating a school system's compliance with social-emotional educational standards.

Although the DESSA could be used as part of a district-wide screening effort, a shorter version would offer the important advantage of economy of time. To facilitate the universal screening of social-emotional competencies, we developed the DESSA-mini (Naglieri, LeBuffe, & Shapiro, 2009). The DESSA-mini comprises four parallel forms for teacher raters. Each mini consists of eight items, yields one total score, and can be completed in just a minute or two. As a result, a teacher can quickly and easily complete ratings on each student and obtain an estimate of the overall social-emotional competence of the class.

The DESSA-mini can be administered up to four times during the school year using the four equivalent alternate forms, for initial assessment, monitoring the progress of children who are receiving selected interventions, and evaluating the success of the interventions. If the child does not respond to the interventions, as indicated by DESSA-mini scores that continue to be in the need for instruction range, then, more intensive, individualized intervention that has been designed based upon comprehensive evaluation data should be implemented. At that point it could be helpful to administer the full DESSA as part of any comprehensive evaluation that would be conducted.

Just as universal screening of essential academic skills is important for early detection of learning problems, so is universal screening of all students in grades K–8 for social-emotional competencies. The use of the DESSA and/or DESSA-mini as a

universal screener for social-emotional competencies could result in more at-risk children being identified and identified earlier, receiving early support, and potentially avoiding more serious social-emotional dysfunction. These educational efforts at the universal level should enhance the capacity of the schools to support children and meet the basic needs of a large percentage of children in regular education. The ultimate goal of these universal activities that involve the DESSA and DESSA-mini is not only to ensure that children's social-emotional strengths are adequate, but to also foster strengths that could function as protective factors to minimize the negative impact of future stressors.

Uses of the DESSA at a Tier 2/Targeted Level

At the Tier 2/Targeted Level of prevention, specific services and supports are provided to individuals or groups determined to be at risk for developing social-emotional difficulties. The goal of targeted interventions is to not only prevent the development of dysfunction, but also to nurture the social-emotional strengths of the child. The DESSA is well suited to provide information that is helpful for these purposes.

One of the most important uses of the DESSA is to identify individual children who may be at risk of developing social-emotional problems. Any child who receives a DESSA Social-Emotional Composite score in the need for instruction range, or who has one or more individual scale *T*-scores in that range should be considered at risk. It will be important to obtain DESSA ratings from both teachers and parents to determine how the child is behaving in each of these important contexts. The rater-comparison technique explained in Chapter 5 should be used to identify areas in which different raters have a shared perception of the child and those areas where they do not. In general, when a need for instruction in an area of social-emotional competence is evident across environments and with different raters, it indicates a more serious concern than if it occurs in only one environment or only with a particular rater (Rosas, Chaiken & Case, 2007).

We further suggest that the DESSA ratings from both parties be used to identify areas where the raters perceived a strength or need and that further analysis be conducted. For example, using individual item analysis, specific strengths and needs reported by each rater could be described. These DESSA findings should then lead to the selection of strategies to support the child at home and in school. Any areas where multiple raters perceived a need for instruction should be prioritized. The goal is to achieve a jointly developed plan where all parties are working in concert to support the child. The intervention should focus not only on remediating any needs for instruction, but also on further developing any typical areas and maintaining any strengths. Finally, a time frame should be established, after which each party will provide additional DESSA data for monitoring of progress. Ideally, this process will occur three or four

times within a typical school year: (a) early in the fall semester to establish a plan, (b) once or twice during the middle of the school year to monitor progress and make any indicated changes, and (c) towards the end of the school year to evaluate overall effectiveness of the intervention.

Uses of the DESSA at the Tier 3/Indicated Level

At the Tier 3/Indicated Level the need for individualized services and supports for children experiencing significant difficulties will be determined. These children referred for a comprehensive evaluation should have received services at Tier 1 and 2; and they now require further examination to better determine what additional services are most appropriate. The DESSA can be useful in identifying areas in need of instruction that may be contributing to the child's school problems. For instance, as part of an eligibility assessment, the DESSA may reveal that the child has a very low score in Self-Management. The items on that scale could then serve as objectives in an IEP such as "wait for his/her turn," or "accept another choice when his/her first choice is not available." Scale and item level analysis may also suggest areas for functional behavioral assessment. For instance, if item #3 – "keep trying when unsuccessful" is rated as never occurring, it could lead to a discussion and functional assessment of the behaviors the child engages in when frustrated. Within a functional approach, the DESSA may also identify appropriate replacement behaviors that need to be developed. For instance, a child who engages in antisocial behaviors motivated by attention seeking may benefit from learning to "greet a person in a polite way" (item #47) as a way of gaining attention. These data may help with eligibility determination (e.g., serious emotional disturbance) or with more adequately describing the connections between learning and emotional problems. For example, a child's specific learning disability could have led to lower scores on the DESSA Optimistic Thinking as well as the Goal-Directed Behavior scales (because of the barrier to learning that the disability presents). Discovering that the child has strengths in Social-Awareness and Relationship Skills might suggest that individual counseling would be an excellent way to help the child understand that the obstacles the learning disability poses can be overcome with the right academic strategies (e.g., see Naglieri & Pickering, 2003; Pressley & Woloshyn, 1995).

In 2004, the Individuals with Disabilities Educational Improvement Act (IDEA) was modified to include a requirement that individual education plans (IEPs) include a child's strengths as determined through technologically sound means. Clearly, the DESSA is ideally suited to this purpose. The individual item analysis technique can be very useful in identifying focal strengths of the child that can be leveraged or scaffolded in the IEP.

Summary and Conclusion

The DESSA is the third in a series of strength-based assessments grounded in resilience theory. Like the Devereux Early Childhood Assessment for Infants and Toddlers (DECA-I/T) and the Devereux Early Childhood Assessment (DECA), the DESSA is a measure of critically important within-child protective factors. However, in the case of the DESSA, we have also construed these items within the larger context of social-emotional competencies and positive youth development. The DESSA also reflects and integrates well with two important trends in the schools – positive behavior support and social-emotional learning programs. For both of these initiatives, the DESSA provides important information that can guide implementation and evaluate results.

The DESSA is also a multifaceted assessment that can provide important information at all three tiers of prevention. At the universal level, in concert with the DESSA-mini, the DESSA can be used to screen entire populations for social-emotional competencies or to conduct community needs assessments. At the targeted level, the DESSA can be very effective in identifying at-risk children and suggesting areas in need of intervention. At the indicated level, the DESSA provides in-depth information to assist with eligibility determinations, to identify strengths for inclusion in IEPs and to guide individualized strategies. The rater comparison technique provides a mechanism for engaging parents, and the pretest-posttest comparison technique is ideally suited for monitoring response to intervention and program evaluation. The authors of the DESSA believe that this tool will assist schools, after-school programs, and child welfare and mental health providers in data-based decision making, to promote the social-emotional competencies of children in order to facilitate their success in school and life.

APPENDICES

APPENDIX A–TABLE 1A

Ratings by Parent

	T-Score	Personal Responsibility	Optimistic Thinking	Goal-Directed Behavior	Percentile Score
STRENGTH	72	40	28	40	99
	71	39			98
	70				98
	69	38		39	97
	68		27		96
	67	37		38	96
	66				95
	65	36		37	93
	64		26		92
	63	35		36	90
	62				88
	61	34		35	86
	60		25		84
TYPICAL	59	33		34	82
	58				79
	57	32	24	33	76
	56				73
	55	31		32	69
	54		23		66
	53	30		31	62
	52		22	30	58
	51	29			54
	50	28		29	50
	49		21	28	46
	48	27			42
	47		20	27	38
	46	26		26	34
	45		19		31
	44	25		25	27
	43	24	18	24	24
	42				21
	41	23	17	23	18
NEED FOR INSTRUCTION	40	22		22	16
	39		16		14
	38	21		21	12
	37	20	15	20	10
	36	19		19	8
	35		14	18	7
	34	18		17	5
	33	17	13		4
	32			16	4
	31	16	12	15	3
	30	15	11		2
	29	14		14	2
	28	≤13	≤10	≤13	1

APPENDIX A–TABLE 1B

Ratings by Parent

	T-Score	Social-Awareness	Decision Making	Relationship Skills	Percentile Score
STRENGTH	72	36	32	40	99
	71	35			98
	70	34			98
	69		31		97
	68	33			96
	67			39	96
	66		30		95
	65	32			93
	64				92
	63		29	38	90
	62	31			88
	61		28	37	86
	60	30			84
TYPICAL	59			36	82
	58		27		79
	57	29		35	76
	56		26	34	73
	55	28			69
	54		25	33	66
	53	27			62
	52		24	32	58
	51	26		31	54
	50			30	50
	49	25	23		46
	48			29	42
	47	24	22		38
	46			28	34
	45	23	21		31
	44			27	27
	43	22		26	24
	42		20		21
	41	21		25	18
NEED FOR INSTRUCTION	40		19	24	16
	39	20	18		14
	38			23	12
	37	19	17		10
	36			22	8
	35	18	16	21	7
	34				5
	33	17	15	20	4
	32			19	4
	31	16	14	18	3
	30	15		17	2
	29	14	13	16	2
	28	≤13	≤12	≤15	1

APPENDIX A–TABLE 1c

Ratings by Parent

	T-Score	Self-Awareness	Self-Management	Social-Emotional Composite		Percentile Score
STRENGTH	72	28	44	558	576	99
	71		43	554	557	98
	70		42	548	553	98
	69		41	538	547	97
	68	27	40	529	537	96
	67		39	523	528	96
	66			516	522	95
	65	26	38	508	515	93
	64			500	507	92
	63		37	492	499	90
	62	25		484	491	88
	61		36	474	483	86
	60		35	467	473	84
TYPICAL	59	24		459	466	82
	58		34	452	458	79
	57	23	33	443	451	76
	56			435	442	73
	55	22	32	428	434	69
	54			422	427	66
	53		31	415	421	62
	52	21		408	414	58
	51		30	402	407	54
	50	20		392	401	50
	49		29	386	391	46
	48	19		381	385	42
	47		28	375	380	38
	46			370	374	34
	45	18	27	364	369	31
	44		26	357	363	27
	43	17		349	356	24
	42		25	341	348	21
	41	16	24	337	340	18
NEED FOR INSTRUCTION	40			327	336	16
	39	15	23	319	326	14
	38		22	313	318	12
	37	14	21	308	312	10
	36			299	307	8
	35	13	20	292	298	7
	34		19	288	291	5
	33	12		282	287	4
	32	11	18	276	281	4
	31			272	275	3
	30	10	17	265	271	2
	29	9	16	260	264	2
	28	≤8	≤15	0	259	1

