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The Devereux Student Strengths Assessment (DESSA) comprehensive system: Screening, assessing, planning, and monitoring

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The Devereux Student Strengths Assessment (DESSA) Comprehensive System:  
Screening, assessing, planning, and monitoring

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Abstract: The Devereux Student Strengths Assessment (DESSA) and the DESSA-Mini are intended to be psychometrically sound and practical measures of social-emotional competence for use in school and out-of-school-time (OST) settings. These strength-based behavior rating scales yield a variety of information designed to support the large scale implementation of social and emotional learning programs. This paper discusses 1) the context for the development of measures, 2) the choice to use a nationally-normed, adult-completed behavior rating scale as the format for assessing student social-emotional competence, 3) the psychometric properties of the DESSA and the DESSA-Mini, 4) some challenges to assessing social-emotional competence in applied settings, 5) examples of how the DESSA and DESSA-Mini results have been used to inform practice decisions, and 6) future research and development needs for social-emotional assessment.

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The Devereux Student Strengths Assessment (DESSA; [LeBuffe, Shapiro, & Naglieri, 2009/2014](#)) Comprehensive System was developed to meet the burgeoning need for a psychometrically sound yet practical measure of social-emotional competence in both school and out-of-school-time (OST) settings. The system has a number of integrated components designed to support large scale implementation of social and emotional learning (SEL). These components are described as *comprehensive* because they comprise screening, formative, interim, and summative assessment approaches, and as a *system* because these parts are interconnected through a series of procedures and principles that organize their use. Although the system can be implemented in various ways to meet local requirements, in standard practice it begins with a very brief, teacher-completed universal screening tool of student social-emotional competence called the DESSA-Mini ([Naglieri, LeBuffe, &](#)

[Shapiro, 2011/2014](#)). Students who could benefit from more information are initially or subsequently assessed with the full DESSA ([LeBuffe et al., 2009/2014](#)).

Completed by parents or teachers/staff, the DESSA can be used to formatively assess a student's strengths and needs for further instruction within eight social-emotional domains. This can inform planning decisions, such as the adoption of SEL-enhancing interventions in the form of well-known SEL curricula or more micro-strategies for building competence. Some social-emotional learning strategies, organized into a multitiered system of supports (MTSS) framework (including universal, small-group, individual, and home-based strategies), are found at an online site called Evo Social/Emotional Learning (Evo SEL). The final components of the DESSA Comprehensive System are a means of tracking progress in the acquisition of social-emotional competence using a response to intervention (RTI) framework through multiple brief forms, and a pretest-posttest comparison technique that enables users to evaluate change over time. These results can then be aggregated at the classroom, grade, school, program, or district level for program evaluation and quality improvement purposes. Therefore, the DESSA is designed to 1) identify which students have social-emotional *strengths* and which students have a particular *need for instruction*, 2) determine specific behaviors that reflect social-emotional strengths or needs for each student that can form the basis of augmentation and maintenance plans, and 3) clarify whether individual students or groups of students are benefiting from SEL instruction.

In this paper we will discuss: 1) the context for the development of the system, 2) the use of a nationally-normed, adult-completed behavior rating scale as an appropriate and feasible approach to assessing student social-emotional competence, 3) the psychometric properties of the DESSA and the DESSA-Mini as relevant to use in applied settings, 4) some unanticipated challenges in assessing social-emotional competence in applied settings, 5) examples of how the DESSA and DESSA-Mini results have been used to inform practice and guide decisions, and finally, 6) future research and development needs for social-emotional assessment.

## 1. The context for the development of the DESSA

The Devereux Student Strengths Assessment (DESSA) has its origins in the strand of applied developmental psychology known as resilience theory, which explores how individuals attain “good outcomes in spite of serious threats to adaptation or development” ([Masten, 2001](#), p. 228). Studies of resilient individuals have identified a consistent set of attributes and assets that contribute to resilient outcomes ([Masten, 2014](#)). These protective factors have been defined ([Masten & Garmezy, 1985](#)) as characteristics that moderate or buffer the negative effects of risk factors. [Garmezy \(1985\)](#) suggested that protective factors could be divided into three categories: 1) community systems such as high quality schools, 2) a supportive family, and 3) child attributes (e.g., physical health, intelligence, problem solving skills). The DESSA was developed to be an assessment of social-emotional competencies, a subset of malleable child attributes that act as protective factors ([LeBuffe, et al., 2009/2014](#)).

Beginning in the mid-1990s, the Devereux Center for Resilient Children (DCRC; [www.CenterforResilientChildren.org](http://www.CenterforResilientChildren.org)) began publishing a series of behavior rating scales designed to measure within-child protective factors. These early childhood measures include the Devereux Early Childhood Assessment (DECA; [LeBuffe & Naglieri, 1999](#)), the Devereux Early Childhood Assessment Clinical Form (DECA-C; [LeBuffe & Naglieri, 2003](#)) and the Devereux Early Childhood Assessment for Infants and Toddlers (DECA-IT; [Mackrain, LeBuffe, & Powell, 2007](#)). In some instances, when children graduated from early care and education programs that used the DECA for infants, toddlers, and preschoolers, their teachers, parents, and other caregivers requested a similar strength-based assessment program that could follow the children into their school-aged years. The DESSA was developed, in part, to meet this need. Collectively, these behavior rating scales span child development from 4 weeks to 14 years and are intended to provide a consistent approach to assessing social-emotional development.

