Devereux Student Strengths Assessment Middle School Edition

Student Self-Report Manual

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A measure of social and emotional competencies of youths in grades 6–8

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APERTURE EDUCATION | DESSA

[1]*This work is derivative of the DESSA High School Edition Student Self-Report, to which Valerie Shapiro made authorial contributions. Valerie Shapiro is not responsible for the final form of this derivative work.*

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ACKNOWLEDGMENTS

Aperture Education's goal is to create resources, such as the Devereux Student Strengths Assessment Middle School Edition Student Self-Report (DESSA-MSE SSR), that are both scientifically sound and easy to use. To achieve this goal takes the time and talent of many individuals. The authors of the DESSA-MSE SSR would like to acknowledge the contributions of our Aperture colleagues and customers who have made this assessment tool possible.

First, we would like to thank the scores of schools and out-of-school time programs and the thousands of middle school students who contributed the ratings that were used in the development of the DESSA-MSE SSR. Without their participation in the pilot study, national standardization study, and psychometric studies the development of the DESSA-MSE SSR would not have been possible. A list of participating data collection sites is provided in Appendix C. We would also like to thank the many students who participated in interviews throughout the development of the DESSA-MSE SSR. Their insights helped shape both the instrument and how results are reported back to students in the Student Portal.

Next, we express our appreciation for our colleagues at Aperture who assisted us in recruiting these data collection sites. Stacey Preator, Aperture's Vice President of Customer Experience and Kristin Hinton, Aperture's Vice President of Sales and Marketing, encouraged their staff to support our recruitment efforts. It also takes the expertise of many individuals to prepare for the release of a tool like the DESSA-MSE SSR. We would especially like to thank Cristina Veale, Bri Spoentgen, Amanda Nieman, and Charese Cook for lending their cross-functional knowledge to ensure a successful launch of this product.

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Our sincerest thanks to all of you who contributed to the development of this instrument.

— Jennifer, Paul, Evelyn, Jack, and Valerie

ABOUT THE AUTHORS

Jennifer L. Robitaille, M.S. is the Director of Research and Development for Aperture Education. She earned her B.A. in psychology from Bloomsburg University of Pennsylvania and her master's degree in research psychology from Villanova University. For over a decade, Jennifer has focused her work on strength-based approaches to the measurement and promotion of social and emotional competence and resilience in children, youths, and the adults who care for them. She has provided consultation, professional development, and evaluation services to early care and education, school, and out-of-school-time settings using the strength-based assessment suite, including the Devereux Early Childhood Assessment (DECA) for Infants, Toddlers, and Preschoolers and the Devereux Student Strengths Assessment (DESSA) for grades K–12. Jennifer is an author of the *DESSA High School Edition* suite and the Educator Social-Emotional Reflection and Training (EdSERT) program, a professional development program focused on enhancing educators' knowledge and effective use of social and emotional learning teaching practices. Her primary research interests focus on the measurement of social and emotional competence and resilience in children and youths, the promotion of educator well-being and social and emotional teaching practices, and program implementation.

Paul LeBuffe, M.A. is a senior research consultant for Aperture Education. He is a graduate of St. Mary's College of Maryland and received his master's degree in experimental psychology from Bryn Mawr College. For the past 30 years, Paul's career has focused on strength-based approaches to promoting social and emotional competence and resilience in children, youths, and the adults who care for them. Believing that such approaches should be data-driven, Paul has authored many widely used, strength-based assessments of behaviors related to children and adolescents' social and emotional strengths and needs, including the Devereux Early Childhood Assessment for Infants (DECA-I), Toddlers (DECA-T), Preschoolers (DECA-P2), and most recently, the Devereux Student Strengths Assessment (DESSA) for grades K–12. These assessments have been adopted by school districts, out-of-school-time programs, Head Start, and other early care and education programs both in the United States and internationally and the results have been used by professionals and parents to promote their students' social

and emotional competence, foster their resilience, and build the skills they will need for school and life success. In addition to the assessments mentioned above, Paul has authored numerous research articles and chapters on social and emotional competence assessment, resilience, and related topics. Paul has presented to varied audiences, including psychologists, teachers, school administrators, out-of-school-time professionals, and parents throughout the United States and internationally on promoting resilience in children, youths, and adults.

Evelyn S. Johnson, Ed.D. is the Vice President, Research and Development for Aperture Education and Professor Emeritus at Boise State University. She earned her Doctor of Education degree from the University of Washington, Seattle in Special Education and Measurement in 1999. She worked as a Research Scientist for the Center for Disease Control and as a Research Associate for the National Research Center on Learning Disabilities at the University of Kansas before joining the faculty at Boise State University, where she also served as the CEO of Lee Pesky Learning Center. During her tenure at Boise State, Dr. Johnson's research focused on: (1) screening and assessment to improve educational outcomes for students with learning disabilities, (2) improving instructional practice through teacher observation and feedback, and (3) self-regulated learning approaches to improve outcomes for students with disabilities. She served as the principal investigator for a federally funded project RESET, which developed reliable and valid teacher observation measures of evidence-based practices for students with disabilities. In 2016, she received a Fulbright Scholars Award to Qatar, where she worked with a team of researchers in the Middle East to develop the Test of Early Arabic Literacy Skills (TEALS). Dr. Johnson's research has consistently focused on the role of assessments in improving instructional decisions and learning outcomes.

Jack A. Naglieri, Ph.D. is a research professor at the University of Virginia and senior research scientist at Aperture Education. He started his career as a school psychologist in 1975, earned a Ph.D. in 1979, and held university positions at Northern Arizona University, The Ohio State University, and George Mason University. Throughout these years, he focused on applied educational and psychological research and the development of psychological and educational measurement tools. He has published 23 books, 293 scholarly papers, and 51 tests and rating scales. Dr. Naglieri is the author of *Naglieri Nonverbal Ability Test* and the *Naglieri General Ability Tests: Verbal, Nonverbal and Quantitative.* He is also well known for his PASS neurocognitive theory of intelligence as measured by the *Cognitive Assessment System*, 2nd Edition, and the intervention handouts book entitled *Helping Children Learn*, 2nd Edition. He also authored *The Autism Spectrum Rating Scales*, *Comprehensive Executive Function Inventory: Child* and *Comprehensive Executive Function Inventory: Adult*, *The Devereux Student Strengths Assessment (DESSA)*, and the *DESSA-mini*. Dr. Naglieri has consistently emphasized the role tests play in accurate diagnosis, educational interventions, and especially equitable assessment based on sound theory and test construction.

Valerie B. Shapiro, Ph.D.[1] is an associate professor jointly appointed in Social Welfare and Public Health at the University of California, Berkeley. Dr. Shapiro was recently selected as a William T. Grant Foundation Scholar. Dr. Shapiro's research is in the prevention of mental, emotional, and behavioral problems in children and youths through the adoption, implementation, and sustainability of effective prevention practices. To promote the use of evidence in

prevention practice, her scholarship focuses on how to (1) set the stage for communities to adopt and sustain a science-based approach to prevention, (2) implement programs success-fully, (3) assess youth outcomes in routine practice, and (4) use big data for continuous improve-ment in the implementation of systematic social and emotional learning. She serves as the chair of the Coalition for the Promotion of Behavioral Health, which produced the National Academy of Medicine Discussion Paper entitled "Unleashing the Power of Prevention" as part of the Grand Challenges for Social Work and Society Initiative and sits on the board of the National Prevention Science Coalition. Dr. Shapiro was the sole recipient of the 2014 Prytanean Faculty Prize, became a Fellow of the Society of Social Work & Research in 2017, and has co-authored several practice tools, such as the DESSA, used to promote the well-being of children nation-ally. She serves on the California Department of Education State SEL Advisory Group and recently co-authored UNESCO guidance for the assessment, monitoring, and evaluation of social and emotional learning worldwide. She earned her B.A. in psychology from Colgate University, her M.S.S. from the Bryn Mawr Graduate School of Social Work & Social Research, and her Ph.D. from the University of Washington School of Social Work. She is a licensed social worker and Department of Education-certified school social worker.

[1]This work is derivative of the DESSA High School Edition Student Self-Report to which Valerie Shapiro made authorial contributions. Valerie Shapiro is not responsible for the final form of this derivative work.

FOREWORD

Aperture Education offers a continuum of strength-based rating scales for the assessment of students' social and emotional competencies from kindergarten through the 12th grade. In addition to the educator report form for K–12 and the parent report form for K–8, the Devereux Student Strengths Assessment Middle School Edition Student Self-Report (DESSA-MSE SSR), and the DESSA High School Edition Student Self-Report (DESSA-HSE SSR) now provide a means to collect grades 6–12 students' self-reported social and emotional competence ratings, enabling school and out-of-school professionals to incorporate student voice in the social and emotional learning (SEL) process. The importance of student voice is increasingly being recognized as a core part of SEL efforts (Cipriano et al., 2020; Soutter, 2019).

Together, the DESSA suite of measures and the related social and emotional growth strategies reflect Aperture Education's commitment to *data-driven social and emotional learning*, which has three key elements.

First, just like academic achievement, the social and emotional competence of each student should be assessed—and when indicated, differentiated—and individualized social and emotional instruction should be provided. Although contextual factors including school culture and climate play an important role in facilitating or inhibiting both the acquisition and demonstration of social and emotional competencies, individual assessment is critically important. Only by assessing and addressing each individual student's social and emotional competencies, reinforcing their existing strengths, and remediating any skill deficits can we ensure that each student has the skills that they need to be successful in school and in life. Given that educational equity has been defined as "mean(ing) that ***every student*** has access to the resources and educational rigor they need" (Jagers et al., 2018 emphasis added) and is "achieved when ***all students*** receive the resources they need so they graduate prepared for success" (Center for Public Education, 2016, emphasis added), the assessment of social and emotional competencies accompanied by differentiated instruction is essential to promoting educational equity.