APPENDIX A–TABLE 2A

Ratings by Teacher

	T-Score	Personal Responsibility	Optimistic Thinking	Goal-Directed Behavior	Percentile Score
STRENGTH	72	40	28	40	99
	71				98
	70				98
	69	39	27	39	97
	68				96
	67	38		38	96
	66		26		95
	65	37		37	93
	64		25	36	92
	63	36			90
	62	35	24	35	88
	61	34		34	86
	60		23		84
TYPICAL	59	33		33	82
	58	32		32	79
	57		22	31	76
	56	31			73
	55		21	30	69
	54	30			66
	53	29	20	29	62
	52			28	58
	51	28	19	27	54
	50	27			50
	49	26	18	26	46
	48	25		25	42
	47	24	17	24	38
	46	23		23	34
	45	22	16	22	31
	44	21		21	27
	43		15	20	24
	42	20	14	19	21
	41	19		18	18
NEED FOR INSTRUCTION	40	18	13	17	16
	39	17	12		14
	38	16		16	12
	37	15	11	15	10
	36	14		14	8
	35	13	10	13	7
	34		9	12	5
	33	12		11	4
	32	11	8	10	4
	31	10	7	9	3
	30	9	6	8	2
	29			7	2
	28	≤8	≤5	≤6	1

APPENDIX A–TABLE 2B

Ratings by Teacher

	T-Score	Social-Awareness	Decision Making	Relationship Skills	Percentile Score
STRENGTH	72	36	32	40	99
	71	35			98
	70				98
	69	34	31	39	97
	68	33			96
	67		30		96
	66	32		38	95
	65		29		93
	64	31		37	92
	63		28	36	90
	62	30		35	88
	61		27		86
	60	29		34	84
TYPICAL	59		26	33	82
	58	28		32	79
	57		25		76
	56	27		31	73
	55				69
	54	26	24	30	66
	53			29	62
	52	25	23	28	58
	51	24			54
	50		22	27	50
	49	23			46
	48		21	26	42
	47	22	20	25	38
	46		19	24	34
	45	21	18	23	31
	44	20		22	27
	43	19	17	21	24
	42		16	20	21
	41	18	15		18
NEED FOR INSTRUCTION	40	17		19	16
	39	16	14	18	14
	38	15	13	17	12
	37	14	12	16	10
	36			15	8
	35	13	11	14	7
	34	12	10	13	5
	33	11		12	4
	32	10	9	11	4
	31	9	8	10	3
	30	8		9	2
	29	7	7	8	2
	28	≤6	≤6	≤7	1

APPENDIX A–TABLE 2c

Ratings by Teacher

	T-Score	Self-Awareness	Self-Management	Social-Emotional Composite		Percentile Score
STRENGTH	72	28	44	561	576	99
	71		43	559	560	98
	70	27		554	558	98
	69		42	545	553	97
	68		41	540	544	96
	67	26		533	539	96
	66		40	528	532	95
	65	25		519	527	93
	64		39	511	518	92
	63	24	38	501	510	90
	62			493	500	88
	61	23	37	486	492	86
	60		36	476	485	84
TYPICAL	59	22	35	466	475	82
	58		34	456	465	79
	57	21		448	455	76
	56		33	439	447	73
	55	20		433	438	69
	54		32	425	432	66
	53		31	416	424	62
	52	19	30	408	415	58
	51			402	407	54
	50	18	29	394	401	50
	49		28	387	393	46
	48	17	27	379	386	42
	47			374	378	38
	46	16	26	367	373	34
	45		25	361	366	31
	44	15	24	353	360	27
	43		23	347	352	24
	42	14	22	339	346	21
	41	13	21	332	338	18
NEED FOR INSTRUCTION	40	12	20	325	331	16
	39		19	316	324	14
	38	11	18	310	315	12
	37		17	303	309	10
	36	10	16	297	302	8
	35	9	15	290	296	7
	34	8	14	281	289	5
	33	7	13	276	280	4
	32		12	271	275	4
	31	6	11	267	270	3
	30	5	10	259	266	2
	29	4	9	247	258	2
	28	≤3	≤8	0	246	1

APPENDIX B–TABLE 1A

Values Needed for Significance When Comparing DESSA *T*-Scores Obtained Before and After Intervention for Parent Raters (p = .05)

Pretest Obtained Score	Personal Responsibility Posttest Range	Optimistic Thinking Posttest Range	Goal-Directed Behavior Posttest Range
72	59–79	57–79	60–79
71	58–78	58–78	59–78
70	57–77	55–78	59–77
69	56-76	54–77	58–76
68	55–76	53–76	57–75
67	54–75	53–75	56–74
66	54–74	52–74	55–73
65	53–73	51–74	54–72
64	52–72	50–73	53–72
63	51–71	49–72	52–71
62	50–70	48–71	51–70
61	49–70	48–70	51–69
60	48–69	47–69	50–68
59	48–68	46–69	49–67
58	47–67	45–68	48–66
57	46–66	44–67	47–65
56	45–65	44–66	46–64
55	44–64	43–65	45–64
54	43–64	42–65	44–63
53	42–63	41–64	44–62
52	42–62	40–63	43–61
51	41–61	39–62	42–60
50	40–60	39–61	41–59
49	39–59	38–61	40–58
48	38–58	37–60	39–57
47	37–58	36–59	38–56
46	36–57	35–58	37–56
45	36–56	35–57	36–55
44	35-55	34–56	36–54
43	34–54	33–56	35–53
42	33–53	32–55	34–52
41	32–52	31–54	33–51
40	31–52	31–53	32–50
39	30–51	30–52	31–49
38	30–50	29–52	30–49
37	29–49	28–51	29–48
36	28–48	27–50	28–47
35	27–47	26–49	28–46
34	26–46	26–48	27–45
33	25–46	25–47	26–44
32	24–45	24–47	25–43
31	24–44	23–46	24–42
30	23–43	22–45	23–41
29	22–24	22–44	22–41
28	21–41	21–43	21–40

APPENDIX B–TABLE 1B

Values Needed for Significance When Comparing DESSA *T*-Scores Obtained Before and After Intervention for Parent Raters (p = .05)

Pretest Obtained Score	Social-Awareness Posttest Range	Decision Making Posttest Range	Relationship Skills Posttest Range
72	58–79	58–79	61–78
71	57–78	58–78	60–78
70	56–77	57–77	59–77
69	55–77	56–76	58–76
68	54–76	55–76	57–75
67	54–75	54–75	56–74
66	53–74	53–74	55–73
65	52–73	53–73	55–72
64	51–72	52–72	54–71
63	50–72	51–71	53–70
62	49–71	50–70	52–70
61	49–70	49–70	51–69
60	48–69	48–69	50–68
59	47–68	47–68	49–67
58	46–67	47–67	48–66
57	45–67	46–66	47–65
56	44–66	45–65	47–64
55	44–65	44–65	46–63
54	43–64	43–64	45–62
53	42–63	42–63	44–61
52	41–62	41–62	43–61
51	40–61	41–61	42–60
50	39–61	40–60	41–59
49	39–60	39–59	40–58
48	38–59	38–59	39–57
47	37–58	37–58	39–56
46	36–57	36–57	38–55
45	35–56	35–56	37–54
44	34–56	35–55	36–53
43	33–55	34–54	35–53
42	33–54	33–53	34–52
41	32–53	32–53	33–51
40	31–52	31–52	32–50
39	30–51	30–51	31–49
38	29–51	30–50	30–48
37	28–50	29–49	30–47
36	28–49	28–48	29–46
35	27–48	27–47	28–45
34	26–47	26–47	27–45
33	25–46	25–46	26–44
32	24–46	24–45	25–43
31	23–45	24–44	24–42
30	23–44	23–43	23–41
29	22–43	22–42	22–40
28	21–42	21–42	22–39

APPENDIX B–TABLE 1c

Values Needed for Significance When Comparing DESSA *T*-Scores Obtained Before and After Intervention for Parent Raters (p = .05)

Pretest Obtained Score	Self-Awareness Posttest Range	Self-Management Posttest Range	Social-Emotional Composite Posttest Range
72	57–79	59–79	67–76
71	56–78	58–78	66–75
70	55–78	57–77	65–74
69	55–77	56–76	64–73
68	54–76	56–75	63–72
67	53–75	55–75	62–71
66	52–74	54–74	61–70
65	51–73	53–73	60–69
64	50–73	52–72	59–68
63	50–72	51–71	58–67
62	49–71	50–70	57–66
61	48–70	50–69	56–65
60	47–69	49–69	55–64
59	46–69	48–68	54–63
58	46–68	47–67	54–62
57	45–67	46–66	53–61
56	44–66	45–65	52–60
55	43–65	44–64	51–59
54	42–64	44–63	50–58
53	41–64	43–62	49–57
52	41–63	42–62	48–56
51	40–62	41–61	47–55
50	39–61	40–60	46–54
49	38–60	39–59	45–53
48	37–59	38–58	44–52
47	36–59	38–57	43–51
46	36–58	37–56	42–50
45	35–57	36–56	41–49
44	34–56	35–55	40–48
43	33–55	34–54	39–47
42	32–54	33–53	38–46
41	31–54	32–52	37–46
40	31–53	31–51	36–45
39	30–52	31–50	35–44
38	29–51	30–50	34–43
37	28–50	29–49	33–42
36	27–50	28–48	32–41
35	27–49	27–47	31–40
34	26–48	26–46	30–39
33	25–47	25–45	29–38
32	24–46	25–44	28–37
31	23–45	24–44	27–36
30	22–45	23–43	26–35
29	22–44	22–42	25–34
28	21–43	21–41	24–33

APPENDIX B–TABLE 2A

Values Needed for Significance When Comparing DESSA *T*-Scores Obtained Before and After Intervention for Teacher Raters (p = .05)