The development of the DESSA has also been shaped by the emergence of social and emotional learning (SEL), and the related need for the assessment of social-emotional competence in routine educational practice. The history of the growth of this field has been well-documented (e.g., [Weissberg, Durlak, Domitrovich, & Gullotta, 2015](#)) and will not be reiterated here. Suffice it to say that at the time this special issue is being published, a number of important conclusions regarding SEL can be drawn. First, a core set of important social and emotional learning competencies have been promulgated by the Collaborative for Academic, Social and Emotional Learning (CASEL) ([Weissberg et al., 2015](#)). Second, social and emotional competencies have been shown to be related to academic achievement, prosocial behavior, and positive attitudes toward school, self, and others (e.g., [Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011](#)). Third, a number of evidence-based programs are available to promote these competencies in children and youth (e.g., [CASEL, 2013](#)). Fourth, these programs can be implemented both in school ([Payton et al., 2008](#)) and in OST ([Gullotta, 2015](#)) settings. Fifth, many of these programs are cost effective with average benefit-cost ratio of 11 dollars to 1 ([Belfield et al., 2015](#)). Based on these and similar findings, a growing number of state departments of education and local school districts have adopted or are considering adopting SEL standards. At the time of publication of this issue, CASEL reports that nine states have comprehensive, free-standing standards for social and emotional learning ([CASEL, 2016](#)).

The rapid growth of SEL research, curricula, and programs, accompanied by the adoption of SEL standards, created the need for an aligned assessment system. Some school districts have sought an assessment system as a means of determining whether all students have met standards or otherwise acquired the requisite “non-cognitive” skills for school and life success. Some districts and OST programs have expressed a need for a formative assessment that can identify each student’s social-emotional strengths and needs, inform instruction and programming, and gauge progress over time. Other schools and OST programs have desired an assessment tool that will promote reflective practice among the adults and create professional development opportunities for their staff around SEL. Finally, schools and OST programs that have invested heavily in developing and/or implementing

SEL programs have a need for summative assessment to evaluate outcomes. The DESSA Comprehensive System was developed in response to these various needs.

### *1.1. Values guiding the development of the DESSA*

The overarching goal of this series of DCRC assessments, including the DESSA, is to inform the promotion of social-emotional competence and resilience within children and youth. Four characteristics shape the DCRC approach to achieving this goal. First, the DCRC assessments are strength-based. This strength-based orientation is important to the dual goals of mental health promotion and challenging behavior prevention in that it enables practitioners to proactively identify strengths and weaknesses in social and emotional development before the occurrence of significant behavioral challenges ([LeBuffe & Shapiro, 2004](#)). If practitioners wait until challenging behaviors emerge before offering social-emotional instruction, they may have missed the opportunity to prevent the enormous costs of mental, emotional, and behavioral problems, and their remediation, to students, their families, schools, and society ([O'Connell, Boat, & Warner, 2009](#)). Strength-based approaches also can be less stigmatizing by focusing on positive, rather than deficit-based, behaviors.

The second key characteristic is the use of assessment data to guide intervention. This position was influenced by the National Association for the Education of Young Children's Position Statement on the "Standardized Testing of Young Children Through 8 Years of Age," which emphasized that "testing provides information that will clearly contribute to improved outcomes for children" ([NAEYC, 1987](#) p. 5). As a result, each of the DCRC rating scales was designed to provide information that could be used to inform the implementation of evidence-based SEL programs or to guide the selection of DCRC-curated social-emotional strategies intended to be integrated into routine practice in schools, OST programs, and at home.

The third defining characteristic of the DCRC rating scales is the focus on teachers and, in the case of the DESSA, OST providers, as not only the raters (i.e., the person providing the ratings) but also as the user of that information (i.e., the person who interprets the assessment results and uses them to inform instruction). This focus on empowering educators to be the consumers of assessment results was originally in response to a resource deficit; the lack of mental health consultants in early childhood settings, public schools, and OST environments. For example, school psychologists, on average, each serve an average of 1383 students ([NASP, 2011](#)). In many states the ratio is far worse (e.g., 2000 or more students per school psychologist in 11 states, including 5700 students per school psychologist in Mississippi). Assuming an average of 20% of students experiencing a mental, emotional, or behavioral disorder ([Merikangas et al., 2010](#)) who require initial or ongoing assessment, and a school year of 180 days, school psychologists who are responsible for 2000 students would average more than two referrals for assessment and evaluation per day. Requiring the DCRC assessments to be administered and interpreted by certified or licensed school mental health professionals would in many states present a barrier to obtaining information needed to provide universal services and

supports. The strengths-based orientation of the DCRC rating scales makes their use by non-mental health professionals appropriate in that the assessments do not generate pejorative labels (e.g., “extreme risk”) or stigmatizing diagnoses (e.g., anxious/depressed). Appropriate usage is encouraged through simple directions, on-demand training (including recorded webinars), and a best practice model that positions the assessment as part of routine educational practice.

The fourth foundational characteristic of the DCRC rating scales is a commitment to strong psychometric qualities. Each of the scales meets or exceeds the standards promulgated by the American Educational Research Association, the American Psychological Association and the National Council on Measurement in Education ([AERA, 2014](#)), including large, diverse standardization samples that approximate the population of school-aged children with respect to important demographic characteristics, good to excellent reliability, and sufficient validity data to support the intended uses of the scales. These are important attributes for defensible decision-making on behalf of children. Detailed information on the psychometric characteristics of the DESSA and the DESSA-Mini are provided below.