A second, key element of *data-driven social and emotional learning* is supporting educators in exploring and understanding DESSA data. The reporting features of the Aperture System—the online platform that delivers the DESSA—encourage the aggregation of DESSA

data at various levels (e.g., classroom, grade, site, program/district) and the disaggregation of data by important student and program characteristics. These powerful data analytic tools enable educators to generate and explore hypotheses about program impact on diverse groups of students, deepening understanding and further supporting effective practice and educational equity efforts.

The third core element of *data-driven social and emotional learning* is the use of assessment data in both formative (student progress) and summative (program efficacy) evaluations to continuously improve practice and optimize outcomes. The DESSA-MSE SSR provides advanced interpretation techniques to support these important activities.

Since the publication of the DESSA for grades K–8 in 2009, the science of social and emotional learning has expanded dramatically, as have educational policy and public interest in this area. The authors of the DESSA-MSE SSR hope that the publication of this measure will support and extend current efforts by communities to recognize the importance of social and emotional competence in ensuring the well-being and success of all students. The authors as well as the staff of Aperture Education welcome opportunities to collaborate with students, educators, parents, and organizations that share this goal. We can be reached through the Aperture Education website, **www.ApertureEd.com**.

Chapter 1

INTRODUCTION

CHAPTER 1

Introduction

Social and Emotional Learning (SEL) is defined by the Collaborative for Academic, Social, and Emotional Learning (CASEL) as, "the process through which all young people and adults acquire the knowledge, skills, and attitudes to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions" (Niemi, 2020). It is not only an integral part of education and human development but is broadly considered a path to personal well-being and global citizenship (Chatterjee Singh & Duraiappah, 2020). Decades of research have demonstrated that SEL initiatives in schools and out-of-school-time (OST) programs can (1) improve students' social and emotional skills and relationships, perceptions of school climate, and academic performance and (2) reduce student anxiety and undesirable behavior (Mahoney et al., 2018). In addition, SEL initiatives can contribute to continuous improvement in education and youth development systems, when implemented well and systemically, with a favorable cost-benefit ratio (i.e., they can save more than they cost; Payton et al., 2008; Gullotta, 2015; Belfield et al., 2015).

A strength-based approach to self-reflection and assessment can encourage student engagement and awareness of SEL, as well as provide actionable information to continuously improve SEL initiatives. Information about individual student social and emotional competencies has the potential to inform instruction in ways that give each young person what they need to thrive, prevent problems before they occur, and invite multiple stakeholders into collaborative conversations. Aggregating information about students' self-reported social and emotional competencies to the classroom, site, program, or district level can help inform local decision making and planning in ways that lead to greater coherence and thoughtful resource allocation and opens useful feedback loops for understanding the extent to which all young people are achieving SEL goals. The *DESSA Middle School Edition Student Self-Report (DESSA-MSE SSR)* is an assessment tool that provides these essential functions in the implementation of SEL initiatives for middle school-age youths.

Background

The Devereux Student Strengths Assessment (DESSA; LeBuffe et al., 2009/2014), now referred to as the DESSA K–8, is the precursor to the DESSA-MSE SSR. The DESSA K–8 was developed to meet the burgeoning need for a practical, norm-referenced measure of social and emotional competence in school and OST settings. Upon publication, the DESSA K–8 received favorable reviews by experts in the field (e.g., Atlas, 2010; Denham et al., 2010; Haggerty et al., 2011; Malcomb, 2010; Merrell & Gueldner, 2010; Tsang et al., 2012). The DESSA K–8 has been widely adopted to assess social and emotional competence in children in the United States. Studies have shown that children who receive typical or high scores on the DESSA K–8 are less likely to have behavior problems (Shapiro & LeBuffe, 2006; Shapiro, Kim, et al., 2017) and more likely to have academic success (Chain et al., 2017). With the publication of the DESSA-HSE (for educators) and the DESSA-HSE SSR, the benefits of the DESSA have been extended to youths in grades 9–12. The DESSA-MSE SSR adds to a collection of tools that together (with the DESSA-HSE, the DESSA K–8 and the Devereux Early Childhood Assessment (DECA) for Infants, Toddlers, and Preschoolers; LeBuffe & Naglieri, 2012; Mackrain et al., 2007) provides a continuous and consistent approach for promoting the well-being of young people from cradle to career (i.e., 1 month through high school graduation).

In addition to SEL, the DESSA tools have 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) individual attributes (e.g., physical health, intelligence, problem-solving skills). The DESSA-MSE SSR is used to self-evaluate behaviors related to social and emotional competencies, a subset of malleable individual attributes that act as protective factors in the face of adversity. Since all young people can experience adverse events and stressors, building social and emotional competence can help to promote resilience and the healthy development of all youths (Shapiro, 2015). To be clear, the DESSA-MSE SSR is intended for use in systems in which adults both provide meaningful opportunities for young people to build social and emotional competence, and simultaneously take responsibility for addressing and alleviating adversities that create an excessive or disparate need for resilience. The DESSA-MSE SSR also encourages students to develop the lifelong habit of self-reflecting on their social and emotional competence.

We use the term *social and emotional competence* to refer to an individual's ability to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions (CASEL, 2020). We conceptualize a competence continuum ranging from a complete lack of proficiency to full proficiency in the execution of prosocial behavior. Our goal is to help identify and nurture the social and emotional strengths of youths, while simultaneously improving the relationships and environments that provide the contexts for their development (Shapiro, 2015). As consistent with CASEL's revised definition of SEL

(**https://casel.org/fundamentals-of-sel/**), this involves addressing various forms of inequities and empowering young people and adults to co-create thriving schools and contribute to safe, healthy, and just communities (Ozer et al., 2021). The DESSA-MSE SSR is intended to support whole-child education, the creation of trauma-informed schools, the growing emphasis of schools and OST providers on SEL to help promote equity and excellence (e.g., Jagers et al., 2018), and the related need for the assessment of social and emotional competence in routine educational practice.

The rapid growth of SEL research, curricula, and programs, accompanied by the adoption of SEL learning standards for K–12 education by more than 20 states (CASEL, 2021), creates an ongoing need for an aligned assessment system. Some school districts seek 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 desire a formative assessment that students can use to identify their own social and emotional strengths and needs, and that can inform instruction and programming, and gauge progress over time (Shapiro, Accomazzo, et al., 2017). Others have wanted an assessment tool that will promote student engagement and voice in SEL initiatives (Mitra, 2018). Finally, schools and OST programs that have invested heavily in developing and/or implementing SEL programs have a need for summative assessment to evaluate and continuously improve impact. The DESSA-MSE SSR was developed in response to these various needs.

Description of the DESSA-MSE SSR

The DESSA-MSE SSR is a 50-item standardized, norm-referenced, self-report behavior rating scale used to assess the social and emotional competence of youths in grades 6–8. We chose this method for several reasons. First, behavior rating scales are the most prevalent method used to assess behavior in schools (Elliott et al., 2015); they are well suited to evaluate the frequency of behaviors across several areas; and they can be "cheap, quick, reliable, and in many cases, remarkably predictive of objectively measured outcomes" (Duckworth & Yeager, 2015, p. 239). Self-report measures can be used to assess the affective, cognitive, and behavioral processes that are part of social and emotional learning (Pekrun, 2020). The DESSA-MSE SSR can be completed by middle school-age youths at schools and youth-serving agencies, including OST, social service, and mental health programs. The DESSA-MSE SSR is entirely strength-based, meaning that the items query positive behaviors (e.g., contribute to group efforts) rather than maladaptive ones (e.g., annoy others).

The DESSA-MSE SSR is organized into conceptually derived scales that provide information about six CASEL-aligned social and emotional competencies. Standard scores can be used to calibrate each student's competence in each of the six dimensions and guide school or program-wide, class-wide, and individual strategies to promote those competencies. For each question, the student is asked to rate themselves using a five-point scale how often they engage in each behavior. The scale names, scale definitions, and sample scale items are as follows:

- ***Optimistic Thinking*** (9 items): Optimistic Thinking is the belief and demonstration of confidence, hopefulness, and positive thinking regarding oneself, others, and one's life situations in the past, present, and future.
  - I expect that I will be successful.
  - I believe I can overcome setbacks.
  - I can imagine a positive future for myself.
- ***Self-Awareness*** (9 items): Self-Awareness is the ability to understand emotions, thoughts, and values and how they influence one's behavior; recognize strengths and limitations; and develop healthy identities and a sense of purpose.
  - I can recognize my emotions.
  - I can recognize my strengths.
  - I know how my emotions influence my behavior.
- ***Self-Management*** (8 items): Self-Management is the ability to manage emotions and behaviors across different situations and environments and to demonstrate agency as one works to set and achieve personal and collective goals.
  - I adapt well to new situations.
  - I can calm down when I'm upset.
  - I keep working until I achieve a goal.
- ***Social Awareness*** (8 items): Social Awareness is the understanding of social norms for behavior; the ability to empathize with, respect, and take the perspectives of others; and the feeling of connection and belonging with family, peers, schools, and community groups.
  - I help make my class a place where everyone can learn.
  - I respect a person's right to have a different opinion.
  - I feel like I belong in my school.
- ***Relationship Skills*** (8 items): Relationship Skills are the abilities to establish and maintain healthy and positive relationships, including effective communication, collaborative problem solving, negotiating conflict, and demonstrating helpful and supportive behaviors.
  - I get along well with different types of people.
  - I listen to others.
  - I encourage my friends or classmates.
- ***Responsible Decision Making*** (8 items): Responsible Decision Making is the ability to make careful, reliable, and constructive choices about personal and social behavior that are appropriate across diverse situations; to consider the personal, social, and collective impact of one's actions; and to demonstrate curiosity and an open-mindedness to learning.
  - I prepare for school, activities, or upcoming events.
  - I accept responsibility for my actions.
  - I ask questions when learning new things.