Pretest Obtained Score	Personal Responsibility Posttest Range	Optimistic Thinking Posttest Range	Goal-Directed Behavior Posttest Range
72	63–78	61–79	63–78
71	62–77	60–78	62–77
70	61–76	59–77	62–76
69	60–75	58–76	61–75
68	59–74	57–75	60–74
67	58–73	56–74	59–73
66	57–72	55–73	58–72
65	56–71	54–72	57–71
64	55–70	54–71	56–70
63	55–70	53–70	55–69
62	54–69	52–70	54–68
61	53–68	51–69	53–67
60	52–67	50–68	52–66
59	51–66	49–67	51–65
58	50–65	48–66	50–65
57	49–64	47–65	49–64
56	48–63	46–64	48–63
55	47–62	46–63	48–62
54	46–61	45–62	47–61
53	45–60	44–62	46–60
52	44–59	43–61	45–59
51	43–58	42–60	44–58
50	43–57	41–59	43–57
49	42–57	40–58	42–56
48	41–56	39–57	41–55
47	40–55	38–56	40–54
46	39–54	38–55	39–53
45	38–53	37–54	38–52
44	37–52	36–54	37–52
43	36–51	35–53	36–51
42	35–50	34–52	35–50
41	34–49	33–51	35–49
40	33–48	32–50	34–48
39	32–47	31–49	33–47
38	31–46	30–48	32–46
37	30–45	30–47	31–45
36	30–45	29–46	30–44
35	29–44	28–46	29–43
34	28–43	27–45	28–42
33	27–42	26–44	27–41
32	26–41	25–43	26–40
31	25–40	24–42	25–39
30	24–39	23–41	24–38
29	23–38	22–40	23–38
28	22–37	21–39	22–37

APPENDIX B–TABLE 2B

Values Needed for Significance When Comparing DESSA *T*-Scores Obtained Before and After Intervention for Teacher Raters (p = .05)

Pretest Obtained Score	Social-Awareness Posttest Range	Decision Making Posttest Range	Relationship Skills Posttest Range
72	62–78	62–78	64–77
71	61–77	61–77	63–77
70	60–76	61–76	62–76
69	59–75	60–75	61–75
68	58–75	59–74	60–74
67	57–74	58–73	59–73
66	56–73	57–72	58–72
65	55–72	56–72	57–71
64	55–71	55–71	56–70
63	54–70	54–70	55–69
62	53–69	53–69	54–68
61	52–68	52–68	53–67
60	51–67	51–67	52–66
59	50–66	50–66	52–65
58	49–65	50–65	51–64
57	48–65	49–64	50–63
56	47–64	48–63	49–63
55	46–63	47–62	48–62
54	45–62	46–61	47–61
53	45–61	45–61	46–60
52	44–60	44–60	45–59
51	43–59	43–59	44–58
50	42–58	42–58	43–57
49	41–57	41–57	42–56
48	40–56	40–56	41–55
47	39–55	39–55	40–54
46	38–55	39–54	39–53
45	37–54	38–53	38–52
44	36–53	37–52	37–51
43	35–52	36–51	37–50
42	35–51	35–50	36–49
41	34–50	34–50	35–48
40	33–49	33–49	34–48
39	32–48	32–48	33–47
38	31–47	31–47	32–46
37	30–46	30–46	31–45
36	29–45	29–45	30–44
35	28–45	28–44	29–43
34	27–44	28–43	28–42
33	26–43	27–42	27–41
32	25–42	26–41	26–40
31	25–41	25–40	25–39
30	24–40	24–39	24–38
29	23–39	23–39	23–37
28	22–38	22–38	23–36

APPENDIX B–TABLE 2c

Values Needed for Significance When Comparing DESSA *T*-Scores Obtained Before and After Intervention for Teacher Raters (p = .05)

Pretest Obtained Score	Self-Awareness Posttest Range	Self-Management Posttest Range	Social-Emotional Composite Posttest Range
72	60–79	63–78	69–75
71	60–78	62–77	68–74
70	59–77	61–76	67–73
69	58–76	60–75	66–72
68	57–75	59–74	65–71
67	56–74	58–73	64–70
66	55–73	57–72	63–69
65	54–72	56–71	62–68
64	53–71	56–70	61–67
63	52–71	55–69	60–66
62	52–70	54–69	59–65
61	51–69	53–68	58–64
60	50–68	52–67	57–63
59	49–67	51–66	56–62
58	48–66	50–65	55–61
57	47–65	49–64	54–60
56	46–64	48–63	53–59
55	45–64	47–62	52–58
54	44–63	46–61	51–57
53	44–62	45–60	50–56
52	43–61	44–59	49–55
51	42–60	43–58	48–54
50	41–59	43–57	47–53
49	40–58	42–57	46–52
48	39–57	41–56	45–51
47	38–56	40–55	44–50
46	37–56	39–54	43–49
45	36–55	38–53	42–48
44	36–54	37–52	41–47
43	35–53	36–51	40–46
42	34–52	35–50	39–45
41	33–51	34–49	38–44
40	32–50	33–48	37–43
39	31–49	32–47	36–42
38	30–48	31–46	35–41
37	29–48	31–45	34–40
36	29–47	30–44	33–39
35	28–46	29–44	32–38
34	27–45	28–43	31–37
33	26–44	27–42	30–36
32	25–43	26–41	29–35
31	24–42	25–40	28–34
30	23–41	24–39	27–33
29	22–40	23–38	26–32
28	21–40	22–37	25–31

APPENDIX C

List of Data Collection Sites by State

With deep appreciation, we would like to acknowledge the parents and/or staff from the following schools and community organizations who participated in the development of the DESSA:

Alabama

Academy for Academics & Arts, Huntsville
Cullman Child Development Center, Cullman
Daphne Middle School, Daphne
Leeds Elementary School, Leeds
Norwood Elementary School, Birmingham
Oak Mountain Middle School, Birmingham
Robert C. Arthur Elementary School, Birmingham
Vestavia Hills Elementary School East, Vestavia Hills

Alaska

Academy for Academics & Arts, Huntsville
Butte Elementary, Palmer
Fire Lake Elementary, Eagle River
Holy Rosary Academy, Anchorage
Kaleidoscope School of Arts & Sciences, Kenai
Ladd Elementary, Fairbanks
Mirror Lake Middle School, Chugiak
Palmer Middle School, Palmer
Russian Jack Elementary, Anchorage
Tudor Elementary, Anchorage
Willow Crest Elementary, Anchorage

Arizona

Aztec Elementary School, Scottsdale
Bicentennial North School, Glendale
Centennial Elementary School, Tucson
Desert Shadows Middle School, Scottsdale
Eagle Ridge Elementary School, Phoenix
Esperero Canyon Middle School, Tucson
Fredonia Elementary School, Fredonia
Howell Peter Elementary, Tucson

Jordan Elementary School, Chandler
Kerr Elementary, Mesa
Kyrene Aprende Middle School, Chandler
Kyrene Centennial Middle School, Phoenix
Kyrene De Las Lomas School, Phoenix
Las Brisas Elementary School, Glendale
Lone Mountain Elementary School, Cave Creek
Madison Meadows School, Phoenix
Martin Luther King Jr. Elementary School, Phoenix
Mesa Verde Elementary School, Tucson
Moon Mountain School, Phoenix
North Ranch Elementary School, Scottsdale
Pima Elementary School, Scottsdale
Sunset Ridge Elementary, Phoenix
Thornydale Elementary School, Tucson
Tucson Country Day School, Tucson
Tucson Jewish Community Center, Tucson
Valley Academy, Phoenix
Van Horne Elementary School, Tucson

Arkansas

Caldwell Elementary School, Benton
David O'Dodd Elementary School, Little Rock
De Queen Elementary School, De Queen
Horatio Elementary School, Horatio
Jefferson Elementary School, Little Rock
Marguerite Vann Elementary School, Conway
Mena Middle School, Mena
Monticello Elementary School, Monticello
Sugar Creek Elementary School, Bentonville
Wickes Elementary School, Wickes

California

Antonio Del Buono Elementary, Gilroy
Barbara Benson Elementary, Tustin
Benicia Middle School, Benicia
Benicia Middle School Viking Marching Band & Color Guard Team, Vallejo
Bowman International School, Palo Alto
Canyon Rim Elementary, Anaheim

Cherrywood Elementary, San Jose
Courtyard Private School, Sacramento
Cragmont Elementary, Berkeley
Crestview Elementary, Lompoc
Cullen Elementary, Glendora
Dan Mini Elementary, Vallejo
Department of Children and Family Services, Covina
Dunsmore Elementary, La Crescenta
Eagle Rock Middle School, Los Angeles
East Ave Middle School, Livermore
Farragut Elementary, Culver City
First Avenue Middle School, Arcadia
Foothills Middle School, Arcadia
Goddard Middle School, Glendora
Golden Hill Elementary, Fullerton
Grattan Elementary, San Francisco
Harder Elementary, Hayward
Hugo Reid Elementary, Arcadia
Joe Henderson Elementary, Benicia
Johnston Cooper Elementary, Vallejo
Kellogg Elementary, Goleta
La Canada Elementary, La Canada
La Colina Junior High, Santa Barbara
Lafayette Elementary, Eureka
Lark Ellen Elementary, Covina
Los Padres Elementary, Salinas
Loyola Elementary, Los Altos
Lydiksen Elementary, Pleasanton
Marshall Elementary, Oakland
Mary Farmar Elementary, Benicia
Matthew Turner Elementary, Benicia
McKinley Elementary, Gridley
Myra A. Noble Elementary, Bakersfield
North Davis Elementary, Davis
Orangewood Elementary, West Covina
Pine Valley Middle School, San Ramon
Polytechnic School, Pasadena
Ramon S. Tafoya Elementary, Woodland
Robert Semple Elementary, Benicia
Rorimer Elementary, La Puente

Rose City Crystals of the Pasadena Figure Staking Club, Pasadena
Royal Oak Intermediate, Covina
Saint James Catholic School, Perris
Santa Fe Middle School, Monrovia
Skyblue Mesa Elementary, Canyon Country
South Pasadena Middle School, South Pasadena
South Valley Middle, Gilroy
Steffan Manor Elementary, Vallejo
Upland Christian Schools, Upland
Valentine Elementary, San Marino
Ynez Elementary, Monterey Park