## 2. Behavior rating scales as an appropriate and feasible approach to assessing social-emotional competence

Methods of collecting information about the capacities of children and youth are often classified into direct and indirect assessments. Direct assessments include performance tasks, which have been essential in the conduct of psychological research, and direct observation, which is widely used in schools to monitor single cases. The direct observation of behavior (e.g., counting the precise number of times a behavior is performed within a brief time interval) is well suited for observing the frequency of a small number of discrete behaviors within a single domain and setting. Direct assessments, however, face some feasibility barriers in routine practice ([Denham, 2015; McKown, 2015](#)). Since small differences in the observation environment can readily shape the observation results, five 30-minute observations are recommended to achieve reliable estimates ([Doll & Elliott, 1994](#)). Direct assessments may require time for training, establishing inter-observer reliability, observing, and interpreting the findings without the conventions of cut-scores or reference groups to inform service decisions ([Naglieri, LeBuffe, & Shapiro, 2013](#)). Thus, current technologies have reserved direct assessments for monitoring a specific case, against its own baseline or within its unique context, rather than the entire population of enrolled students.

The most widely used method of indirect assessment in routine practice is behavior rating scales ([Elliott, Frey, & Davies, 2015](#)). Behavior rating scales pose a series of questions to an informant who retrospectively offers their impression of the frequency of behavior on a Likert scale. They are well suited for assessing a broad array of behaviors and can be “cheap, quick, reliable, and in many cases, remarkably predictive of objectively measured outcomes” ([Duckworth & Yeager, 2015](#), p. 239). Behavior rating scales can be

used across settings and with multiple informants to capture a broader understanding of the child's behavior, over time, and relative to a standardized reference group. Brief behavior rating scales may enable teachers to rate an entire classroom of students in a single prep period, and provide educators with contextualized results and interpretation guidelines. Although scores generated through behavior rating scales may contain measurement error in the form of subjectivity and recall biases, studies have shown that this bias may be less than expected ([Shapiro, Kim, Accomazzo, & Roscoe, 2016](#)), and efficiency demands have made behavior rating scales the most prevalent method used to assess behavior in schools ([Elliott et al., 2015](#)).

Due in part to the differences in coverage between most direct and indirect assessments, and complementary sources of error, they are unlikely to be directly comparable ([Merrell, 1993](#)). Different methods, however, provide different information and have distinct advantages. Therefore, whenever possible, multi-method assessment is recommended ([McKown, 2015](#)). The intention of the DESSA is to provide a psychometrically strong, strength-based, pragmatic behavior rating scale for the measurement of social-emotional competence, ideally in the context of a multi-method assessment.

The DESSA is a 72-item standardized, norm-referenced, strength-based behavior rating scale that assesses the social-emotional competence of children in kindergarten through the eighth grade. The DESSA yields an overall total score called the Social Emotional Composite (SEC) as well as scores across eight domains of social-emotional competence including Self-Awareness, Social Awareness, Self-Management, Goal-Directed Behavior, Relationship Skills, Personal Responsibility, Decision Making, and Optimistic Thinking ([Smith, Shapiro, Sperry, & LeBuffe, 2014](#)). These eight domains were derived from the five-domain framework developed by the Collaborative for Academic, Social, and Emotional Learning ([CASEL, 2013](#)). Two of the five CASEL domains were viewed as having two components each (the CASEL domain of *Responsible Decision Making* became the *Personal Responsibility* and *Decision Making* scales on the DESSA; the CASEL domain of *Self-Management* became *Self-Management* and *Goal-Directed Behavior*). Reflecting the influence of resilience theory on the development of the DESSA, an Optimistic Thinking scale was also added, yielding eight DESSA scales. Items were assigned to these scales based both on their content and item-scale correlations. This approach was used to create an assessment that is aligned with social and emotional learning standards based on the CASEL framework. Since the CASEL framework is theoretically-derived, a useful step in the progression of assessment research to support social-emotional learning would be to conduct a confirmatory factor analysis of DESSA items in order to assess the scale structure. At the present time, we know of no studies that have used a factor analysis approach to examine the CASEL framework.

The DESSA takes 8 to 10 min to administer and can be completed by parents or caregivers, teachers, OST program staff, staff at child-serving organizations, and other important adults in the child's life ([Naglieri et al., 2013](#)). To complete the behavior



rating scale, the rater (i.e., informant) reads the stem: “During the past four weeks, how often did the child. ..” and then rates each item on a 5-point Likert scale ranging from 0 to 4 (Never = 0, Rarely = 1, Occasionally = 2, Frequently = 3, Very Frequently = 4). Items are summed to Raw Scores which are converted to *T*-scores ( $M = 50$ ,  $SD = 10$ ), with high scores (*T*-scores of 60 and above) indicating *Strengths*, *T*-scores between 41 and 59 (inclusive) representing *Typical* scores, and *T*-scores of 40 and below representing a *Need for Instruction*. The DESSA was designed to guide social-emotional instruction and for measuring outcomes in routine practice ([Simmons, Shapiro, Accomazzo, & Manthey, 2016](#)).