Each of the six DESSA-MSE SSR scale scores is derived from the ratings of the items assigned to that scale. A Social-Emotional Composite (SEC) score is also included, which is based on a combination of the scores received on the six scales. This composite score provides

an overall indication of the strength of the youth's self-reported social and emotional competence. The separate scores on the six DESSA-MSE SSR scales are used to create individual student rating reports as well as classroom and group reports, to convey the strengths and needs of the student and/or groups of students as compared to national norms (please see Chapter 2 for a further explanation of the importance of norms). The DESSA-MSE SSR yields information that can also be used to monitor progress and evaluate outcomes. More information about these interpretation strategies will be presented in Chapter 5.

Uses of the DESSA-MSE SSR

The DESSA-MSE SSR has been developed to provide a measure of student self-reported social and emotional competence, which can be used to implement strategies to promote positive youth development. Specifically, the DESSA-MSE SSR has been designed to:

- Provide a psychometrically sound, strength-based measure of self-reported social and emotional competence in youths.
- Prioritize areas for social and emotional growth, including enabling youths to identify personal growth goals, as well as enabling adults to identify social and emotional competencies to prioritize for individuals or groups.
- Facilitate progress monitoring for individual youths, by evaluating change over time at the individual scale level.
- Identify social and emotional disparities between sociodemographic groups that can be subjected to a root cause analysis and addressed.
- Provide a common language and approach to those involved in promoting positive youth development, including educators, administrators, policymakers, community members, mental health and social service professionals, social scientists, parents, and young people.
- Facilitate collaboration between youths, parents, and professionals by providing a means of comparing ratings of the same youths using the DESSA-MSE SSR and the DESSA K–8 to identify similarities and meaningful differences.
- Identify youths with the greatest self-reported need for social and emotional instruction, prevent problems before they emerge, and promote positive developmental outcomes.
- Identify the self-reported strengths and needs of individual youths who have already been identified as having social, emotional, and behavioral concerns.
- Provide meaningful information on self-reported strengths for inclusion in individual education and service plans, as required by federal, state, and funder regulations.
- Enable the evaluation and continuous improvement of SEL and positive youth development programs, by encouraging student voice and rigorously evaluating outcomes at the individual, classroom/group, school, district/program, and community levels.
- Serve as a sound research tool to advance science and support public policy development.

Values Guiding the Development and Use of the DESSA-MSE SSR

The overarching goal of the DESSA-MSE SSR is to inform the promotion of social and emotional competence and resilience of youths. Five characteristics shape our approach to achieving this goal. First, the measure is strength-based. This orientation is important to the dual goals of mental health promotion and challenging behavior prevention in that it enables the proactive identification of strengths and weaknesses in social and emotional development before the occurrence of significant social and emotional challenges emerge (LeBuffe & Shapiro, 2004). If practitioners wait until undesirable behaviors emerge before offering social and 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 et al., 2009). Strength-based student self-report approaches also clearly list positive skills that students can work to develop as needed to achieve their own personal goals.

The second key characteristic of the DESSA-MSE SSR is to be justice-promoting. In this commitment, we intend to affirm the diversity of young people, include their voices in decision making through the accompanying set of growth strategies included as part of the Aperture Student Portal, and contribute to equity for all. To fulfill this commitment, the DESSA-MSE SSR was standardized on a sample of young people who reflect the regional, gender, and racial/ethnic diversity of the United States. Analyses were conducted prior to publication to examine how the tool detects and/or presents differences between sociodemographic subgroups, which are transparently reported in Chapter 3. Our strength-based approach, described in this chapter, aims to prevent the stigmatization and pathologization of young people as a result of the assessment process. Similarly, our preventative orientation advances the call for a reorganization of community resources to promote population health rather than waiting for a meaningful subsection of young people to experience hardship and rationing cost-intensive interventions. Furthermore, Chapters 4 and 5 describe our approach to scoring and interpretation, which centers on educational institutions taking responsibility for social and emotional instruction and building students' capacity to develop their social and emotional competency (e.g., providing high-quality, evidence-based SEL instruction), rather than presuming that low DESSA-MSE SSR scores are the fault or responsibility of the young person themself. Chapter 5 stresses the importance of including the voice of young people in the process of interpreting DESSA-MSE SSR scores, setting goals, making decisions, and setting the expectation that the DESSA-MSE SSR be used in conjunction with climate surveys and other approaches to risk assessment, such that basic needs and threats to developmental outcomes are not missed and the promise of structural and environmental strategies are not overlooked.

The third defining characteristic is the use of an assessment process that merges all we know about a student with norm-referenced data to help understand the individual, and ultimately guide intervention decisions. In common with the positions of other professional organizations, we believe that measures of social and emotional competence have maximum value when they lead to improved outcomes for young people (National Association for the Education of Young Children, 1987). As a result, the DESSA-MSE SSR was designed to yield *actionable* insights to inform the selection and implementation of evidence-based SEL programs or strategies intended to be integrated into routine practice in schools, OST programs, and at home.

The fourth foundational characteristic of the DESSA-MSE SSR is a commitment to strong psychometric qualities. The assessment tool 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-age youths 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 with and on behalf of young people. Detailed information on the psychometric characteristics of the DESSA-MSE SSR is provided in Chapter 3.

The fifth foundational characteristic of the DESSA-MSE SSR is the focus on students 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 uses their results to engage in related growth strategies). This focus on empowering students to respond to their own results in ways that have personal meaning is meant to increase students' motivation to engage with the DESSA-MSE SSR, and to continue to develop their ability to self-reflect, set goals, and work towards achieving them. In addition to students, educators can also use students' self-reported results to inform their SEL programming.

The strengths-based orientation of the DESSA-MSE SSR makes its use by non-mental health professionals appropriate in that the scales do not yield scores with pejorative labels (e.g., "extreme risk") or 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.

Qualifications of DESSA-MSE SSR Users and Raters

Qualifications of DESSA-MSE SSR Users

For the purposes of this manual, DESSA-MSE SSR *users* are those who interpret its scores. Students are one user group, and typically, educators, administrators, coaches, program directors, and evaluators are another user group. The guidelines presented here should be considered a general description, rather than an exhaustive list, of those who may use the DESSA-MSE SSR. 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-MSE SSR user has responsibility for the proper use and interpretation of DESSA-MSE SSR results.

Because DESSA-MSE SSR results can be used to make decisions that shape the experiences of young people, DESSA-MSE SSR users should have training in the proper administration, interpretation, and utilization of the DESSA-MSE SSR.

For students, this means that students should receive instruction on the importance of social and emotional competence generally, as well as on the six competencies included on the DESSA-MSE SSR. Training materials are included in the Student Portal, but in general, the student should be provided with the opportunity to understand why completing the DESSA-MSE SSR is important, how to interpret the student-facing results, and how to engage

in the growth strategies included in the Student Portal to further develop their social and emotional competence.

Educators and others who may use DESSA-MSE SSR results to inform social and emotional learning programs should have knowledge of the interpretation of standardized scores such as *T*-scores and percentile ranks, the interpretation of scale content and profiles, and how to communicate the results to families, allied professionals, and young people themselves. Typically, DESSA-MSE SSR users will include educators, administrators, coaches, program directors, and evaluators. The DESSA-MSE SSR can also be used by counselors, social workers, psychologists, and other professionals in education, behavioral health, child welfare, and juvenile justice settings to gain a better understanding of a youth's self-reported social and emotional strengths and needs.

Qualifications of DESSA-MSE SSR Raters

Because the DESSA-MSE SSR is a self-report measure, the student acts as the *rater* or the person who completes the items on the DESSA-MSE SSR. The student should be able to read English at the third-grade level. (Recommendations for using the DESSA-MSE SSR with students who have difficulty reading English are presented in Chapter 4.) As of the publication date, the DESSA-MSE SSR can also be completed by students in the following languages: Spanish, Arabic, Chinese Simplified and Traditional, Bengali, French, Haitian Creole, Korean, Russian, and Urdu. For more detailed and updated information about translations, please contact Aperture Education by visiting our website at **www.ApertureEd.com**. Students should receive some instruction prior to completing the DESSA-MSE SSR on the importance of social and emotional competence and how to complete their self-assessment.

Reasonable concerns exist as to whether a student can accurately self-assess their own social and emotional competence. However, as detailed in Chapter 3, the results of our psychometric studies indicate that the DESSA-MSE SSR provides a reliable and valid measure of students' self-reported social and emotional competence.

Restrictions for Use

DESSA-MSE SSR users should follow both the instructions included in this manual and all commonly accepted guidelines for test use and interpretation, such as the Standards for Educational and Psychological Testing (AERA, 2014). It is the DESSA-MSE SSR user's responsibility to ensure that completed DESSA-MSE SSR protocols and reports remain secure and are released with consent only to professionals who will safeguard their proper use. Copyright law does not permit the DESSA-MSE SSR user to photocopy or otherwise duplicate test items or record forms in any form, even for the purpose of sharing results. The completed DESSA-MSE SSR Individual Student Rating Report may be copied and provided to youths, parents, and multi-disciplinary teams after it has been reviewed with them. Because all DESSA-MSE SSR items, norms, and other materials are copyrighted, no DESSA-MSE SSR materials may be reproduced or transmitted in any form or by any means without written permission from Aperture Education.

Chapter 2

DEVELOPMENT AND STANDARDIZATION

CHAPTER 2

Development and Standardization

Development of the DESSA-MSE SSR Items

A variety of approaches were used to develop the initial set of DESSA-MSE SSR items. First, we consulted the definitions of the social and emotional competencies and related skills described in the CASEL Framework (**www.casel.org**), which has undergone revisions since the publication of the DESSA for kindergarten through eighth grade (K–8) children and youths (LeBuffe et al., 2009/2014), to ensure continued and adequate coverage. We also reviewed definitions of the focal constructs of identity, agency, belonging, collaborative problem solving, and curiosity) known to be critical to promoting well-being and thriving in diverse groups of students (Jagers et al., 2021). To ensure we were not excluding other important social and emotional competencies, we also reviewed the SEL taxonomy work of the EASEL Lab (**http://exploresel.gse.harvard.edu/**). This construct review process resulted in updated definitions of the social and emotional competencies we aimed to measure with the DESSA-MSE SSR.