Colorado

3 Cs Preschool, Commerce City
Adams County School District Child Care Center, Commerce City
Antelope Trails Elementary School, Colorado Springs
Arrowhead Elementary School, Aurora
Aspen Elementary School, Aspen
Aspen Middle School, Aspen
Audubon Elementary, Colorado Springs
Bates Elementary School, Colorado Springs
Bergen Meadows Primary School, Evergreen
Bill Metz Elementary School, Monte Vista
Birch Elementary School, Broomfield
Broadway Extended Hours, Grand Junction
Carver Elementary School, Colorado Springs
Chipeta Elementary School, Colorado Springs
Cimarron Elementary School, Aurora
Clifton Extended Hours, Clifton
Compass Montessori – Wheat Ridge Charter School, Wheat Ridge
Creative Play Centers and Adventure Clubs, Colorado Springs
Custer County Elementary School, Westcliffe
Custer County Middle School, Westcliffe
Douglas County Student Support Center, Parker
Douglass Valley Elementary School, U.S. Air Force Academy
Edwards Elementary School, Edwards
Evans Elementary School, Alamosa
Explorer Elementary School, Colorado Springs
Falcon Elementary School, Falcon
Grant Elementary School, Colorado Springs

Irving Middle School, Colorado Springs
Jackson Elementary School, Colorado Springs
Junior Academy Small Wonders, Colorado Springs
Laredo Middle School, Aurora
Liberty Middle School, Aurora
Lincoln Orchard Mesa Elementary School, Grand Junction
Loma Extended Hours, Loma
Longfellow Elementary School, Colorado Springs
Madison Exploratory School, Canon City
Marsh Elementary School, Monte Vista
Martinez Elementary School, Colorado Springs
McKinley Elementary School, Canon City
Merino Junior Senior High School, Merino
Mesa Elementary School, Boulder
Mesa View Extended Hours, Grand Junction
Midland Elementary School, Colorado Springs
Mitchell Elementary School, Golden
Monte Vista Middle School, Monte Vista
Montessori Peaks Charter Academy, Littleton
New Emerson School at Columbus, Grand Junction
North Middle School, Colorado Springs
Penrose Elementary School, Colorado Springs
Pine Lane Primary School, Parker
Polaris at Ebert Elementary School, Denver
Polston Elementary School, Alamosa
Prairie Hills Elementary School, Colorado Springs
Putnam Elementary School, Fort Collins
Rishel Middle School, Denver
Rock Ridge Elementary School, Castle Rock
Rudy Elementary School, Colorado Springs
Saint Vincent de Paul School, Denver
Salida Middle School, Salida
Sand Creek Elementary School, Colorado Springs
Sangre De Cristo Undivided High School, Mosca
Scenic Extended Hours, Grand Junction
Shelton Elementary School, Golden
South Lakewood Elementary School, Lakewood
SPIN Preschool and Childcare Center, Canon City
Stratton Elementary School, Colorado Springs
The Da Vinci Academy School, Colorado Springs

Timberline Elementary School, Centennial
Washington Elementary School, Lamar
West Jefferson Middle School, Conifer
West Side Academy for Children, Colorado Springs
Whittier International School, Boulder
Wildcat Mountain Elementary School, Littleton
Wilder Elementary School, Littleton
Witt Elementary School, Westminster

Connecticut

Bristol Boys & Girls Club, Bristol Bristol Family Center, Bristol
Chapel School, Stratford
Clara T. O'Connell School, Bristol
Clarence A. Bingham School, Bristol
Cook Hill School, Wallingford
Dag Hammarskjold School, Wallingford
Ellen P. Hubbell School, Bristol
Evarts C. Stevens School, Wallingford
Foote School, New Haven
Greene-Hills School, Bristol
Holy Trinity School, Wallingford Howe School, Bridgeport
Ivy Drive School, Bristol
James Morris School, Morris
John J. Jennings School, Bristol
Lake Garda Elementary School, Burlington
Linden Street School, Plainville
Madison Middle School, Trumbull
Mill Hill School, Fairfield
Nathan Hale School, Enfield
Newtown Middle School, Newtown
Northville Elementary School, New Milford
Saint James School, Stratford
Saint Stephen School, Hamden
Sarah Noble Intermediate School, New Milford
Schaghticoke Middle School, New Milford
Scofield Middle School, Stamford
South Side School, Bristol
The Glenholme School, Washington Depot
University of Hartford Clinical Psychology Department, Hartford
University of Hartford Magnet School, West Hartford

Wallingford Community Day Care Center, Inc., Wallingford
Wilcoxson School, Stratford
Worthington Hooker School, New Haven

Delaware

Centreville School, Wilmington
Claymont Elementary School, Claymont
David W. Harlan Elementary School, Wilmington
Delaware Technical & Community College Child Development Center, Georgetown
Georgetown Elementary School, Georgetown
Lake Forest South Elementary School, Harrington
Lulu M. Ross Elementary School, Milford
Silver Lake Elementary School, Middletown
Southern Delaware School of the Arts, Selbyville
Sussex Central Middle School, Millsboro
West Park Place Elementary School, Newark
Wilmington Montessori School, Wilmington
Holy Rosary Elementary School, Claymont
Southern Elementary School, New Castle

District of Columbia

Hardy Middle School, Washington, D.C.
St. Albans School for Boys, Washington, D.C.
Stoddert Elementary School, Washington, D.C.

Florida

Ada Merritt Elementary School, Miami
Apopka Middle School, Apopka
Arbor Ridge School, Orlando
Ascension Catholic School, Melbourne
Astronaut High School, Titusville
Audubon Elementary School, Merritt Island
Bair Middle School, Sunrise
Baldwin Middle-Senior High School, Baldwin
Banyan Elementary School, Sunrise
Beauclerc Elementary School, Jacksonville
Benito Middle School, Tampa

Bentley Elementary School, Sanford
Biscayne Gardens Elementary, Miami
Bonneville Element, Orlando
Bowling Green Elementary School, Bowling Green
Camelot Elementary School, Orlando
Carlton Palmore Elementary School, Lakeland
Centennial Middle School, Miami
Central Florida Preparatory School, Gotha
Challenger 7 Elementary School, Cocoa
Charles D. Wyche, Junior Elementary School, Miami
Charles E. Bennett Elementary School, Green Cove Springs
Christa McAuliffe Elementary School, Palm Bay
Clearlake Middle School, Cocoa
Closing the Gap School, Sarasota
Coconut Grove Elementary School, Coconut Grove
Coleman Middle School, Tampa
Columbia Elementary School, Palm Bay
Community Education Partners, Orlando
Coral Park Elementary School, Coral Springs
Coral Springs Christian Academy, Coral Springs
Croton Elementary School, Melbourne
Crystal Lake Middle School, Lakeland
Dade Christian School, Miami
Daniel Jenkins Academy of Technology Middle School, Haines City
Darnell Cookman Middle School, Jacksonville
David Fairchild Elementary School, Miami
Deer Park Elementary, New Port Richey
Dr. Edward L. Whigham Elementary School, Miami
Dr. W.J. Creel Elementary School, Melbourne
Eastbrook Elementary School, Winter Park
Edgewater Public School, Edgewater
Egypt Lake Elementary School, Tampa
English Estates Elementary School, Fern Park
Essrig Elementary School, Tampa
Family Central, Inc of Palm Beach, Broward, and Miami Dade Counties
Fieldston Preperatory School, Titusville
Flamingo Elementary School, Hialeah
Floranada Elementary School, Fort Lauderdale
Frances S. Tucker Elementary School, Miami
Friendship Christian Academy, Tampa

George W. Carver Elementary School, Coral Gables
George Washington Carver Middle School, Miami
Gertrude K. Edleman/Sabal Palm Elementary School, North Miami Beach
Golfview Elementary Magnet School, Rockledge
Gotha Middle School, Windermere
Gratigny Elementary School, Miami
Hans Christian Andersen Elementary, Rockledge
Henry S. West Laboratory School, Coral Gables
Hialeah Elementary School, Hialeah
Hialeah Gardens Elementary School, Hialeah Gardens
Hiawassee Elementary School, Orlando
Highlands Elementary School, Winter Springs
Incarnation Catholic School, Sarasota
Indian Trails Middle School, Palm Coast
Ivey Lane Elementary School, Orlando
Joella Good Elementary School, Miami
John G. Dupuis Elementary School, Hialeah
Joseph Stilwell Middle School, Jacksonville
Lake Asbury Elementary School, Green Cove Springs
Lake Como Elementary School, Orlando
Lake George Elementary School, Orlando
Lake Gibson Middle School, Lakeland
Lake Orienta Elementary School, Altamonte Springs
Lake Silver Elementary School, Orlando
Lake Sybelia Elementary School, Maitland
Lakeside Junior High School, Orange Park
Lakeview Elementary School, Saint Cloud
Lakeview Middle School, Winter Garden
Lamar Louise Curry Middle School, Miami
Largo Central Elementary School, Largo
Lawton Chiles Middle School, Lakeland
Lewis Carroll Elementary School, Merritt Island
Liberty Elementary School, Margate
Little River Elementary School, Orlando
Lockmar Elementary School, Palm Bay
Lovell Elementary School, Apopka
Lyndon B. Johnson Middle School, Melbourne
Mandarin Christian School, Jacksonville
McKitrick Elementary School, Lutz
Meadow Woods Middle School, Orlando

Meadowlane Elementary School, West Melbourne
Meadowlane Elementary School, Hialeah
Metropolitan Christian Academy of the Arts, Tallahassee
Metrowest Elementary School, Orlando
Miami Lakes Elementary School, Miami Lakes
Minneola Elementary School, Clermont
Myrtle Grove Elementary School, Opa Locka
Naples Park Elementary School, Naples
New River Middle School, Fort Lauderdale
Neytz Hachochma Exceptional Student Education, Miami
Norcrest Elementary School, Pompano Beach
North Andrews Gardens Elementary School, Fort Lauderdale
North Hialeah Elementary School, Hialeah
Oak Hill Elementary School, Orlando
Ojus Elementary School, Miami
Olympia Heights Elementary School, Miami
Orange Grove Middle Magnet School, Tampa
P.K. Yonge Developmental Research School, Gainesville
Paradise Christian School, Hialeah
Park Avenue Christian Academy, Titusville
Piedmont Lakes Middle School, Apopka
Pinellas Park Elementary School, Pinellas Park
Ramblewood Elementary School, Coral Springs
Reinherdt Holm Elementary School, Pensacola
Rideout Elementary School, Middleburg
Riverside Baptist Child Development Center, Miami
Rochelle School of the Arts, Lakeland
Roy Allen Elementary School, Melbourne
Saint Louis Covenant School,
Sanford Math, Science, and Technology Magnet School, Sanford
Scenic Heights Elementary School, Pensacola
Seacrest Country Day School, Naples
Silver Bluff Elementary School, Miami
South Miami Elementary School, South Miami
South Seminole Middle School, Casselberry
Space Coast Junior/Senior High School, Cocoa
Suntree Elementary School, Melbourne
Teague Middle School, Altamonte Springs
The Sagemont School, Weston
Three Oaks Elementary School, Fort Myers