The DESSA-Mini is a brief, 8-item version of the DESSA that provides a snapshot of a student's social-emotional competence. The DESSA-Mini was designed to be used for universal screening of social-emotional competence as well as ongoing progress monitoring. A single student can be rated in about 1 min by a teacher, OST staff, or staff at other child serving organizations. Thus, an adult can complete DESSA-Mini ratings on a classroom of students in about one planning period. Four different DESSA-Mini forms, each with a different set of non-overlapping items, were created by selecting items from the larger 72-item DESSA that 1) most strongly correlated with the overall SEC and 2) yielded similar scores across the four forms. The four DESSA-Mini forms can be used in rotation to limit the practice effects which can bias scores derived from repeated use of the same small item set over time. Each DESSA-Mini yields a single score: the Social-Emotional Total (SET). Like the DESSA, results on the DESSA-Mini are provided as *T*-scores, with high scores indicating *Strengths*.

### 3. Psychometric properties of the DESSA and the DESSA-Mini

As summarized elsewhere (e.g., [Shapiro, Kim, Robitaille, & LeBuffe, 2017](#)), the DESSA was nationally standardized on a sample of 2494 students. Teachers and teacher aides provided ratings on 778 students, parents and adult caregivers living with the child provided ratings on 1244 students, and OST program staff provided 472 ratings from 2005 to 2007. The *Statistical Abstract of the United States 2008: The National Data Book* was used to determine the desired characteristics of the K-8 standardization sample in regard to gender, region, race, and ethnicity.

The obtained standardization sample approximated these desired characteristics, as shown in [Table 1](#). With regard to socioeconomic status, 22% of the sample qualified for free or reduced price lunch; This figure is slightly higher than the 19% of families in 2005 whose income was \$25,000 or less and would meet income criteria for the free school lunch program ([LeBuffe et al., 2009/2014](#)). The percentage of students meeting this criterion, however, increased sharply after data collection. Despite this societal change, the adequacy of the norms were independently reviewed (e.g., [Atlas, 2010; Malcomb, 2010](#)) and determined to be sufficiently diverse, recent, and large ([Merrell & Gueldner, 2010](#)).



Separate norms are provided for 1) teachers and staff and 2) parents and other caregivers who live with the student. Separate norms are not presented for age groups because age differences were not found in the DESSA standardization sample ([LeBuffe et al., 2009/2014](#)). Age in months was not a statistically significant predictor of the Social Emotional Composite based upon teacher/staff or caregiver ratings. Age explained approximately 3% of the variance in teacher ratings, and approximately 1% of the variance in caregiver ratings, but the addition of age to regression models after other demographic characteristics produced non-significant  $\Delta r^2$  values. The lack of age trends in the DESSA standardization data surprised researchers and practitioners alike. Our working hypothesis, buttressed by anecdotal explanations provided by users, is that raters implicitly age adjust their item-level responses based on their developmental expectations for the student's performance.

There were differences in social-emotional competence observed in the standardization sample, however, by the student's ascribed sex. Girls received ratings about 3.5 *T*-Score points higher than boys (see [Table 2](#)). There is also some evidence that early elementary school girls develop social-emotional competence, as measured by the DESSA, across a school year at a faster rate than early elementary school boys ([Shapiro, Kim, Robitaille, & LeBuffe, under review](#)). Despite these differences, separate norms for boys and girls were not created. The decision to have one set of norms for both sexes preserves these observed differences for local interpretation, rather than having different standards for the behavior of boys and girls embedded in the instrument. In other words, local systems can choose to have different standards of behavior for boys and girls based on normative expectations, but different standards are not implicit in the score itself. Using different norms for boys and girls could lead to boys having to struggle more than girls in order to qualify for additional instruction, and to girls needing to enact more prosocial behavior relative to boys in order to be characterized as having a strength. The DESSA developers felt that having separate norms for boys and girls would obfuscate real differences in social-emotional competence ratings that may reify gender disparities in the performance of behaviors related to social-emotional competence. Rather than interpreting a boy's behavior relative to other boys and a girl's behavior relative to other girls, the default for interpretation of a DESSA score is that all children are considered relative to each other.

The DESSA has very high internal reliability, with SEC alpha coefficients of 0.98 for parent raters and 0.99 for teacher/staff raters ([LeBuffe et al., 2009/2014](#)). Across the eight DESSA scales, alpha coefficients range from 0.82–0.89 for parent raters and 0.89–0.94 for teacher raters. Test-retest reliability of the DESSA SEC (the consistency of scores obtained for the same child when ratings were completed by the same adult with a four to eight day interval between ratings) is reported in the test manual as 0.90 for parents and 0.94 for teachers ([LeBuffe et al., 2009/2014](#)). Inter-rater reliability of the SEC (the consistency of scores obtained for a child by two different raters) is reported in the test manual as 0.78 for parent raters and 0.80 for teacher raters. Subsequent studies have shown cross-informant agreement across performance benchmarks to be 88% between teachers and OST program staff ([Shapiro, Accomazzo, & Robitaille, 2017](#)). Taken together, these results

provide evidence that the DESSA is reliable for assessing children's social-emotional competence.