Second, we reviewed the existing 72 items on the DESSA K–8 (LeBuffe et al., 2009/2014) and the DESSA High School Student Self-Report (DESSA-HSE SSR; LeBuffe et al., 2020). These items were originally developed through a thorough review of the literature on resilience (e.g., Werner & Smith, 1982, 1992), social and emotional learning (e.g., Payton et al., 2000), and positive youth development (e.g., Catalano et al., 2002). We first compared the content of the existing items to our updated scale definitions. New items were written to cover content areas not previously emphasized (e.g., developing healthy identities). Existing items were considered for developmental appropriateness for middle school youths, resulting in items that were deleted (e.g., "wait for their turn") or revised (e.g., the item "show the ability to decide between right and wrong" was reworded to "do the right thing in a difficult situation"). We also carefully considered the reading level of the items so that the overall readability level of the DESSA-MSE SSR would be as low as possible. Items were also considered from an equity perspective, to help ensure appropriateness with diverse groups of students. The item-development phase resulted in

a pool of 84 items. All items were written as sentences beginning with "I" (e.g., "I set goals for myself.") to improve the overall readability level of the DESSA-MSE SSR.

Feedback from Students

Prior to pilot testing the items, we conducted cognitive interviews with a diverse sample of 11 middle school students. Students attended schools in New York, Michigan, Texas, and Idaho, representing each of the four geographic regions (Northeast, Midwest, South, and West) designated by the U.S. Census Bureau. Demographics were self-reported by students as follows: 45.5% Male, 36.4% Black or African American, 9.1% White, and 54.5% Hispanic/Latinx; 18.2% were English Language Learners (ELL), and 9.1% were receiving special education services. Not all students provided information on ELL or special education status.

Both in-person and virtual interviews were conducted. The purpose of the interviews was twofold. First, we wanted to ensure that students could comprehend and provide a rating for the items. Second, we wanted to test several different response option formats to see which option students preferred. Each student was presented with a counterbalanced subset of 12 items from the larger pool of 84 items, grouped into three sets each with different response option formats. The three formats included a five-point Likert scale (Never, Rarely, Sometimes, Often, Almost Always), a four-point Likert scale (Never, Sometimes, Often, Always), and the same four-point Likert scale with visual support aids (e.g., "Never" was supported with an open circle; "Always" was supported with a filled-in circle). For each of the 12 items, students were asked to rate themselves and then answer a series of questions about the item, including whether the item was clear and how they chose their response. They were also asked about the instructions and the three response option formats. Interviews were recorded and transcribed, and then coded by two independent reviewers.

Based on this feedback, a subset of the items was revised prior to pilot testing, and a five-point Likert scale (Never, Rarely, Sometimes, Often, Almost Always) without a visual aid was selected.

Feedback from Expert Reviewers

Prior to pilot testing, the construct definitions and 84 items were reviewed by four experts in the field of SEL, including individuals with expertise in the related fields of educational equity, special education, and school psychology and mental health. Items were organized by the social and emotional competency domain it intended to measure (i.e., Self-Management) and experts were asked to review each item and indicate whether the item was relevant to its aligned domain and whether the item was appropriate from an equity perspective. Reviewers also indicated whether the items were developmentally appropriate for middle school-age youths and whether any important social and emotional skills relevant to middle school youths were missing from the item pool.

Feedback obtained from the reviewers was very consistent. The reviewers positively evaluated the item pool from the perspectives of SEL content coverage, developmental appropriateness for middle school students, and equity across diverse groups of students. Based on feedback, wording revisions were made to nine items. For example, the item "I show respect for others in a game or competition" was simplified to "I show respect for others." In addition to item wording suggestions, reviewers also identified *collective goal setting and efficacy* as an important social

and emotional content area missing from our scale definitions and item pool. As a result, four new items were written to measure this skill set, bringing the item pool to 88 items for pilot testing.

National Pilot Study

To investigate the usefulness of the initial items and their interrelationships, we conducted a national pilot study using a convenience sample of ratings completed by middle school youths. A total of 356 youths across sixth, seventh, and eighth grades participated in the pilot study. The sample was sufficiently diverse with respect to grade, gender, race, ethnicity, geographic region of residence, and free or reduced-price lunch eligibility.

We reduced the initial pool by examining item performance across the following indicators: item missingness, item mean raw score, corrected item-total reliability, evidence of grade trends, ability of the item to discriminate among students exhibiting similar levels of the construct, factor loadings of the item to the construct, content feedback from expert reviews; and content coverage based on scale definitions. Using these criteria, items that performed poorly against other items on the scales were flagged and considered for elimination. This process resulted in a reduced set of 73 items that we incorporated into the standardization edition of the DESSA-MSE SSR.

National Standardization

In accordance with standards promulgated by the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education (AERA, 2014), we normed the DESSA-MSE SSR through a carefully prescribed method to ensure the data collection procedures resulted in a large, diverse standardization sample that closely approximated the United States population of middle school-age youths with respect to important demographic characteristics. This ensured a wide variety of youths were included in the generation of norms. A discussion of the psychometric characteristics of the DESSA-MSE SSR is provided in Chapter 3.

We collected data using an online rating form. The sample was collected between October 2022 and March 2023. Ratings were obtained from middle school students from school districts and OST programs across the United States. Schools and programs were recruited through a variety of methods including invitations to Aperture Education clients and contacts (e.g., inviting middle school DESSA users to participate), advertising through national organizations such as the National Association of School Psychologists (NASP) and the American Educational Research Association (AERA), and posting the study opportunity on websites and social media. No personally identifying information was included in the standardization protocols, which were reviewed and approved by Devereux Advanced Behavioral Health's Institutional Review Board.

Selection of the DESSA-MSE SSR Standardization Sample

Self-report ratings by middle school-age youths in grades 6–8 were eligible for inclusion in the DESSA-MSE SSR standardization sample. Youths receiving special education services were also eligible for inclusion. We eliminated ratings with too much missing data (defined as

missing answers on two or more of the final set of 50 items), ratings with the same item response across all items (e.g., the youth answered "Almost Always" for all items), and ratings completed too quickly (defined as less than 5 minutes for reading instructions, completing demographic questions, and completing the 73 standardization items) or too long (defined as more than 100 minutes). Ratings were also excluded if, in response to the question, "How many questions in this survey did you answer honestly?", the youth provided a response of "Hardly any of them", "Only some of them", or did not respond. Prior to finalizing, the sample was trimmed to achieve representativeness to U.S. Census data regarding age, sex, race, Hispanic/Latinx ethnicity, geographic region of residence, and socioeconomic status.

Representativeness of the DESSA-MSE SSR Standardization Sample

A total of 1,350 youths in grades 6–8 (ages 11–14) comprised the DESSA-MSE SSR standardization sample. The sample closely approximated the population of 10- through 14-year-olds in the United States with respect to age, sex, geographic region of residence, race, Hispanic/Latinx ethnicity, and socioeconomic status. We based the desired characteristics of the standardization sample on the most current national estimates (2017–2021) from the American Community Survey (ACS) published by the U.S. Census Bureau. In the tables that follow, the total number of youths included may not sum to 1,350 due to missing data.

Grade and Sex

Table 2.1 presents the numbers and percentages of males and females in the DESSA-MSE SSR standardization sample in each grade from grades 6–8, presented relative to the composition of the U.S. population. The number of youths in each grade ranged from 421 in eighth grade to 469 in seventh grade. The overall mean number of youths per grade was 450. 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 well as in each grade, closely approximated the proportions of the U.S. population.

TABLE 2.1
DESSA-MSE SSR Standardization Sample Characteristics by Grade and Sex

	Males		Females		Total	
	n	%	*n*	%	*n*	%
Grade 6	225	48.9	235	51.1	460	34.1
Grade 7	260	55.4	209	44.6	469	34.7
Grade 8	210	49.9	211	50.1	421	31.2
Total Sample	695	51.5	655	48.5	1350	100.0
U.S. %		51.2		48.8		

Note: The U.S. population data are based on the 2017–2021 estimates for 10- through 14-year-olds only in "Table S0101: Age and Sex, 2021 American Community Survey 5-Year Estimates," U.S. Census Bureau, 2021. Generated using **https://data.census.gov/cedsci/**.

Geographic Region

We collected data from students attending 94 schools and OST programs across 28 U.S. states and the Commonwealth of the Northern Mariana Islands. Table 2.2 shows the numbers and percentages of students by grade level and location, according to the four geographic regions (Northeast, Midwest, South, and West) and the U.S. Island Areas designated by the U.S. Census Bureau. These data show that the DESSA-MSE SSR standardization sample closely approximated the regional distribution of the U.S. population.

Race

Table 2.3 provides the DESSA-MSE SSR standardization sample composition by race within each geographic region. Based on information provided by students on the rating forms, we classified the students according to the six 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, White, and Two or More Races. The data in Table 2.3 indicate that the racial composition of the total standardization sample closely approximated that of the U.S. population.

Hispanic/Latinx Ethnicity

The proportions of students of Hispanic/Latinx ethnicity included in the DESSA-MSE SSR standardization sample by geographic region are presented in Table 2.4. Students were asked whether they were of Hispanic/Latinx ethnicity. Data show that the Hispanic/Latinx composition of the standardization sample closely approximated that of the U.S. population.

TABLE 2.2
DESSA-MSE SSR Standardization Sample Characteristics by Geographic Region and Grade

	Northeast		Midwest		South		West		U.S. Island Areas		Total	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
Grade 6	45	17.6	80	24.2	226	50.7	109	34.8	0	0.0	460	34.1
Grade 7	93	36.3	163	49.4	112	25.1	97	31.0	4	80.0	469	34.7
Grade 8	118	46.1	87	26.4	108	24.2	107	34.2	1	20.0	421	31.2
Total Sample	256	19.0	330	24.4	446	33.0	313	23.4	5	0.4	1350	100.0
U.S. %		16.0		20.9		38.8		24.2		0.1		

Note: The U.S. population data are based on the 2017–2021 estimates for 10- through 14-year-olds only in "Table S0101: Age and Sex, 2021 American Community Survey 5-Year Estimates," U.S. Census Bureau, 2021. Generated using **https://data.census.gov/cedsci/**. The U.S. Island Area data are based on the 2020 Decennial Census of Island Areas Demographic Profile, U.S. Census Bureau, 2020. Generated using **https://data.census.gov/cedsci/**.