Timberlin Creek Elementary School, Saint Augustine
Touchdowns4Life, Tamarac
Twin Lakes Elementary School, Hialeah
Valleyview Elementary School, Lakeland
Vineland Elementary School, Miami
Virginia Shuman Young Elementary School, Fort Lauderdale
Volusia Pines Elementary School, Lake Helen
Wendell Watson Elementary School, Lakeland
Wise Kids Daycare, Miami
Youth Co-op Charter School, Hialeah Gardens
YMCA of Greater Miami, Miami
YMCA of Key West, Key West

Georgia

Addison Elementary School, Marietta
Bells Ferry Elementary School, Marietta
Carmel Elementary School, Woodstock
Chattahoochee Elementary School, Cumming
Chestatee Elementary, Gainesville
Findley Oaks Elementary School, Duluth
Frey Elementary School, Acworth
Gilmer Middle School, Elluay
Hickory Hills Elementary School, Marietta
Katherine Jacob Greenfield Hebrew Academy, Atlanta
Montessori of Macon, Macon
Nickajack Elementary School, Smyrna
North Forsyth Middle School, Cumming
Pharr Elementary School, Snellville
Riverside Middle School, Evans
Sawnee Elementary School, Cumming
Sprayberry, Marietta
The Porter School, Roswell
Vaughan Elementary, Powder Springs
Wesleyan School, Norcross

Hawaii

Saint Theresa School, Kekaha
Washington Middle School, Honolulu

Idaho

ANSER Charter School, Boise
Chubbuck Elementary School, Chubbuck
Eagle Rock Junior High School, Idaho Falls
Falls Valley Elementary School, Idaho Falls
Filer Elementary School, Filer
Harrison Elementary School, Twin Falls
I. B. Perrine Elementary School, Twin Falls
Idaho Arts Charter School, Nampa
Immanuel Lutheran School, Twin Falls
Kimberly Elementary School, Kimberly
Kimberly Middle School, Kimberly
Morningside Elementary School, Twin Falls
Oregon Trail Elementary School, Twin Falls
Pal–Step After School Program, Twin Falls
Rocky Mountain Middle School, Idaho Falls
Shadow Hills Elementary School, Boise
Ucon Elementary School, Idaho Falls
Washington Elementary School, Pocatello

Illinois

Augustinian Volunteers, Chicago
Creekside Elementary, Elgin
DuJardin Elementary School, Bloomingdale
Hitch Elementary School, Chicago
Holmes Elementary School, Chicago
Lycée Français de Chicago, Chicago
Molden Elementary Dewey Street Campus, Troy
Nippersink Middle School, Richmond
Oak Prairie Jr. High School, Homer Glen
Oakton Elementary School, Evanston
Palos East Elementary School, Palos Heights
Saint Margaret of Scotland School, Chicago
Saint Sabina Academy, Chicago
U. S. Grant Middle School, Springfield
Westfield Middle School, Bloomingdale
Woodland Elementary School, Gages Lake

Indiana

Abraham Lincoln Elementary School, Indianapolis
Allisonville Elementary School, Indianapolis
Bridgeport Elementary School, Indianapolis
Brownsburg East Middle School, Brownsburg
Brumfield Elementary, Princeton
Center for Inquiry, Indianapolis
Central Elementary School, Plainfield
Chapel Glen Elementary School, Indianapolis
Chapel Hill 7th & 8th Grade Center, Indianapolis
Chapelwood Elementary School, Indianapolis
Edgewood Elementary School, Michigan City
Ernie Pyle School 90, Indianapolis
H. L. Harshman Middle School, Indianapolis
Heather Hills Elementary School, Indianapolis
Hickory Center Elementary School, Fort Wayne
Hoosier Prairie Elementary School, Terre Haute
J. B. Stephens Elementary School, Greenfield
Lincoln Elementary School, Fort Wayne
Lynhurst 7th & 8th Grade Center, Indianapolis
North Harrison Elementary School, Ramsey
North Wayne Elementary School, Indianapolis
Perry Meridian 6th Grade Academy, Indianapolis
Robey Elementary School, Indianapolis
Rousseau McClellan IPS 91, Indianapolis
White Lick Elementary School, Brownsburg

Iowa

Capitol View Elementary School, Des Moines
Crocker Elementary School, Ankeny
Drexler Elementary School, Farley
Eisenhower Elementary School, Dubuque
Fair Oaks Middle School, Fort Dodge
Freeburg Early Childhood Program, Waterloo
Jackson Elementary School, Cedar Rapids
John Kennedy Elementary School, Dubuque
Lambert Elementary School, Manchester
Lincoln Elementary School, Dubuque
Lone Tree Elementary School, Lone Tree

Nishna Valley Elementary School, Hastings
Norwalk Middle School, Norwalk
Parkview Middle School, Ankeny
Phillips Middle School, Fort Dodge
Riverdale Heights Elementary School, Pleasant Valley
Stratford Elementary School, Stratford
Terrace Elementary School, Ankeny
Westwood Elementary School, Ankeny
YMCA of Greater Des Moines, Ankeny

Kansas

Alpha Montessori School, Kansas City
Assumption Elementary School, Topeka
Auburn Elementary, Auburn
Berryton Elementary, Berryton
Broken Arrow Elementary, Shawnee Mission
East Indianola Elementary, Topeka
Indian Hills Elementary, Topeka
Jay Shideler Elementary, Topeka
Lansing Elementary, Lansing
Lowman Hill Elementary, Topeka
Mahaffie Elementary, Olathe
Rochester Elementary, Topeka
Ross Elementary, Topeka
Scott Computer Technology Magnet, Topeka
Shawnee Heights Elementary, Topeka
Stanton County Elementary, Johnson
Sunflower Elementary School, Andover
Tecumseh South Elementary, Tecumseh
Wanamaker Elementary, Topeka

Kentucky

A. M. Yealey Elementary School, Florence
Capital Avenue Day Cay, Frankfort
Children, Inc., Covington
Clays Mill Elementary School, Lexington
Clearfield Elementary School, Clearfield
Dixie Elementary Magnet School, Lexington
Dixon Elementary School, Dixon

Edythe Jones Hayes Middle School, Lexington
Fort Wright Elementary School, Covington
Glendover Elementary School, Lexington
Good Shepherd School, Frankfort
Highland Heights Elementary School, Highland Heights
John W. Reiley Elementary School, Alexandria
Johnson Elementary School, Fort Thomas
Julia R. Ewan Elementary School, Lexington
Kenton Elementary School, Independence
Lexington Traditional Magnet School, Lexington
Lincoln Elementary School, Fort Campbell
Meadowthorpe Elementary School, Lexington
Millcreek Elementary School, Lexington
Monroe County Middle School, Tompkinsville
Murray Elementary School, Murray
Murray Middle School, Murray
New Haven Elementary School, Union
Ockerman Elementary, Florence
Oldham County Middle School, Buckner
Owensboro 5-6 Elementary Center, Owensboro
Picadome Elementary School, Lexington
Prestonsburg Elementary School, Prestonsburg
R. C. Hinsdale Elementary School, Edgewood
River Ridge Elementary School, Villa Hills
Robert B. Turner Elementary School, Lawrenceburg
Russell Springs Elementary School, Russell Springs
Sedalia Elementary School, Sedalia
South Edmonson Elementary School, Smiths Grove
Summit View Elementary School, Independence
Tates Creek Elementary School, Lexington
Taylor Mill Elementary School, Covington
Treasure House Child Care Center, Covington
Trimble County Middle School, Bedford
Villa Madonna Academy High School, Villa Hills
Wright Elementary School, Shelbyville

Louisiana

Evolutions Partial Hospitalization Program at Greenwell Springs Hospital, Greenwell Springs
Lockport Lower Elementary School, Lockport

Lockport Upper Elementary School, Lockport
Saint Mary's Nativity School, Raceland
W.S. Lafargue Elementary School, Thibodaux
West Side Middle School, Amite
West Thibodaux Middle School, Thibodaux

Maine

All Saint's Catholic School, Bangor
Greely Middle School, Cumberland Center
Pleasant Hill School, Scarborough
Saint Patrick's School, Portland
Sedgwick Elementary School, Sedwick
South Elementary School, Rockland

Maryland

Ashburton Elementary, Bethesda
Baltimore Lab School: A Division of the Lab School of Washington, Baltimore
Burning Tree Elementary, Bethesda
Centreville Elementary School, Centreville
Cross Country Elementary, Baltimore
Emmanuel Lutheran School, Baltimore
Francis Scott Key Middle School, Silver Spring
Grace Bible Baptist School, Baltimore
Hampton Elementary, Lutherville
Hillcrest Elementary, Baltimore
Hillcrest Heights Elementary, Temple Hills
Hope Christian Academy, Adelphi
Jacksonville Elementary, Phoenix
Judith A. Resnik Elementary, Gaithersburg
Kennard Elementary School, Centreville
Kennedy Krieger, Baltimore
Key School, Annapolis
Lincolnshire Elementary, Hagerstown
Magothy River Middle School, Arnold
Maryland School for the Deaf, Frederick
North Harford Middle School, Pylesville
Northern Middle School, Hagerstown
Old Forge Elementary, Hagerstown
Padonia International Elementary, Cockeysville

Pleasant Valley Elementary, Knoxville
Potomac Heights Elementary, Hagerstown
Queen Anne School, Upper Marlboro
Redland Middle School, Rockville
Rolling Terrace Elementary, Takoma Park
Salisbury Christian School, Salisbury
Sandy Plains Elementary, Baltimore
Takoma Park Elementary, Takoma Park
Thomas Pullen School, Landover
Westbrook Elementary, Bethesda