Evidence of criterion and construct validity for using the DESSA to measure social-emotional competence is reported in the test manual ([LeBuffe et al., 2009/2014](#)) and by [Shapiro and LeBuffe \(2006\)](#). DESSA scores indicate very large differences ( $d = 1.39$ ) between samples of typically developing students and those receiving special education services under the Seriously Emotionally Disturbed (SED) classification. In addition, DESSA SEC scores, generated by teachers, were significantly correlated with scores from the BASC-2 Behavioral Symptoms Index ( $r = -0.72$ ), Adaptive Skills Scale ( $r = 0.92$ ; [Nickerson & Fishman, 2009](#)), and the Rating Scale of Impairment ( $r = 0.71$ ; [Goldstein & Naglieri, 2016](#)). Furthermore, a study of 335 students authored by Dr. [Chain et al. \(2017\)](#) found all DESSA scale scores and the SEC ( $r = 0.45$ ) to be significantly associated with academic achievement (i.e., standards based achievement tests); the Goal-Directed Behavior scale correlated most strongly with achievement ( $r = 0.66$ ). The DESSA has also been examined for racial and ethnic differences for both parent and teacher raters and found no interpretable differences for most comparisons. The exception was a small difference between how teachers rated the strengths of White students compared to Hispanic/Latino(a) students in the standardization sample ( $d = 0.26$ ). In other samples, no differences in SEC have been found between White students and students of Color ([Chain et al., 2017](#)). A study presented in the test manual indicates that social-emotional competence, as measured by the DESSA, reduces negative outcomes in the context of risk, as one would expect from a scale designed to measure protective factors ([LeBuffe et al., 2009/2014](#)).

The DESSA-Mini norms were developed from the DESSA standardization sample of 1249 children and youth rated by teachers and program staff. Therefore, the demographic characteristics of the DESSA-mini sample are very similar to those of the DESSA presented above. The DESSA-Mini has very high internal reliability, with the Social-Emotional Total score alpha coefficients exceeding 0.90 across the four forms ([Naglieri et al., 2011/2014](#)). The alternate form reliability of the DESSA-Mini is also very high, with correlation coefficients meeting or exceeding 0.90 across all forms. Similarly, item means and standard deviations across the four forms (when rating the same children) are found to be very similar, with means ranging from 50.5 to 50.7, indicating their general interchangeability. Test-retest reliability of the four DESSA-Mini forms range between 0.88 and 0.94. Inter-rater reliability of the DESSA-Mini forms ranged from 0.70 to 0.81 on the four forms. Taken together, these results provide evidence that the four unique forms of the DESSA-Mini are reliable for the coordinated measurement of children's social-emotional competence.

The DESSA-Mini has demonstrated evidence of criterion and construct validity for the measurement of social-emotional competence ([Naglieri et al., 2011/2014](#)). DESSA-Mini SET scores strongly correlate ( $r = 0.95-0.96$ ) with DESSA SEC scores. Consistent classification of students in the *Need for Instruction* range between the DESSA-Mini and the

DESSA is about 95% across the four forms ([Naglieri et al., 2011](#)). Concurrent criterion validity studies have estimated DESSA-Mini sensitivity rates between 62 and 81% and specificity rates between 83 and 98% (positive predictive value 92–97%, negative predictive value 86–92%, and area under the curve 0.79–0.88), exceeding practice standards for screening accuracy, and balancing sensitivity and specificity in a way that avoids the over-identification of students with needs for accelerated SEL instruction ([Naglieri et al., 2011](#); [Shapiro, Kim, et al., 2017](#)). Furthermore, very large differences exist between the mean scores of typically developing students and those receiving special education services under the SED classification ( $d$  ranged from 1.17 to 1.24 across forms). Finally, predictive criterion validity studies have found DESSA-mini SET scores to significantly predict the likelihood of a student having a serious disciplinary infraction ([Shapiro, Kim et al., 2017](#)). Students who were identified as having a *Need for Instruction* in October were 4.5 times more likely to have a record of serious disciplinary infraction by the end of the academic year relative to those who are not identified.

#### 4. Unanticipated challenges in the assessment of social-emotional competence

Despite being the most prevalent assessment method in schools ([Elliott et al., 2015](#)), the use of behavior rating scales to assess social-emotional competence in routine practice is not without challenges. Within elementary school settings, where students typically remain with the same teacher throughout the school day, the decision of who at the school is best suited to provide ratings is clear. The primary classroom teacher, who usually knows students best, spends the most time with students, and has opportunities to observe students across a variety of activities is typically chosen to provide ratings. However, the determination of the best rater of social and emotional behaviors becomes more difficult in middle and high schools where teachers teach multiple periods of the same subject area to different groups of students, spend far less time with individual students, and have fewer opportunities to observe students across multiple contexts.

One of the greatest challenges in the assessment of social-emotional competence through behavior rating scales is knowing whether a rater can provide an accurate view of a student's social-emotional competence ([Shapiro et al., 2016](#)). Secondary school administrators implementing a classroom-based SEL program have often asked teachers to complete ratings on the students to whom they deliver lessons. Others have opted to ask teachers to rate students during advisory periods, to rate students in a pre-selected class period (such as during first period classes), or to only ask specific subject teachers (often social studies) to complete ratings on all of their students throughout the day. Although it may be beneficial for multiple secondary teachers to provide ratings ([Evans, Allen, Moore, & Strauss, 2005](#)), in practice, schools may face limited resources, time, and personnel to complete and make full use of multiple ratings for instruction or evaluation purposes.