TABLE 2.3
DESSA-MSE SSR Standardization Sample Characteristics by Race and Geographic Region

	American Indian/ Alaska Native		Asian		Black/ African American		Native Hawaiian/ Pacific Islander		White		Two or More Races		Total
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*
Northeast	4	14.8	8	16.7	19	11.7	0	0.0	141	21.8	13	9.8	185
Midwest	9	33.3	20	41.7	22	13.5	1	20.0	163	25.2	40	30.1	255
South	7	25.9	10	20.8	110	67.5	1	20.0	197	30.5	47	35.3	372
West	7	25.9	7	14.6	12	7.4	1	20.0	145	22.4	33	24.8	205
U.S. Island Areas	0	0.0	3	6.3	0	0.0	2	40.0	0	0.0	0	0.0	5
Total Sample	27	2.6	48	4.7	163	15.9	5	0.5	646	63.2	133	13.0	1022
U.S. %		1.1		5.4		15.0		0.2		66.6		11.8	

Note: The U.S. population data are based on the 2017–2021 estimates for 10- through 14-year-olds only in "Tables B01001A, B, C, D, E, G: Sex by Age (Race), 2021 American Community Survey 5-Year Estimates," U.S. Census Bureau, 2021. Generated using **https://data.census.gov/cedsci/**.

TABLE 2.4
DESSA-MSE SSR Standardization Sample Characteristics by Hispanic/Latinx Ethnicity and Geographic Region

	Hispanic/Latinx		Non-Hispanic/Latinx		Total
	n	%	*n*	%	*n*
Northeast	81	21.0	175	18.1	256
Midwest	104	27.0	226	23.4	330
South	91	23.6	355	36.8	446
West	109	28.3	204	21.1	313
U.S. Island Areas	0	0.0	5	0.5	5
Total Sample	385	28.5	965	71.5	1350
U.S. %		27.8		72.2	

Note: The U.S. population data are based on the 2017–2021 estimates for 10- through 14-year-olds only in "Tables B01001I: Sex by Age (Hispanic or Latino), 2021 American Community Survey 5-Year Estimates," U.S. Census Bureau, 2021. Generated using **https://data.census.gov/cedsci/**.

Socioeconomic Status

To assess the socioeconomic status of the DESSA-MSE SSR standardization sample, we determined the number of students eligible to receive either free or reduced-price lunches. Based on the information provided by students on the rating forms, eligibility data was available for 1,030 of the 1,350 students in the standardization sample. Of this sample of 1,030 students, 541 (52.5%) were eligible to receive free or reduced-price lunches. This very closely approximated the 52.1% of K–12 students in the U.S. eligible to receive free or reduced-price lunches in the

2019–2020 academic year (U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, November 2021).

Special Education Services

To assess the education status of the DESSA-MSE SSR standardization sample, we determined the number of students receiving special education services. Based on the information provided by students on the rating forms, eligibility data were available for 1,176 of the 1,350 students in the standardization sample. Of this sample of 1,176 students, 172 (14.6%) were receiving special education services. This very closely approximated the 14.7% of K–12 students in the United States being served under the Individuals with Disabilities Education Act (IDEA) during the 2021–2022 academic year (U.S. Department of Education, Office of Special Education Programs, National Center for Education Statistics, February 2023).

Organization of the DESSA-MSE SSR Items into Scales

The primary purpose of the DESSA-MSE SSR is to provide educators, parents, OST staff, and other professionals concerned with the social and emotional competence of students, as well as the students themselves, with a useful and meaningful set of scales that both (a) reflect current social and emotional functioning and (b) lead to strategies and interventions to promote social and emotional competencies. We have aligned our items across the DESSA K–12 assessment suite with the descriptions of core social and emotional competencies provided by the Collaborative for Academic, Social, and Emotional Learning (CASEL; **www.casel.org**). This framework is widely reflected in state and school district educational standards as well as social and emotional learning curricula, and it is, therefore, familiar to many educators and administrators. In our existing DESSA K–12 suite, three of the five core social and emotional competencies suggested by CASEL (Self-Awareness, Self-Management, and Responsible Decision Making) had been subdivided to yield more specific social and emotional competencies that simplified understanding and intervention (e.g., "Personal Responsibility" and "Decision Making" vs. "Responsible Decision Making"), and highlighted the importance of optimistic thinking as an important social and emotional competency (Ciarrochi et al., 2015). This process yielded eight preliminary first-order scales.

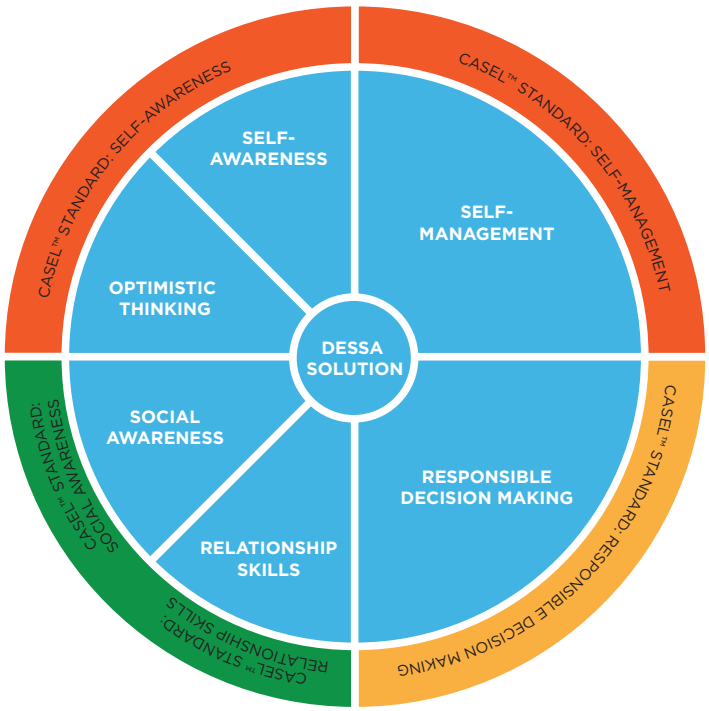
As described at the start of this chapter, development of the DESSA-MSE SSR began with a construct and item review process that resulted in updated definitions of the social and emotional competencies we aimed to measure. In addition to updating our content coverage, we also refined our alignment to the CASEL Framework. Specifically, scale definitions were revised to yield six preliminary first-order scales. These include the five core competencies defined by CASEL (Self-Awareness, Self-Management, Social Awareness, Relationship Skills, and Responsible Decision Making) and the retaining of the Optimistic Thinking scale. This revision provides clearer alignment to the CASEL Framework, state SEL standards, and existing SEL curricula, and also reduces complexity for educators as they review and plan instruction based on this data.

We organized DESSA-MSE SSR items into these logically derived and defined scales based on the CASEL Framework, as presented in Figure 2.1. 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-MSE SSR as much as possible without compromising breadth of coverage; (3) to simplify the administration, scoring, and interpretation of the DESSA-MSE SSR; and (4) to ensure that the constructs were measured reliably by the scales.

To achieve the goals outlined above, we examined item performance using a combination of Classical Test Theory (CTT) and Item Response Theory (IRT) techniques. We dropped items based on the following criteria: First, we examined the corrected item-total correlations to ensure that each item correlated highly with the scale to which it was assigned. To avoid potential ceiling effects on any scale, which would impact the ability of the measure to detect a change, we examined each item's mean raw score for evidence of potential ceiling effects (defined as an item mean raw score of greater than 3.0; possible range = 0–4). To simplify the scales and avoid the necessity of age norms, we examined each item for evidence of age trends. To minimize potential bias, we examined differential item functioning between groups of students (Black or African American, White, and Hispanic/Latinx students).

In addition to the previously described methods of item evaluation and scale assignment, we assessed each item and scale's performance through IRT techniques. Our primary interest in carrying out these analyses was to either confirm the item- and scale-level conclusions drawn from the techniques described in the previous section (i.e., CTT techniques) or to refine our

FIGURE 2.1
Alignment of the DESSA-MSE SSR Scales to the CASEL Framework



conclusions using the additional information gained from the IRT analyses. Analyses were completed in R using the *ltm* package (Rizopoulos, 2006). Graded Response Modeling (GRM) models were fit for each iteration of the six DESSA-MSE SSR scales. The primary information reviewed to evaluate the items and scales were:

- Each scale's Test Information Curve (TIC), which indicated how precisely the scale measured the social and emotional construct (e.g., Self-Management) across different levels of the construct.
- Each item's Item Information Curve (IIC), which indicated how much information each item contributed to the scale across different levels of the construct, compared to the other items on the scale.
- The model summary statistics, which estimated item difficulty and how well each item discriminated among students exhibiting similar levels of the construct (e.g., how well a Self-Management item discriminated between two students with similar competence in Self-Management).

With the techniques described above, we were able to confirm the item- and scale-level decisions.

Twenty-three items were eliminated because of these steps, resulting in a final set of 50 items comprising the six scales. Based upon the sum of the standard scores of all six scales, we also created a composite score referred to as the Social-Emotional Composite (SEC), which provides an overall estimate of the student's social and emotional competencies. Depending on the conversion table used, the Lexile reading level for the DESSA-MSE SSR falls into the second- to third-grade range.