Massachusetts

Alice A Macomber School, Westport
Athol-Royalston Middle School, Athol
Baldwinville Elementary, Baldwinville
Barry Elementary, Chicopee
Big Sprouts After School Program, Methuen
Bourne Middle School, Bourne
Breed Middle School, Lynn
EDCO Program for the Deaf and Hard of Hearing, Newtonville
Elizabeth Peabody House, Somerville
Ella F. Hoxie School, Sagamore Beach
Elmwood School, Hopkinton
Flagg Street School, Worcester
Frank M. Silvia Elementary School of Falls River, Falls River
Hampshire Regional School District, Westhampton
Hanscom Primary, Hansom Air Force Base
Highland Elementary, Westfield Holy Cross School, Springfield
Hopkinton Middle School, Hopkinton
Hubbardston Center, Hubbardston
Jackson Street, Northampton
Johnson School, Natick
Joseph H. Martin School, East Taunton
Learning Prep School, Newton
Leroy E. Mayo School, Holden
Mapleshade School, East Longmeadow
Martin Luther King Jr. School, Cambridge
Mary Rowlandson Elementary, Lancaster
Mattacheese Middle School, West Yarmouth
Meadow Brook School, East Longmeadow

Memorial School, Upton
Montrose School, Natick
Mountview Middle School, Holden
Naquag Elementary, Rutland
New Braintree Grade School, New Braintree
New Hingham Regional Elementary, Chesterfield
Oak Ridge School, East Sandwich
Oakham Center School, Oakham
Our Lady of Lourdes School, Jamaica Plain
Pleasant Street School, Athol
Reingold Elementary, Fitchburg
Roxbury Preparatory Charter School, Roxbury
Sewell-Anderson, Lynn
Silver Hill School, Haverhill
Stall Brook, Bellingham
Station Avenue Elementary, South Yarmouth
The Bridgeview School, Sagamore
The Carroll School, Lincoln
The Learning Center for Deaf Children, Framingham
The Meadowbrook School of Weston, Weston
Torah Academy, Brookline
Uphams Corner Charter School, South Boston
Walsh Middle School, Framingham
Westlands Elementary, Chelmsford
Wilbraham Middle School, Wilbraham
William E. Norris School, Southampton
Wilson Middle School, Natick
Winthrop L. Chenery Middle School, Belmont
Wire Village School, Spencer
Woodside Montessori Academy, Millis
Worcester Arts Magnet School, Worcester

Michigan

Allegan County Development Center, Allegan
Andrews Elementary School, Three Rivers
Beach Elementary School, Muskegon
C.W. Otto Middle School, Lansing
Caledonia Community Schools, Caledonia
Chime Elementary School, Kalamazoo
Community Action Agency of Battle Creek, Battle Creek

Dawson Elementary School, Allegan
Fennville Public High School, Fennville
Gull Lake Middle School, Hickory Corners
Gunnisonville School, Lansing
Hebrew Day School of Ann Arbor, Ann Arbor
Ida Middle School, Ida
International WAGR Syndrome Association (IWSA), Allen Park
Kellogg Elementary, Hickory Corners
Kettle Lake Elementary School, Alto
Lake Center Elementary School, Portage
Lake's Elementary School, Rockford
Lincoln Park Middle School, Lincoln Park
Manton Consolidated Elementary School, Manton
New Beginnings Academy, Ypsilanti
Ontonagon Area Elementary School, Ontonagon
Roosevelt Elementary School, Zeeland
Saint Anthony Academy, Belleville
Sauk Trail Academy, Hillsdale
Seneca Middle School, Clinton Township
St. Germaine Elementary School, Saint Clair Shores
St. Mary Elementary School, Williamston
Verona School, Battle Creek
Wilde Elementary School, Warren
Woodward School for Technology and Research, Kalamazoo

Minnesota

Concord Elementary, Edina
Crosslake Community Charter School, Crosslake
Eastview Elementary, Lakeville
J.W. Smith Elementary, Bemidji
Kellogg Middle School, Rochester
Lily Lake Elementary, Stillwater
Rochester Montessori School, Rochester
Saint Mathias School, Hampton
Southwest Junior High, Forest Lake

Mississippi

Joyner Elementary School, Tupelo Northwest Rankin Elementary, Flowood
West Bolivar Elementary, Rosedale

Missouri

Allen Village Charter, Kansas City
Attucks Elementary, Kansas City
Burrell Behavioral Health, Springfield
C.A. Franklin Elementary, Kansas City
Campbellton Elementary, New Haven
Clearview Elementary, Union
Ervin Junior High, Kansas City
Fairview Elementary, Columbia
First Baptist Christian, O'Fallon
Foreign Language Academy, Kansas City
Genesis School, Kansas City
George Melcher Elementary, Kansas City
Gordon Parks Elementary, Kansas City
Graceland Elementary, Kansas City
Lee A. Tolbert Community Academy, Kansas City
Longfellow Elementary Magnet School, Kansas City
Mary Harmon Weeks Elementary, Kansas City
Moberly Middle School, Moberly
North Park Elementary, Moberly
Operation Breakthrough, Inc., Kansas City
Paseo Academy of Performing Arts, Kansas City
Pershing Middle School, Springfield
Plaza Middle School, Kansas City
Russell Elementary, Hazelwood
Saint Joseph Elementary School, Springfield
Santa Fe Elementary, Kansas City
Southwest Charter School, Kansas City
Springfield Catholic Schools, Springfield
University Academy, Kansas City
Washington Middle School, Washington
Wendell Phillips Elementary Magnet School, Kansas City
Wm. A. Knotts Elementary Magnet School, Kansas City

Montana

Big Sky Elementary, Billings
Independent School, Billings
St. Francis School – Intermediate, Billings
Washington Middle School, Missoula

Nebraska

Alcott Elementary School, Hastings
Elliot Elementary School, Lincoln
Lefler Middle School, Lincoln
YMCA of Lincoln, Lincoln

Nevada

Brookfield School, Reno
Brown Elementary School, Reno
Caughlin Ranch Elementary School, Reno
Green Valley Christian School, Henderson
Little Golden Goose, Reno
Martha P. King Elementary School, Boulder City
Tony Alamo Elementary School, Las Vegas

New Hampshire

Bethlehem Elementary Schools, Bethlehem
Frances C Richmond School, Hanover
Hillside Middle School, Manchester
John Powers School of the Strafford Learning Center, Somersworth
Southside Middle School, Manchester

New Jersey

Allen W. Roberts School, New Providence
Belhaven Middle School, Linwood
Brookdale Avenue School, Verona
Chancellor Avenue School, Irvington
Children's Day Nursery and Family Center, Passaic
Dawes Avenue Elementary School, Somers Point
Edward T. Hamilton Elementary School, Vorhees
Gables School, Neptune
Gregory School, West Orange
Haddonfield Middle School, Haddonfield
Holy Innocents Elementary School, Neptune
Indian Mills Elementary School, Shamong
Indian Mills Memorial School, Shamong
J. Fithian Tatem School, Haddonfield
Jordan Road Elementary School, Somers Point

Jordan Road Middle School, Somers Point
Joseph C. Shaner Memorial School, Mays Landing
Levitt Middle School, Willingboro
Manchester Regional High School, Haledon
Middle Township Elementary School, Cape May Court House
Moriah School of Englewood, Englewood
Mountain View School, Flanders
Oldmans Township School, Pedricktown
Primary Prep, Jersey City
Richard Stockton School, Cherry Hill
Roosevelt Middle School, West Orange
Rosa International Middle School, Cherry Hill
Sage Day at Boonton, Boonton
Schuyler School, Kearny
St. Vincent de Paul School, Mays Landing
Upper Township Elementary, Marmora
Van Sciver School, Westmont
Ventnor Middle School, Ventnor
Veterans Memorial Middle School, Brick Town
West Deptford Middle School, West Deptford
West End Memorial Elementary School, Woodbury
William G. Rohrer Middle School, Westmont
Woodbury Jr.–Sr. High, Woodbury
Yale School Southeast, Voorhees

New Mexico

Marie M. Hughes Elementary, Albuquerque
Vista Middle School, Las Cruces

New York

Academy of Saint Dorothy, Staten Island
Alfred-Almond School, Almond
Arongen Elementary School, Clifton Park
Arrowhead Elementary School, East Setauket
Berlin Elementary School, Berlin
Birchwood Elementary School, Schenectady
Bronx Charter School for Better Learning, Bronx
Bronx Charter School for the Arts, Bronx
Bronx Studio School, Bronx

Canaan Elementary School, Patchogue
Central Baptist Christian School, Yorkshire
Chango Elementary School, Ballston Lake
Cohoes Child Development Center, Cohoes
Cohoes Middle School, Cohoes
David B. Crane Elementary School, Rochester
Division Street Elementary School, Saratoga Springs
Dorothy Nolan Elementary School, Saratoga Springs
Eagle Elementary School, Medford
Early Learning Center of the Bethlehem School District, Delmar
Eugene Brooks Middle School, Amenia
Germantown Central School, Germantown
Geyser Road Elementary School, Saratoga Springs
Grafton Elementary School, Cropseyville
Guilderland Elementary School, Guilderland
Harbor Hill School, Greenvale
Harry L. Edson School, Kingston
Herbert Hoover Elementary School, Buffalo
Howe International Magnet School, Schenectady
Irvington Middle School, Irvington
J.D. George Elementary School, Verona
John F. Kennedy School, Great Neck
Karigon Elementary School, Clifton Park
Lake Avenue Elementary School, Saratoga Springs
Lenape Elementary School, New Paltz
Linden Avenue Middle School, Red Hook
Lisha Kill Middle School, Albany
Mattituck-Cutchogue Elementary School, Cutchogue
Michael F. Stokes School, Levittown
Montessori School of the Finger Lakes, Auburn
Murray Avenue School, Larchmont
Ostrander Elementary School, Wallkill
P.S. 163 Arthur A Schomberg, Bronx
P.S. 8 Shirley Solomon School, Staten Island
Rabbi Jacob Joseph School for Boys, Staten Island
Red Hook Residential Center, Red Hook
Saint Ann's School, Brooklyn
Saint Brigid School, Brooklyn
Saint Frances de Chantal School, Bronx
School Age Care at Harmony Hill, Cahoes

Seymour Smith Elementary School, Pine Plains
Slingerlands Elementary School, Delmar
Southgate School, Loudonville
Sullivan West Elementary School, Jeffersonville
The Ark Community Charter School, Troy
The Kindness Project, Capital District Child Care Council, Schenectady
Tri-Valley Secondary School, Grahamsville
Wayland-Cohocton School, Wayland
Woodland Hill Montessori, Rensselaer
Yeshiva Merkaz Hatorah, Far Rockaway