There is also a need for additional assessments to capture students' unique and important perspectives of their own social-emotional strengths and needs. Many self-report

assessments are only intended to provide population-level information, and cannot facilitate individual decision making. Yet, this information is critical to the planning process, and when combined with parent and teacher/staff ratings, may provide a more well-rounded view of the student. In secondary schools and lower resourced settings, student self-report forms may also be more practical than a teacher-completed assessment. The lack of a DESSA student report, for example, has been a challenge in practice and identified as a need for additional development ([Haggerty, Elgin, & Woolley, 2011](#)).

There is also a growing understanding that more emphasis is needed on the assessment and promotion of social-emotional competence at the high-school level ([Williamson, Modecki, & Guerra, 2015](#)), including a need for more research on effective SEL programs and strategies, as well as a better understanding of how best to incorporate SEL assessment and resources into these settings. For example, the DESSA is currently appropriate for students in kindergarten through eighth grades, but the lack of a high school version has been a barrier for districts and programs serving both children and adolescents. As SEL standards become increasingly common for districts, comprehensive social and emotional assessments that cover all students within the district will be necessary. Like others who may be working to resolve this resource gap, a DESSA High School Edition (DESSA-HSE) is under development.

An additional challenge common to all behavior rating scales is the requirement of time needed for observation before a rating can be completed. For example, both the Social Emotional Assets and Resilience Scales (SEARS; [Merrell, 2011](#)) and the Behavioral and Emotional Rating Scale Second Edition (BERS-2; [Epstein, 2004](#)), two strength-based rating scales, require at least three months of observation prior to completing the rating. The DESSA also requires an initial, albeit briefer (four week), observation period. Therefore, results from these rating scales are not available for instructional planning during at least the first month of the school year. Similarly, when evaluating outcomes, the “pretest” rating may occur after at least one month of SEL instruction, potentially reducing pretest-posttest differences ([Shapiro et al., under review](#)). Furthermore, because scores from behavior rating scales are based on the number of times specific behaviors have occurred, raters must have sufficient exposure to the student; otherwise the rating may result in an erroneously low score. For example, according to guidance in the DESSA manual, the rater should have “contact with the child for two or more hours for at least three days per week for a four-week period.” ([LeBuffe et al., 2009/2014](#), p. 11). More research is needed to determine whether this guidance is empirically founded and applicable to brief OST programs (such as a six-week summer enrichment program), particularly in situations where the factors influencing a rater's exposure to a student (e.g., staff-child ratios, number of days per week, daily length of time within the program, types of activities/interactions occurring) may differ.

Ideally, social-emotional assessments will be used to inform and guide SEL instruction, providing additional support to students who are found to have underdeveloped social-emotional competencies. However, an unintended consequence of this practice has

been *too* much focus on students with low social-emotional competencies and not enough focus on continuing to promote the existing strengths of students (Simmons et al., 2016). Teachers and OST program staff have observed that if the strengths of students are not reinforced, they can decline by the end of the school year (Bresser & Kirsch, 2016). Although social-emotional assessment can provide important information to focus skill-building efforts, it is important for educators to continually provide opportunities for practice and reinforcement of these skills for *all* students, not just those who are struggling.

## 5. Use of the DESSA by school leaders to make practice decisions

The overarching goal of the DESSA Comprehensive System is to improve outcomes for students by providing useful information to teachers, counselors, principals, and other leaders in both school and OST settings. Consequently, much thought was given to how DESSA scores could be used within common school-based decision-making frameworks, especially multitiered systems of support (MTSS). The National Association of School Psychologists defines MTSS as, “a foundational, evidence-based framework for effectively integrating multiple systems and services to simultaneously address students' academic achievement, behavior and social-emotional well-being.” (NASP, 2016, p. 1). This section will provide brief descriptions of how the DESSA Comprehensive System has been designed to inform instruction and services offered within an MTSS framework.

### 5.1. Use of the DESSA-Mini in screening

The DESSA-Mini was designed as a brief, teacher-completed universal screening tool for the measurement of social-emotional competence. Recognizing the many demands placed on teachers, the goal was to enable a teacher to screen all students in his/her classroom in one planning period. The 8-item DESSA-Mini can be completed in less than a minute per student with real-time scoring and reporting at the individual student, classroom, and school level, if done in the secure online platform. Students who receive ratings in the *Need for Instruction* range are thought to benefit from a full DESSA assessment of their social-emotional competence. The DESSA-Mini has also been used to conduct a school-wide needs assessment. Based on the national normative sample, 16% of students are expected to receive ratings in the *Need for Instruction* range; when the percentage is substantively higher than this, it can be used to document an exceptional need for SEL in a community.

### 5.2. Use of the DESSA in tiered systems of support

Although the most common implementation model is to screen with the DESSA-Mini and reserve assessment with the DESSA for those students whose require additional information, some teachers and schools have opted to use the full DESSA on a universal basis. By rating all the students in a classroom or OST group with the DESSA, a comprehensive picture of the social-emotional *Strengths* and *Needs for Instruction* of all the students can be obtained. The Classroom/Group Profile, generated in the online Evo SEL platform, presents this information as a simple graphic (<http://www.apertureed.com/wp->

[content/uploads/2017/02/DESSA-ClassroomProfileSample.pdf](#)). This profile provides a matrix of scores in which each row is a student and each column a social-emotional competency measured by the DESSA. Each cell is color-coded. Green represents a *Strength* for the student on that particular DESSA scale. A blue cell signifies a *Typical* score. A red cell denotes a *Need for Instruction*. By scanning down the columns and noting the number of green, blue, and red cells, the user can quickly determine the DESSA scales that have the most students falling in each of the three ranges to inform targets for Tier I, classroom-wide, universal supports.