Norming Procedures

The initial step in the preparation of the norms was to determine if any trends existed in the data. We first examined the DESSA-MSE SSR scale and total raw scores for potential age differences. Table 2.5 presents the raw score means and standard deviations for the six DESSA-MSE SSR scales and the total raw score by grade. Minor variations in mean raw scores were observed across the three grade levels. To evaluate the practical significance of these mean raw score differences, we calculated *d*-ratios, a measure of effect size. 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 0.2 are negligible. Those between 0.2 and 0.5 reflect a small effect size. Those between 0.5 and 0.8 indicate a medium effect size, and *d*-ratios greater than 0.8 indicate a large effect size. Across all grade level and scale level comparisons (a total of 18 comparisons), 15 were categorized as negligible, three were categorized as small, and no medium or large effect sizes were observed. Effect sizes ranged from 0.05 to 0.29, with scale raw score means differing by 1.5 raw score points or less for all comparisons. Similarly, on the total raw scale, effect sizes ranged from 0.07 (seventh- vs. eighth-grade comparison; mean raw score difference = 3.7) to 0.21 (sixth-vs. eighth-grade comparison; mean raw score difference = 10.6). Given that the mean scale and total raw score differences observed across grades were all negligible to small, we constructed the norms for all grades combined.

TABLE 2.5
DESSA-MSE SSR Raw Score Means and Standard Deviations by Grade

Scales	Grade 6 (n = 460)		Grade 7 (n = 469)		Grade 8 (n = 421)	
	Mean	SD	Mean	SD	Mean	SD
Self-Awareness	25.3	5.7	24.9	6.0	24.5	5.8
Self-Management	21.1	5.4	20.6	5.7	20.2	5.8
Social Awareness	23.9	5.0	22.9	5.2	22.4	5.2
Relationship Skills	23.8	5.2	23.2	5.2	22.9	5.3
Responsible Decision Making	22.5	5.2	21.7	5.5	21.5	5.3
Optimistic Thinking	25.3	6.5	24.6	6.7	24.2	6.9
Total Raw Score	305.0	50.7	298.1	52.0	294.4	52.3

We also examined mean score differences across the DESSA-MSE SSR scales and SEC by sex. There were statistically significant differences between the ratings for male and female students on two of the six scales including Self-Management ($p < .001$, $d = 0.23$) and Optimistic Thinking ($p < .001$, $d = 0.27$), with males receiving scores that were 2.2 and 2.7 *T*-score points higher than females, respectively. On the SEC, males and females differed by less than 1 *T*-score point, which was non-significant and negligible in magnitude (d = 0.10). Table 2.6 presents the *T*-score means, standard deviations, and *d*-ratios for the six scales and SEC. The data in this table indicate that middle school-age males and females generally self-report similar levels of social and emotional competence, with the exception of the small differences observed in Self-Management and Optimistic Thinking. Although these findings depart from the sex differences typically observed on the teacher-completed DESSA K–12 and the DESSA-HSE SSR assessment tools, they are consistent with research showing a general decline in protective factors during the middle school years (Kim et al., 2015).

To preserve these differences in social and emotional competencies, we constructed the raw-score-to-*T*-score norms-conversion tables based on both sexes. Consequently, slight differences between males and females may be evident in Self-Management and Optimistic Thinking. This reflects natural differences between the sexes and establishes a single set of social and emotional competency expectations that applies equally to all students.

We next 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 six scales and the SEC, we computed standard scores (*T*-scores with a mean of 50 and a standard deviation of 10) based on percentile score distributions. We based the SEC *T*-score on the percentile distribution of the sum of the six *T*-scores corresponding to the DESSA-MSE SSR scales for each case. This approach provides equal weighting to each of the

TABLE 2.6
DESSA-MSE SSR Standard Score Sex Differences by Scale

Scales	Males ($n = 695$)		Male/Female *d*-ratio	Females ($n = 655$)	
	Mean	SD		Mean	SD
Self-Awareness	50.6	9.8	0.14	49.3	9.9
Self-Management	50.7	9.3	0.23*	48.5	9.6
Social Awareness	49.2	9.4	–0.10	50.1	9.1
Relationship Skills	49.5	9.8	–0.09	50.4	10.0
Responsible Decision Making	50.2	9.8	0.04	49.8	9.9
Optimistic Thinking	51.4	9.9	0.27*	48.7	9.7
Social-Emotional Composite	50.5	9.8	0.10	49.6	9.8

Note: $p < .001$

six competencies in computing the SEC score. 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.

Chapter 3

PSYCHOMETRIC PROPERTIES

CHAPTER 3

Psychometric Properties

As described in Chapter 1, a foundational characteristic of the DESSA-MSE SSR is a commitment to strong psychometric qualities. This rating scale was developed to meet or exceed the standards promulgated by the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education (AERA, 2014). Chapter 2 of this manual describes the large, diverse standardization sample that approximates the population of middle school-age youths in the United States. This chapter will focus on evidence of reliability and validity to support the intended uses of the scale. Together, these important attributes allow for defensible decision making based on youths' perceptions of their social and emotional competence.

Reliability

The reliability of an assessment tool like the DESSA-MSE SSR 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). Evidence for the reliability of the DESSA-MSE SSR was explored using several methods. First, we computed the internal reliability coefficients and the standard errors of measurement for each scale. Second, we assessed the test–retest reliability and stability of each scale.

Internal Reliability

Internal reliability (or internal consistency) refers to the extent to which the items on the same scale or instrument are correlated and can be considered to measure the same underlying construct. We determined internal consistency using Cronbach's alpha (Cronbach, 1951). The

internal reliability coefficients were based on the youths included in the DESSA-MSE SSR standardization sample ($N = 1{,}350$).

Table 3.1 presents the internal consistency estimates for each of the six scales and the Social-Emotional Composite (SEC) score. The SEC reliability was computed using the formula provided by Nunnally and Bernstein (1994) for the reliability of a linear composite. The coefficient for the SEC was .96, exceeding the .90 value for a total score suggested by Bracken (1987) and meeting the "desirable standard" described by Nunnally (1978, p. 246).

The internal reliability coefficients for the six DESSA-MSE SSR scales range from .82 (Self-Awareness) to .87 (Optimistic Thinking), all of which exceeded the .80 desirable standard suggested by Bracken (1987). The median reliability coefficient across the seven scales was .83. Taken together, these results indicate that the DESSA-MSE SSR scales have good internal reliability.

Standard Error 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). As such, the SE_M provides an estimate of the amount of fluctuation in DESSA-MSE SSR scores that can be expected by chance; the larger the SE_M, the greater the amount of chance fluctuation. We obtained the SE_M for each of the DESSA-MSE SSR 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 (i.e., 10) and the appropriate reliability coefficient is used. The SE_M values for each DESSA-MSE SSR scale are presented in Table 3.2. 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.

TABLE 3.1
Internal Reliability (Alpha) Coefficients for the DESSA-MSE SSR Scales

Scales	Alpha Coefficient
Social-Emotional Composite	.96
Self-Awareness	.82
Self-Management	.83
Social Awareness	.83
Relationship Skills	.84
Responsible Decision Making	.83
Optimistic Thinking	.87

TABLE 3.2
Standard Errors of Measurement for the DESSA-MSE SSR Scale *T*-Scores

Scales	SE_M
Social-Emotional Composite	1.90
Self-Awareness	4.30
Self-Management	4.10
Social Awareness	4.15
Relationship Skills	3.95
Responsible Decision Making	4.07
Optimistic Thinking	3.58

Test–Retest Reliability

The correlation between scores obtained for the same youths on two separate occasions is another indicator of the reliability of an 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-MSE SSR, a group of middle school students ($n = 121$) across five schools rated themselves on two different occasions separated by an interval of 4 to 9 days. Demographic information on this sample is provided in Table 3.3.

The results of this study are shown in Table 3.4. All correlations are significant ($p < .01$) and high in magnitude, ranging from $r = .68$ (Self-Awareness) to $r = .78$ (Optimistic Thinking). The coefficient for the SEC score was .80, while the median test–retest reliability coefficient across the DESSA-MSE SSR scales was .76. These findings indicate that the DESSA-MSE SSR scales have acceptable test–retest reliability.

Stability of DESSA-MSE SSR Ratings

The correlation coefficients reported above for the test–retest reliability study indicate that youths ranked themselves similarly across the two DESSA-MSE SSR ratings completed about 1 week apart. However, the coefficients do not describe the actual similarity in the scores. To examine score stability across 1 week, the second rating *T*-score for each youth on each scale was subtracted from the corresponding first rating *T*-score. Using this approach, identical scores on the two ratings would result in a value of 0. Table 3.5 provides the test–retest mean scale scores, standard deviations, and mean *T*-score differences received by the youths in the test–retest study. The mean score difference on the SEC was 1.1 *T*-score points. On average, the mean value of the test–retest difference on the six social and emotional competence scales was equal to one *T*-score point. Paired samples *t*-tests conducted for each mean score comparison yielded significant differences between the first and second ratings on the Self-Management

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

	Student Sample (*N* = 121)	
	n	%
Grade		
6	44	36.4
7	35	28.9
8	42	34.7
Gender		
Male	60	49.6
Female	61	50.4
Race		
American Indian/Alaskan Native	1	0.8
Asian	3	2.5
Black/African American	37	30.6
Native Hawaiian/Other Pacific Islander	0	0
White	513	42.1
Two or More	7	5.8
Prefer to Self-Describe/Missing	22	18.2
Ethnicity		
Hispanic/Latinx	14	11.6
Region of Residence		
Northeast	22	18.2
Midwest	0	0
South	79	65.3
West	20	16.5
Free or Reduced-Price Lunch Eligibility		
Yes	43	35.5
No	48	39.7
Don't Know	30	24.8

scale ($p = .013$, $d = 0.23$) and the Relationship Skills scale ($p = .004$; $d = 0.27$), with effect size estimates considered to be small according to Cohen's (1988) guidelines. All other comparisons yielded no significant differences between the two ratings.

TABLE 3.4

Test–Retest Reliability Coefficients for Two DESSA-MSE SSR Ratings by the Same Student over a Four- to Nine-Day Interval

Scales	*r*
Social-Emotional Composite	.80
Self-Awareness	.68
Self-Management	.73
Social Awareness	.76
Relationship Skills	.76
Responsible Decision Making	.76
Optimistic Thinking	.78

Note: All correlations are significant at $p < .01$.