North Carolina

Bugg Elementary, Raleigh
Central Elementary, Albemarle
Central Park School for Children, Durham
Dillard Drive Middle, Raleigh
Dr. Hubert Eaton Sr. Elementary, Wilmington
Durant Road Middle School, Raleigh
Fremont STARS Elementary School, Fremont
Green Elementary, Raleigh
Heyward C. Bellamy Elementary, Wilmington
John R. Griffin Middle School, Fayetteville
Lerner Jewish Community Day School of Durham, Durham
Middle Creek Elementary, Apex
Nashville Elementary, Nashville
New Garden Friends School, Greensboro
North Davidson Middle, Lexington
Powell Elementary, Raleigh
Southwest Elementary, Clemmons
Wakefield Elementary, Raleigh
Wakefield Middle School, Raleigh
Yates Mill Elementary, Raleigh

North Dakota

Beulah Middle School, Beulah
Burlington Des Lacs Elementary School, Burlington
Cathedral of the Holy Spirit School, Bismarck
Centennial Elementary School, Bismarck
Dorothy Moses Elementary School, Bismarck

Grimsrud Elementary School, Bismarck
Littlie Flower Elementary School, Minot
Northridge Elementary School, Bismarck
Rita Murphy Elementary School, Bismarck
Robert Place Miller School, Bismarck
Solheim Elementary School, Bismarck
Washington Elementary School, Minot

Ohio

Academy of Arts and Humanities, Warren
Beaver Local Middle School, Lisbon
Berne Union Elementary School, Sugar Grove
Birch Elementary School, North Olmsted
Brunswick Memorial Elementary School, Brunswick
Calcutta Elementary School, East Liverpool
Central Clinic, Cincinnati
Central Elementary School, New Philadelphia
Central Fairmount Elementary School, Cincinnati
Clearmount Elementary School, North Canton
Coldwater Elementary School, Coldwater
Columbus Humanities, Arts and Technology Academy, Columbus
Community Services of Stark County, Inc., Canton
Cottage Grove Elementary School, Akron
Crestwood Primary School, Mantua
Crim Elementary School, Bowling Green
East Palestine Elementary School, East Palestine
Erwine Middle School, Akron
Forest Elementary School, North Olmsted
Fort Loramie Elementary School, Fort Loramie
Franklin Furnace Christian Academy, Franklin Furnace
Garfield Heights Middle School, Garfield Heights
Genesis Center for Learning, Williamsburg
Glen Este Middle School, Cincinnati
Glenbrook Elementary School, Euclid
Hastings Middle School, Upper Arlington
Heritage Elementary School, Pickerington
Hollingsworth East Elementary School, Eaton
Holloway Elementary School, Holland
Holt Crossing Intermediate School, Grove City
Horizon Science Academy – Springfield, Toledo

Independence Elementary School, Liberty Township
Innes Middle School, Akron
Ironton Junior High School, Ironton
Ironton Middle School, Ironton
J.R. Coleman Family Services, Inc, Canton
Kean Elementary, Wooster
Knox Elementary School, Alliance
Lakeview Elementary School, Akron
Lakeview Middle School, Cortland
Lander Elementary School, Cleveland
Langston Middle School, Oberlin
Maple Leaf Intermediate Elementary School, Garfield Heights
Mariemont Junior High School, Cincinnati
Mental Health & Recovery Board of Wayne and Holmes Counties
Monroe Alternative Middle School, Columbus
Montessori School of Bowling Green, Bowling Green
New Richmond Elementary School, New Richmond
North Elementary School, East Liverpool
Northwest Elementary School, Canal Fulton
Norton Primary Elementary School, Norton
Oakview Elementary School, Kettering
Ohio Virtual Academy, Maumee
Parkside Elementary School, Westlake
Parkway Elementary School, Alliance
Parma Park Elementary School, Parma Heights
Pfeiffer Elementary School, Akron
Possum Elementary School, Springfield
Reilly Elementary School, Salem
Revere Middle School, Bath
Ridge Elementary School, Bowling Green
River View Middle School, Warsaw
Roosevelt Elementary School, McDonald
Roosevelt Elementary School, Hubbard
Rossford Junior High School, Rossford
Saint Columban Elementary School, Loveland
Saint Joseph School, Canton
Saint Mary Church, Massillon
Saint Mary Elementary School, Massillon
Saint Patrick School, London
Salem High School, Salem

Sebring Local Schools, Sebring
Seton Catholic Elementary School, Hudson
Shaker Heights Middle School, Shaker Heights
Shreve Elementary, Shreve
St. Bernard Taylor Creek School, Cincinnati
Thomas A Edison Intermediate School, Columbus
Treca Digital Academy, Marion
Trilby Elementary School, Toledo
Triway Junior High School, Wooster
Turkeyfoot Elementary School, Akron
Washington Elementary School, Alliance
West Main Intermediate Elementary School, Newark
William Patrick Day Early Childhood Center, Cleveland
Willowville Elementary School, Batavia
Woodward Park Middle School, Columbus

Oklahoma

Beggs Middle School, Beggs
Del City Elementary School, Oklahoma City
Dewey Elementary School, Dewey
Dewey Middle School, Dewey
Dewey Public Schools, Dewey
Hilldale Middle School, Muskogee
Kingston Middle School, Kingston

Oregon

Aiken Elementary School, Ontario
Fern Hill Elementary School, Forest Grove
Hall Elementary School, Gresham
Hoover Elementary School, Corvallis
W. Verne McKinney Elementary School, Hillsboro

Pennsylvania

21st Century Cyber Charter School, Downingtown
Albright Learning Center, Reading
Allard Elementary School, Moon Township
Amos K. Hutchinson Elementary School, Greensburg
Anna L. Lingelbach School, Philadelphia

Appleman Elementary School, Benton
Aronimink Elementary School, Drexel Hill
Bala Cynwyd Middle School, Bala Cynwyd
Bangor Area School District, Bangor
Barkley Elementary School, Phoenixville
Beaumont Elementary School, Devon
Bell Township Elementary School, Punxsutawney
Belle Valley Elementary School, Erie
Belmont Hills Elementary School, Bala Cynwyd
Berks Christian School, Birdsboro
Blankenburg Rudolph School, Philadelphia
Boyertown Area Junior High School – East, Gilbertsville
Brandywine Residential School, Glenmoore
Brandywine-Wallace Elementary School, Downingtown
Bright Beginnings Child Care, Limerick
Caley Elementary School, King of Prussia
Caln Elementary School, Thorndale
Charlestown Playhouse, Phoenixville
Cheltenham Elementary School, Cheltenham
Childhood Apraxia of Speech Association (CASANA), Pittsburgh
Christ Memorial Lutheran School, Malvern
Clarion – Limestone Area Junior Senior High School, Strattanville
Colebrookdale Elementary School, Boyertown
Collegium Charter School, West Chester
Colonial Elementary School, Plymouth Meeting
Columbus Elementary School, Chester
Community Services of Chester County, Phoenixville
Conwell Middle Magnet School, Philadelphia
Cornwall Terrace Elementary School, Sinking Spring
Cranesville Christian Academy, Cranesville
Daniel Boone Area Middle School, Douglassville
Danville Elementary School, Danville
Devereux Day School, Downingtown
Downingtown Middle School, Downingtown
DuBois Area Middle School, DuBois
E. N. Peirce Middle School, West Chester
Eagleville Elementary School, Eagleville
East Bradford Elementary School, West Chester
East Coventry Elementary School, Pottstown
Easter Seals of Southeastern Pennsylvania, Conshohocken

Exton Elementary School, Exton
Fern Hill Elementary School, West Chester
Forrest Edwin Elementary School, Philadelphia
Francis Hopkinson School, Philadelphia
Franklin Elementary School, Pottstown
Fred S. Engle Middle School, West Grove
Friendship Elementary School, Coatesville
General Wayne Elementary School, Malvern
George Sharswood School, Philadelphia
Graystone Academy Charter School, Coatesville
Great Valley Middle School, Malvern
Greenway Middle School, Pittsburgh
Greenwood Elementary School, Kennett Square
Hamilton Elementary School, Lancaster
Hampton Middle School, Allison Park
Hancock Elementary School, Norristown
Henry Houston School, Philadelphia
Hillcrest Elementary School, Holland
Hillsdale Elementary School, West Chester
Honey Brook Elementary Center, Honey Brook
Horatio B. Hackett School, Philadelphia
Independence Charter School, Philadelphia
Indiana Area Junior High School, Indiana
J. Hampton Moore School, Philadelphia
James Logan School, Philadelphia
John Wister School, Philadelphia
Joseph Pennell School, Philadelphia
Lake-Lehman Junior Senior High School, Lehman
Lakeside Elementary School, Honesdale
Lancaster Christian School, Lancaster
Lewis C. Cassidy Academics Plus School, Philadelphia
Liberty-Valley Elementary School, Danville
Limerick Elementary School, Royersford
Lionville Elementary School, Downingtown
Lionville Middle School, Exton
Lynnewood Elementary School, Havertown
Makefield Elementary School, Yardley
Mary D. Lang Elementary School, Kennett Square
Mifflinburg Elementary School, Mifflinburg
Nether Providence Elementary School, Wallingford

North Brandywine Middle School, Coatesville
Northwestern Primary School, Darlington
Oakmont School, Havertown
Oaks Elementary School, Oaks
Octorara Elementary School, Atglen
Octorara Middle School, Atglen
Octorara Primary Learning Center, Atglen
Our Lady of Consolation Early Learning Center, Parkesburg
Our Lady of Mount Carmel Christian School, Erie
Overbrook Educational Center, Philadelphia
Oxford Area School District, Oxford
Peirce Middle School, West Chester
Penn London Elementary School, West Grove
Pennsylvania Virtual Charter School (PAVCS), Norristown
Philadelphia-Montgomery Christian Academy, Dresher
Phoenixville Area School District, Phoenixville
Pocopson Elementary School, West Chester
Pottsgrove Middle School, Pottstown
Radnor Elementary School, Radnor
Reeceville Elementary School, Coatesville
Renaissance Academy Edison School, Phoenixville
Ridley Middle School , Ridley Park
Robert Fulton School, Philadelphia
Rose Tree Day School, Media
Rosemont School of the Holy Child, Rosemont
Ross Elementary School, Sweet Valley
Sabold Elementary School, Springfield
Saint Anastasia Elementary School, Newtown Square
Saint Mary Elementary School, Schwenksville
Saint Patrick School, Malvern
Saint Philip Nerl School, Lafayette Hill
Saint Thomas Good Counsel School, Bryn Mawr
Salisbury Elementary School, Gap
Schuylkill Elementary School, Phoenixville
Shamona Creek Elementary School, Downingtown
Smedley Middle School, Chester
South Elementary, Trappe
Spring City Elementary School, Spring City
Spring-Ford Middle School 7th Grade Center, Royersford
Spring-Ford Middle School 8th Grade Center, Royersford