A second way in which the DESSA can support universal, school-wide strategies is through the utilization of the pretest-posttest comparison report. This report compares *T*-scores obtained at the beginning and end of the school year and, based on the standard error of prediction, determines if the student has shown significant growth, no change, or a significant decline on each of the eight social-emotional competencies. This information can be aggregated across the student body to determine the extent to which the students as a whole seem to be making progress. An example of this approach was provided by an elementary school in Anchorage, Alaska. In the first year of DESSA use, the Principal noted that, on average, his students were making progress on all competencies measured by the DESSA except Optimistic Thinking. When he examined the DESSA data, he discovered that for many of the Native Alaskan boys in his school, the *T*-scores on this scale were actually decreasing over time. Optimism seemed to him to be a logical predictor of dropout, which was notably high among this demographic group. In response, he made optimism an overarching theme of the following school year. This meant that optimism became the focus of school assemblies, the emphasis of featured library books, the focus of teachers' lesson plans, and the topic of hallway decorations and messages. Although causal claims cannot be made, DESSA scores in the second year were different. Scores on Optimistic Thinking showed significant improvement, the percentage of students falling in the *Need for Instruction* range declined, and the school made annual yearly progress for the first time, a trend that continued for the next two years. The Classroom/Group Profile can also be useful at Tier 2 by identifying groups of students with a *Need for Instruction* in a particular area. These students can then receive additional services and supports through pull-out groups or more intensive instruction. For instance, a school social worker may identify those students who were rated in the *Need for Instruction* range in Relationship Skills and invite them to join a friendship skills group. This approach is being widely used by student assistance personnel.

The provision of intensive services to specific students at Tier 3 is supported by the Individual Student Report that provides *T*-scores and percentile ranks for each scale, and a listing of the rating received on each item. Based on the individual item rating distributions from the national standardization sample, unusually low or high ratings indicate a *Need for Instruction* or a *Strength* on a particular *item*. This individual item analysis enables the user to determine the specific behaviors that the student is not yet exhibiting, which then can become very specific targets for intervention. This was designed



to enable goals and progress monitoring in intervention plans to be very behaviorally specific and empirically grounded.

One of the most important uses of the DESSA is the identification of *Strengths* exhibited by students receiving special education services. Even if a student receiving special education services does not receive a DESSA scale score in the *Strength* range, in our experience, they often have at least one scale score in the *Typical* range and almost always have one or more areas of relative strength (i.e., areas where scores are higher than other areas). Identifying these focal strengths has three important uses. First, they can be incorporated into individual education plans, helping school personnel meet the requirement to identify and include student strengths in this document. Second, they can be leveraged to help the student acquire skills rated in the *Need for Instruction* range. Building upon existing strengths to address skill deficits is an important aspect of a strength-based approach. Third, this positive information can be shared with the student and their family. We have received many reports from DESSA users that the ability to identify a *Strength* on the DESSA, whether at the scale or individual item level, and then sharing that information with the student and family can foster a more collaborative and hopeful partnership. As one teacher from Anchorage, Alaska anonymously reported through a teacher survey after initial roll-out of the DESSA, “Being that my students are in a self-contained special education classroom, I was surprised that several of my students are “typical” in more areas than I would have thought. This allowed me to write strength statements and share good news with the parents. I liked how it made me see my students, and it really took my teaching with SEL in a new direction.”

### 5.3. Use in progress monitoring

Waiting until the end of the year to evaluate the effectiveness of SEL interventions can be inefficient. At that point, if a student has not made progress in response to an intervention, opportunities for modifying instruction have been lost. If the student has made significant progress, continuing to provide tier 2 or 3 services throughout the entire year may have been unnecessary. To maximize the number of students benefiting from instruction, and minimizing unnecessary services, more frequent status checks are needed.

The DESSA-Mini multiple forms can be used for this purpose. Form 1 can be used as the universal screening tool early in the year, and Forms 2, 3 and 4 can be used in sequence approximately every two months to gauge response to SEL instruction. An Ongoing Progress Monitoring form can be used to enable the user to chart the SET *T*-scores across the year. Progress is evaluated by determining the amount of change in *T*-scores between successive DESSA-Mini administrations. Since the DESSA-Mini standardization data did not show raw score changes as a function of age, it seems plausible that increases in scores on the DESSA-Mini reflect the impact of interventions rather than development alone. Using Cohen's *d*-ratio as a guide, changes of 2–4, 5–7, and 8 or more *T*-score points are interpreted as reflecting small, medium, and large changes, respectively. Recent research studying children in K-2 indicates that these estimates reflect reasonable progress of children who begin the year in the Need for Instruction range and are exposed to a



well-implemented, evidence-based Social Emotional Learning program ([Shapiro et al., Under Review](#)). The DESSA-Mini manual provides guidance on how SEL instruction may be modified based on these results. For example, if the *T*-score change is less than eight *T*-score points for a student who needs instruction, the user is encouraged to increase the frequency or intensity of the intervention and/or consult with student assistance personnel for alternative strategies. Ideally, students who scored in the Need for Instruction range at the beginning of the school year would show progress, as evidenced by *d*-ratios in the medium or large range on successive DESSA-Minis, and would end the year with their final SET score in the Typical or Strength range.