TABLE 3.5

Test–Retest *T*-Score Stability for Two DESSA-MSE SSR Ratings by the Same Student over a Four- to Nine-Day Interval

Scales	First Rating		Second Rating		*T*-Score Difference
	Mean	SD	Mean	SD	
Social-Emotional Composite	51.0	10.0	52.1	10.5	–1.1
Self-Awareness	50.7	10.2	51.4	10.3	–0.7
Self-Management	50.0	9.7	51.7	10.3	–1.7
Social Awareness	50.7	9.7	50.7	10.0	0.0
Relationship Skills	50.1	10.2	52.0	10.1	–1.9
Responsible Decision Making	51.2	10.4	52.0	10.0	–0.8
Optimistic Thinking	51.4	10.1	52.3	10.2	–1.0

Reliability Study Summary

The results of the reliability studies of the DESSA-MSE SSR provide evidence of scale reliability for assessing middle school youths' self-reported social and emotional competencies. The results of the internal consistency data demonstrate that the DESSA-MSE SSR meets the standards suggested by Bracken (1987). The test–retest study shows that youths rank their scores on the DESSA-MSE SSR similarly over relatively brief periods of time. The stability study further indicates that the rankings and the mean scale scores received by the youths at different points in time over a relatively brief interval are quite similar.

One final note about the reliability of the DESSA-MSE SSR. The interrater reliability of behavior rating scales is typically examined when two different raters observe the student in the same environment (e.g., a teacher and a teacher aide). Because the DESSA-MSE SSR is completed as a self-report, it was not possible or appropriate to investigate interrater agreement. Future research will explore the similarities between DESSA-MSE SSR ratings (completed by students) and DESSA ratings (completed by educators).

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 evidence and theory support the interpretations of test scores for proposed uses of tests" (AERA, 2014, p. 11). According to the *Standards for Educational and Psychological Testing* (AERA, 2014), the sources of validity evidence can be conceptualized in various ways. We investigated the validity of the DESSA-MSE SSR regarding *test content* (content validity), *internal structure and relations to other variables* (construct validity), and *test bias*.

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-MSE SSR, content-related validity addresses how well the 50 items represent the domain of behavioral characteristics related to social and emotional competence in middle school youths.

As detailed in Chapter 2, we based the items comprising the DESSA-MSE SSR on a thorough review of the literature on social and emotional competence, positive youth development, and resilience in middle school-age youths. We also based the items, in part, on our earlier publication, the DESSA for children and youths in grades K–8 (LeBuffe et al., 2009/2014), which has its own research base (for a review, see LeBuffe et al., 2018) and was developed to align to the CASEL Framework. Prior to conducting a national pilot study, the items were reviewed by four experts in the field of SEL, including individuals with expertise in the related fields of educational equity, special education, and school psychology and mental health. As described in Chapter 2, the reviewers positively evaluated the item pool from the perspectives of SEL content coverage, developmental appropriateness for middle school students, and equity across diverse groups of students.

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-MSE SSR, two types of construct validity were investigated. The first pertains to the DESSA-MSE SSR's internal scale structure, examined using confirmatory factor analysis. This study is discussed below in the Internal Structure section. The second concerns the relationships between DESSA-MSE SSR scale scores and scores on another well-developed measure of social and emotional behavioral strengths in youths. This study is discussed below in the section entitled Convergent Validity.

Internal Structure

One approach to establishing construct validity is to examine the internal structure of an assessment to determine the degree to which relationships among the items conform to the construct(s) on which score interpretations are based. Chapter 2 of this manual described the item- and scale-level analyses completed to guide the organization of the DESSA-MSE SSR

items into statistically and logically derived scales. We examined this scale structure of the DESSA-MSE SSR using confirmatory factor analysis. It should be noted that because our intent was to align the DESSA-MSE SSR to the CASEL Framework and the existing suite of DESSA measures, we did not conduct an exploratory factor analysis before proceeding to the confirmatory factor analysis.

Confirmatory Factor Analysis. To better explore the validity of the DESSA-MSE SSR's scale structure through factor analysis, confirmatory factor analysis was completed among the standardization sample, excluding cases missing one or more item response(s) ($N = 1{,}350$). We fit a six-factor model in which each item was assigned to one factor in alignment with its earlier assignment to one of the six DESSA-MSE SSR scales (Self-Management, Relationship Skills, etc.). Chapter 2 of this manual provides a discussion of assignment of items to the six scales.

Confirmatory factor analysis was completed in R using the lavaan package (Rosseel, 2012). Weighted Least Square Mean and Variance Adjusted Estimators (WLSMV) were used, given the ordinal nature of the data (Li, 2016). The six-scale solution exhibited a good model fit as described by Hu and Bentler (1999), indicated by a Tucker-Lewis Index (TLI) value of 0.990 and a Root Mean Square Error of six (RMSEA) value of 0.032.

This evidence suggests that the six-factor DESSA-MSE SSR model fits the standardization data well. For the purposes of comparison, two alternative models were explored, representing other popular conceptualizations of social and emotional competencies:

1. A three-factor model that assigned items to three factors: Intra-Personal (comprised of the DESSA-MSE SSR scales of Self-Awareness, Optimistic Thinking, and Self-Management; Inter-Personal (comprised of the DESSA-MSE SSR scales of Social Awareness and Relationship Skills); and Decision Making (comprised of the DESSA-MSE SSR scale Responsible Decision Making).
2. A one-factor model that assigned all items to a single factor.

Fit indices for the six-scale model and the two additional models are presented in Table 3.6. Each model tested exhibits a high TLI value (ranging from 0.985 for the one-scale model to 0.990 for the six-scale model) and a low RMSEA value (ranging from 0.032 for the six-scale model to 0.039 for the one-scale model), indicating a good fit to the data.

The model fit indices suggest that all tested models fit the data well. To evaluate the fit of the proposed DESSA-MSE SSR model relative to the alternative models, the proposed DESSA-MSE SSR model was compared to the three-scale model and one-scale model, pairwise, via a series of scaled chi-square difference tests. The results of the pairwise comparisons are included in Table 3.7.

These results indicate that the proposed DESSA-MSE SSR six-scale model fits the data significantly better than the tested three-scale model and the one-scale model. Marginal improvements in TLI and RMSEA values suggest that the model that assigns DESSA-MSE SSR items to scales as described in Chapter 2 fits the data *as well as*, if not *slightly better than*, the alternatives tested.

TABLE 3.6
Fit Indices for the DESSA-MSE SSR Six-Scale Model and Two Alternative Models

Model	Test Statistic (Standard) // *p*-Value (Chi-Square)	Test Statistic (Robust) // *p*-Value (Chi-Square)	Degrees of Freedom	Tucker-Lewis Index (TLI)	Root Mean Square Error of Approximation (RMSEA)
Six-Scale Model	2777.35 // $p < .001$	3915.45 // $p < .001$	1160	.990	.032
Three-Scale Model	2858.86 // $p < .001$	3962.34 // $p < .001$	1172	.989	.033
One-Scale Model	3528.25 // $p < .001$	4693.18 // $p < .001$	1175	.985	.039

TABLE 3.7
Comparisons between the DESSA-MSE SSR Six-Scale Model and Two Alternative Models

Comparison	Chi-Square of Six-Scale Model	Chi-Square of Comparison Model	Chi-Square Difference	df Difference	*p*
Six-Scale Model vs. Three-Scale Model	2777.35	2858.86	66.79	12	$p < .001$
Six-Scale Model vs. One-Scale Model	2777.35	3528.25	644.00	15	$p < .001$

Variability of DESSA-MSE SSR Scale Scores. Evidence for the construct validity of DESSA-MSE SSR scales was also explored through an examination of the variability of scale scores. For each youth in the standardization sample (N = 1,350), the youth's highest scale T-score and lowest scale T-score were identified. We calculated the difference between the maximum and minimum T-score and expressed these results as a frequency distribution and descriptive statistics of the T-score difference. These results are presented in Table 3.8.

There are several important points to consider when examining the variability of DESSA-MSE SSR scale scores. First, the mean difference between all youths' highest and lowest T-scores is 11.9 (SD = 5.1). This means that the typical middle school youth will show a difference of about 11 T-score points between the highest and lowest of the six DESSA-MSE SSR scales. Second, the cumulative percentages of DESSA-MSE SSR scale T-score differences reported in Table 3.8 tells us that very few youths (8.1%) rated themselves with minimal or no variation (defined as five or fewer points) between their highest and lowest DESSA-MSE SSR scale T-score. Similarly, few youths (9.8%) had a difference of 18 points or more. This, along with the mean difference reported at the bottom of Table 3.8, indicates that typically, the six DESSA-MSE SSR scales do differ from one another and are measuring differing social and emotional domains.

TABLE 3.8
Cumulative Frequencies of the *T*-Score Difference between the Highest and Lowest DESSA-MSE SSR Scale Scores

Scale Difference	Cumulative Percent
0	0.4
1	0.4
2	0.7
3	2.1
4	3.9
5	8.1
6	12.4
7	18.5
8	25.8
9	33.3
10	43.1
11	52.6
12	61.6
13	67.0
14	73.6
15	79.0
16	84.5
17	87.6
18	90.2
19	92.0
20	93.6
21	94.9
22	96.0
23	97.9
24	98.7
25	98.9
26	99.2
27	99.3
28	99.4
29	99.6
30	99.6
31	99.7
32	99.7
33	99.8
34–39	99.9
40	100.0
M	11.88
SD	5.06
N	1,350

As Chapter 5 of this manual will explain, using the numerical scale score provides important information about the degree to which the youth is similar to, or not similar to, the normative group. However, scale scores can also be examined within each youth to consider whether the youth is showing an expected or unusual amount of intra-scale variability on the DESSA-MSE SSR and to identify their relative strengths or needs for instruction as an individual.