Springton Lake Montessori School, Newton Square
Standing Stone Elementary School, Huntingdon
Stourbridge Primary Center, Honesdale
Stratford Friends School, Havertown
Strath Haven Middle School, Wallingford
The Kid's Place, Swarthmore
The Quaker School at Horsham, Horsham
The Shipley School, Bryn Mawr
Thomas G. Morton School, Philadelphia
Thomas K. Finletter Plus Academic School, Philadelphia
Upper Bucks YMCA School Age Child Care, Quakertown
Upper Darby Kindergarten Center, Drexel Hill
Upper Dauphin Area Elementary School, Lykens
Upper Dauphin Area High School, Elizabethville
Upper Dauphin Area Middle School, Lykens
Upper Merion Middle School, King of Prussia
Uwchlan Hills Elementary School, Downingtown
Village Charter School of Chester – Upland, Chester Township
Vincent Elementary School, Spring City
Wakisha Charter School, Philadelphia
Wallenpaupack Area Middle School, Hawley
Wallenpaupack South Elementary School, Newfoundland
Washington Grover Junior School, Philadelphia
Webster School, Philadelphia
Welsh Valley Middle School, Narberth
West Bradford Elementary School, Downingtown
West Pottsgrove Elementary School, Stowe
Westmont Hilltop Elementary School, Johnstown
Westtown-Thornbury Elementary School, West Chester
Widener Memorial School, Philadelphia
William H. Harrison School, Philadelphia
Wissahickon Charter School, Philadelphia
Wordsworth Academy, Fort Washington
Worrall Elementary School, Broomall
York Avenue Elementary School, Lansdale

Rhode Island

Burrillville Middle School, Harrisville
Cranston Johnston Catholic Regional School, Cranston
Greenwood School, Warwick

John Brown Francis Elementary, Warwick
West Glocester Elementary, Chepachet

South Carolina

Augusta Circle Elementary, Greenville
Florence Christian School, Florence
Greenville Middle Academy, Greenville
Paris Elementary School, Greenville

South Dakota

John Harris Elementary, Sioux Falls

Tennessee

Arlington Middle School, Arlington
Athens Junior High School, Athens
Bess T. Shepherd Elementary, Chattanooga
Brighton Elementary School, Brighton
Chattanooga Human Services Head Start, Chattanooga
Crestview Elementary School, Covington
Crestview Middle School, Covington
Drummonds Elementary School, Drummonds
Eastview Elementary School, Greeneville
Greeneville Middle School, Greeneville
Hardy Elementary School, Chattanooga
J. E. Woodard Elementary School, Columbia
Oneida Elementary School, Oneida
Rivermont Elementary, Chattanooga
Tennessee Ridge Elementary, Tennessee Ridge
Woodmore Elementary, Chattanooga

Texas

Anna Elementary, Anna
Art and Pat Goforth Elementary School, League City
Betty Group DayCare, Galveston
Bonham Elementary, Wichita Falls
Brookwood Elementary, Houston
Coleto Creek School, Victoria
Eastridge Elementary, Red Oak

Epiphany Episcopal School, Kingsville
Fairmont Elementary, Pasadena
Falcon Pass Elementary, Houston
Forest Trail Elementary, Austin
Friendswood Junior High, Friendswood
Goliad Elementary, Goliad
Goliad Middle School, Goliad
Greenways Intermediate School, Amarillo
I. W. and Eleanor Hyde Elementary, League City
James H Ross Elementary, League City
Lorena Middle School, Lorena
Meadows Elementary, Sugar Land
North Richland Middle School, North Richland Hills
Oak Brook School, Murphy
Our Lady of Victory School, Victoria
Parmley Elementary, Willis
Rancho Isabella Elementary, Angleton
San Jacinto Elementary, Odessa
Smithfield Elementary, North Richland Hills
Stone Oak Elementary, San Antonio
The Fay School, Houston
Thompson Elementary, Houston
Tye Elementary, Merkel
Victory Lakes Intermediate School, League City
West Memorial Elementary, Katy
Yoakum Junior High, Yoakum

Utah

North Ogden Junior High, Ogden

Vermont

Arlington Memorial School, Arlington
Barre City Elementary/Middle School (BCEMS), Barre
Boys & Girls Club in Bradford, Randolph
Bristol Elementary School, Bristol
J. F. Kennedy Elementary School, Winooski
Lothrop School, Pittsford
Mary Hogan School, Middlebury
Mary Johnson Children's Center, Middlebury

Middlebury Union Middle School (MUMS), Middlebury
Morristown Elementary Schools, Morrisville
Park Street School, Springfield
Riverside School, Springfield

Virginia

Abingdon Elementary, Abingdon
Falls Church McLean Day Care, Falls Church
Bren Mar Park Elementary, Alexandria
Canterbury Woods Elementary, Annandale
Charles City County Elementary, Charles City
Frost Middle School, Fairfax
Gesher Jewish Day School, Fairfax
H.H. Poole Middle School, Stafford
Hampton Oaks Elementary, Stafford
Horizon Elementary, Sterling
Little Run Elementary, Fairfax
Longfellow Middle School, Falls Church
McLean Children's Center, Falls Church
Newsome Park Elementary, Newport News
Paul H. Cale Elementary, Charlottesville
Poe Middle School, Annandale
Rodney E. Thompson Middle School, Stafford
Sudley Elementary, Manassas
Taylor Elementary, Arlington
Widewater Elementary, Stafford

Washington

Acme Elementary, Acme
Bryant School, Tacoma
Cedar Wood Elementary, Everett
Chimacum Elementary School, Chimacum
Chimacum Middle School, Chimacum
Clover Creek Elementary, Tacoma
Concrete Elementary, Concrete
Darrington Elementary School, Darrington
Edison Elementary School, Kennewick
Edmonds School District, Mountlake Terrace
Elma Elementary School, Elma

Elma Middle School, Elma
Evaline Elementary School, Washington
Fairview Junior High School, Bremerton
Fruit Valley Elementary School, Vancouver
Hazel Dell Elementary School, Vancouver
Helen Baller Elementary, Camas
Highland Elementary, Lake Stevens
Home School Resource Center, Everett
Jefferson Elementary, Spokane
Kellogg Marsh Elementary School, Marysville
Kellogg Middle School, Shoreline
Lakewood Elementary School, Lakewood
LCR Preschool, Chimacum
Liberty Elementary, Marysville
Lowell Elementary School, Seattle
Lydia Hawk Elementary, Lacey
Maltby Elementary, Snohomish
Maple Grove Primary School, Battle Ground
Maplewood Parent Cooperative Education Program, Edmonds
Minter Creek Elementary, Gig Harbor
Monroe Middle School, Monroe
Mountain View Elementary, Lacey
Mt. Pilchuck Elementary School, Lake Stevens
Pinewood Elementary, Marysville
Robert S. Lince Elementary, Selah
Showalter Middle School, Seattle
South Bay Elementary, Lacey
Stanwood Elementary School, Stanwood
Sultan Middle School, Sultan
Sunnyside Elementary, Pullman
Tomorrow's Hope Child Care, Everett
Tonasket Elementary School, Tonasket
Tonasket Middle School, Tonasket
Vader Elementary, Vader
Warden School District, Warden
Wilson Elementary, Spokane
Woodland Primary, Woodland

West Virginia

Cheat Lake Elementary School, Morgantown
Cheat Lake Middle School, Morgantown
East Dale Elementary School, Fairmont

Wisconsin

Blakewood Elementary, South Milwaukee
Cherokee Heights Middle School, Madison
Greenville Elementary, Greenville
Greenville Middle School, Greenville
Hamilton Early Learning Center, La Crosse
Jones Elementary, Racine
Leopold Elementary, Madison
Nelson Education Center/Clear Lake Elementary, Clear Lake
New Berlin Center Elementary, New Berlin
Prairie River Middle School, Merrill
Robbins Elementary, Eau Claire
Saint Mary Elementary School, Menomonee Falls
Todd Elementary, Beloit

Wyoming

Glenrock Intermediate School, Glenrock
Rawhide Elementary, Gillette

. . . and the many parents homeschooling their children across the nation!

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Aperture Education empowers over 3,000 schools and out-of-school-time programs across North America to measure, strengthen, and support social and emotional competence in K–12 students and educators. The mission of Aperture Education is to ensure that all members of school and out-of-school-time communities, both children and adults, have the social and emotional skills to be successful, productive, and happy. We achieve this by providing education leaders, teachers, out-of-school-time staff, parents, and students with accurate and actionable data about their social and emotional strengths and needs. We pair this data with research-informed strategies and resources, leading to improved outcomes.

The Aperture System includes the Devereux Student Strengths Assessment (DESSA) suite of strength-based assessments, which is lauded by researchers for its high standards for reliability and validity and appreciated by educators for its ability to easily and quickly identify each student's unique social and emotional strengths and areas of needed support. Aperture Education partners with industry curriculum leaders to deliver research-based intervention strategies to bolster specific areas of needed growth. Paired with robust reporting in one easy-to-use system, professional development for staff, and an aligned educator social and emotional learning program called the Educator Social-Emotional Reflection and Training (EdSERT), Aperture is often favored in districts and programs nation-wide and continues to develop innovative solutions to bring the whole child into focus.

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The DESSA is part of a series of measures of behaviors related to resilience, social-emotional competence, and school success developed by the Devereux Center for Resilient Children. These assessment tools span the age range of one month through the 8th grade, and include:

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- The Devereux Early Childhood Assessment—Clinical Form (**DECA-C**) for ages 2–5 years
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More information about these assessment tools can be obtained by contacting the Devereux Center for Resilient Children at www.centerforresilientchildren.org.

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