#### *5.4. Key challenges in advancing the field of social-emotional assessment*

In this article we have presented the DESSA Comprehensive System as a practical, psychometrically sound approach to assessing and ultimately promoting the social-emotional competence of children in grades K-8. We have briefly reviewed key reliability and validity data for the use of the DESSA as a screening and assessment tool and have illustrated some of the ways in which the DESSA is being used in practice for planning, progress monitoring, and program evaluation. Despite the progress made by the DESSA and other measures in meeting the needs of educators for SEL assessment, the assessment of social-emotional competence is relatively early in its development. We need additional studies to explore the utility of the DESSA for instructional planning. We have already noted that innovation is needed to enable the use of behavior rating scales like the DESSA in secondary schools and in situations in which there is limited time to observe prior to initial assessment. We also wish to note that it is very difficult to study “normative” development of social-emotional competencies in our current educational climate, where interventions (of varying and usually unknowable quality) to promote social-emotional development are typically shaping the education of young people. In this final section we present three additional challenges facing this field that require additional research and development. Addressing these issues will advance both theory and practice and result in a better understanding of how to assess and promote social-emotional competence.

The first challenge is determining the optimal approach to assessing social-emotional competence. As noted earlier, different assessment methodologies such as behavior rating scales, self-reports, direct observation, and performance tasks provide different information, obtained from various sources, and have different sources of error. The question is not which of these approaches is “best,” but how can they be effectively combined to yield comprehensive, accurate, and pragmatically useful information. Studies combining different methods of assessment in routine practice need to be conducted and the independent and combined predictive validity of the various assessment approaches investigated.

Second, we need to better understand how to incorporate the student's perspective into the assessment process. The most typical approach, self-report, has significant limitations. In addition to concerns about students' susceptibility to social desirability

effects and “faking good” (or “faking bad,” depending on the incentive structure), the validity of self-reports can be compromised by developmental and/ or cognitive limitations. Nevertheless, the student's own perspective on their social-emotional competence is critical. For example, [Duckworth and Yeager \(2015\)](#) provide a hypothetical example in which a student rates himself as “Sometimes” coming to class prepared whereas the teacher rates him as “Rarely” being prepared. Although Duckworth and Yeager discuss this example in the context of threats to validity, from our perspective it offers a valuable opportunity to help the student better understand expectations in the classroom and for the teacher to better understand the student's perspective on preparedness. The opportunity for rich discussion and valuable learning that this situation provides would not have been recognized without eliciting the student's self-appraisal. New approaches such as computerized programs that directly assess students' social and emotional comprehension (e.g. [McKown, Russo-Ponsaran, Johnson, Russo, & Allen, 2016](#)) hold promise for further reconciling perspectives.

Third, as a field we need to continue to refine and validate our understanding of the core social-emotional competencies that make a difference for children. Despite the widespread acceptance of the social-emotional competencies identified by CASEL, [Duckworth and Yeager \(2015\)](#) note the plethora of terms and constructs used in the SEL field. It is not just a matter of preferred terminology (e.g., skill vs. competence vs. trait), but the implications of what these different terms mean for the nature of assessment, and disagreement about the constructs themselves. For instance, the DESSA includes Optimistic Thinking as an important social-emotional competence. This construct, however, is not part of the CASEL framework. We wrote earlier that we are not aware of any studies that have used a factor analysis approach to examine the CASEL framework. One study collected data for a factor analysis using indicators of four out of the five CASEL constructs through self-report indicators; researchers decided not to assess self-awareness, arguing that “assessing students' self-awareness skills raises some ethical issues... is unrelated to valued academic and social outcomes (other than depression) ... [and that] providing schools with information about skills they are not likely to change does not seem practical” ([Mantz, Bear, Yang, & Harris, 2016](#), p. 8). The DESSA has retained self-awareness indicators with the belief that the capacity to identify one's emotions may be an important requisite to managing them, but more research is needed to understand the relations between these constructs. The high internal reliabilities of the DESSA reflect the current state of the field; they do not indicate strong conceptual distinction. The assertion by Mantz and colleagues, however, goes beyond revealing a lack of conceptual clarity and consensus surrounding the meaning of these constructs and their associated inter-relationships, but reconsiders their unique importance, utility, and potential to benefit or harm students.

High quality assessment can play a critical role in helping us elucidate and understand how to best conceptualize the variety of social-emotional competencies that are critical for school and life success. We believe that an ongoing focus and investment in assessment development can contribute conceptual clarity, in addition to discovering

innovative measurement strategies suitable for school settings. Importantly, as we conduct explorations seeking conceptual clarity, we need to be mindful of the important differences that might exist across cultures and carefully account for these differences in our interpretation and utilization of assessment results. It is clear that much progress has been made in the assessment of social-emotional competence, but there is still much work to be done.

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Although some authors were involved in the development of the DESSA, no author of this paper receives any direct financial remuneration from the sale of the assessments or resources mentioned within this manuscript.

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