Convergent Validity

One common approach to establishing the construct validity of an assessment tool is to demonstrate that scores on the measure 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-MSE SSR with raw scores from the SSIS SEL Brief Scales (Elliott et al., 2020), a behavior rating scale that assesses social and emotional learning skills of children and adolescents. Specifically, correlations were made between (a) the DESSA-MSE SSR SEC score with the SSIS SEL scale and composite scores, (b) the SSIS SEL composite score with the DESSA-MSE SEC scale and composite scores, and (c) DESSA-MSE SSR and SSIS SEL scale scores based on theoretical similarities in the constructs being measured (e.g., the Self-Management scales on both measures). We hypothesized scores across these comparisons would yield significant moderate correlations.

Middle school students ($N = 154$) completed the DESSA-MSE SSR and the SSIS SEL Brief in one session. The demographic characteristics of the students involved in this study are presented in Table 3.9. These data indicate that this sample was diverse in terms of demographics.

Descriptive statistics for youths' ratings on the DESSA-MSE SSR and the SSIS SEL are presented in Table 3.10. Pearson product–moment correlations between the DESSA-MSE SSR and the SSIS SEL scales and total scores are displayed in Table 3.11. The DESSA-MSE SSR SEC correlated significantly ($r = .82$, $p < .01$) with the SSIS Composite score and its five scale scores, including Self-Awareness ($r = .74$, $p < .01$), Self-Management ($r = .65$, $p < .01$), Social Awareness ($r = .68$, $p < .01$), Relationship Skills ($r = .67$, $p < .01$), and Responsible Decision Making ($r = .67$, $p < .01$). Comparisons at the scale level across the two measures also yielded significant moderate correlations, as can be seen in Table 3.11. Taken together, the results suggest that the DESSA-MSE SSR corresponds closely to another psychometrically sound instrument that measures similar constructs, yet the correlations were not so high as to raise concerns about the measures being exact replications of each other.

Examination of Potential Bias and Equity Issues

Minimizing bias and promoting equity are important goals in Aperture Education's development of assessment tools and strategies. We acknowledge that there is no simple, comprehensive, or definitive way to declare a tool to be *unbiased* or *equity-promoting*. We recognize that efforts to avoid bias and promote equity appear not only as psychometric analyses but also as guidelines for use (see Chapter 5). To consider these issues with the complexity that they deserve, we have compiled a monograph that describes what we mean by assessment tool bias, why it is important, and how Aperture Education works to reduce it (Mahoney et al., 2022). In this chapter, we aim to provide critical information that DESSA-MSE SSR users

TABLE 3.9
Demographic Characteristics of the DESSA-MSE SSR Construct Validity Sample

	Students (*N* = 154)	
	n	%
Grade		
6	51	35.7
7	44	30.8
8	48	33.6
Gender		
Male	69	48.3
Female	74	51.7
Race		
American Indian/Alaskan Native	1	0.6
Asian	3	1.9
Black/African American	47	30.5
Native Hawaiian/Other Pacific Islander	0	0
White	58	37.7
Two or More	9	5.8
Prefer to Self-Describe/Missing	36	23.4
Ethnicity		
Hispanic/Latinx	15	10.3
Region of Residence		
Northeast	24	15.9
Midwest	0	0
South	104	68.9
West	23	15.2
Free or Reduced-Price Lunch Eligibility		
Yes	50	35.0
No	56	39.2
Don't Know	37	25.9

Note: Demographic data was unavailable for 11 students.

TABLE 3.10

Results of the DESSA-MSE SSR Construct Validity Study (*N* = 154): Means and Standard Deviations of the DESSA-MSE SSR and the SSIS SEL Scales and Composite Scores

	Mean	SD
SSIS SEL		
SSIS Self-Awareness Scale Raw Score	8.1	2.2
SSIS Self-Management Scale Raw Score	7.6	2.2
SSIS Social Awareness Scale Raw Score	9.0	2.5
SSIS Relationship Skills Scale Raw Score	8.6	2.2
SSIS Responsible Decision Making Scale Raw Score	9.1	2.1
SSIS Composite SEL Raw Score	42.4	9.4
DESSA-MSE SSR		
Self-Awareness *T*-score	51.4	10.2
Self-Management *T*-score	51.8	10.0
Social Awareness *T*-score	51.0	9.9
Relationship Skills *T*-score	51.9	9.9
Responsible Decision Making *T*-score	51.9	9.9
Optimistic Thinking *T*-score	52.4	10.0
Social-Emotional Composite *T*-score	52.2	10.3

TABLE 3.11

Results of the DESSA-MSE SSR Construct Validity Study (*N* = 154): Correlation of the DESSA-MSE SSR with the SSIS SEL

	DESSA-MSE SSR						
	SA	SM	SO	RS	RDM	OT	SEC
SSIS SEL	*r*	*r*	*r*	*r*	*r*	*r*	*r*
SSIS Self-Awareness Raw Score	.66	–	–	–	–	.64	.74
SSIS Self-Management Raw Score	–	.63	–	–	–	–	.65
SSIS Social Awareness Raw Score	–	–	.69	–	–	–	.68
SSIS Relationship Skills Raw Score	–	–	–	.68	–	–	.67
SSIS Responsible Decision Making Raw Score	–	–	–	–	.63	–	.67
SSIS Composite SEL Raw Score	.68	.82	.77	.80	.79	.69	.82

Note: SA = Self-Awareness; SM = Self-Management; SO = Social Awareness; RS = Relationship Skills; RDM = Responsible Decision Making; OT = Optimistic Thinking; SEC = Social-Emotional Composite.

All correlations are significant at $p < .01$.

will expect and require, and we welcome opportunities to collaborate with educators, student support personnel, advocates, families, and youths to continue to collect information, scrutinize the DESSA tools, and evolve our use guidelines to promote equitable SEL assessment, supports, and outcomes.

Examination of Group Differences

The principle of fairness in testing (see AERA, 2014) requires scrutiny across a wide variety of youth characteristics, such as age, gender identity, race, ethnicity, socioeconomic status, language use, sexual orientation, and disability. Key findings related to age and sex at birth have been presented previously in this manual. This section focuses on analyses related to race and ethnicity.

We examined race and ethnicity differences in the DESSA-MSE SSR standardization sample using a series of regression models to predict the DESSA-MSE SSR SEC *T*-score and the six DESSA-MSE SSR scale *T*-scores from youths' race/ethnicity, statistically controlling for factors which may obscure the analysis of differences in social and emotional competence by race/ethnicity. These factors included: youth sex and socioeconomic status as measured by free and reduced-price lunch eligibility. Youths were excluded from the analysis if there were missing data across these factors. We used these procedures to compare: (1) Black/African American youths ($n = 185$) and *all other* youths ($n = 689$); and (2) Hispanic/Latinx youths ($n = 270$) and *all other* youths ($n = 760$).[1] A significance level of $\alpha = .05$ was used for the SEC. For comparisons made across the six DESSA-MSE SSR scales, a Bonferroni correction was made to account for the multiple comparisons, yielding a corrected pairwise significance level of $\alpha = .008$.

Black/African American Youths versus All Other Youths

The results obtained when examining the effect of race on DESSA-MSE SSR scores, while controlling for birth sex (male vs. female) and free or reduced-price lunch eligibility (eligible vs. ineligible, as an indicator of socioeconomic status), are shown in Table 3.12. The variable Black/African American was not found to be a significant predictor of the DESSA-MSE SEC *T*-score at the $\alpha = .05$ significance level. One of the six scales (Optimistic Thinking) showed a significant difference between Black/African American and all other youths ($\alpha = .002$). This difference of 2.51 *T*-scores points on the Optimistic Thinking scale was a statistically significant but small difference not explained by birth sex or free or reduced-price lunch eligibility.

Hispanic/Latinx Youths versus All Other Youths

The results obtained when examining the effect of ethnicity on DESSA-MSE SSR scores, when controlling for birth sex (male vs. female), and free or reduced-price lunch eligibility (eligible vs. ineligible), are shown in Table 3.13. Hispanic/Latinx ethnicity was found to be a

[1] We intentionally chose "all other youths" as the comparison group for these analyses, so as not to infer that only White youths should be the standard or reference group to which youths of color are compared.

TABLE 3.12

Regression Results for Black/African American Youths (*n* = 185) vs. All Other Youths (*n* = 689)

DESSA-MSE SSR Scale	Unstandardized Coefficient of Race Variable	Adjusted Mean for Black/African American Youths	Adjusted Mean for All Other Youths	Test Statistic (*t*) of Race Variable	*p*-Value of Race Variable	Significant at the $\alpha = .05$ Significance Level?	Significant after Bonferroni Correction? Pairwise $\alpha = .008$
Social-Emotional Composite	1.129	47.4	46.2	1.383	.167	No	NA
Self-Awareness	1.853	49.4	47.5	2.239	.025	Yes	No
Self-Management	1.630	48.1	46.5	2.043	.041	Yes	No
Social Awareness	0.083	45.4	45.3	0.108	.914	No	No
Relationship Skills	–0.426	44.8	45.2	–0.523	.601	No	No
Responsible Decision Making	0.465	47.2	46.7	0.571	.568	No	No
Optimistic Thinking	2.505	50.2	47.7	3.035	.002	Yes	Yes

TABLE 3.13

Regression Results for Hispanic/Latinx Youths (*n* =270) vs. All Other Youths (*n* =760)

DESSA-MSE SSR Scale	Unstandardized Coefficient of Race Variable	Adjusted Mean for Hispanic/ Latinx Youths	Adjusted Mean for All Other Youths	Test Statistic (*t*) of Hispanic/ Latinx Variable	*p*-Value of Hispanic/Latinx Variable	Significant at the α = .05 Significance Level?	Significant after Bonferroni Correction? Pairwise α = .008
Social-Emotional Composite	–2.355	45.2	47.6	–3.335	<.001	Yes	NA
Self-Awareness	–3.191	46.6	49.8	–4.480	<.001	Yes	Yes
Self-Management	–1.250	46.8	48.0	–1.818	.069	No	No
Social Awareness	–1.827	43.9	45.7	–2.732	.006	Yes	Yes
Relationship Skills	–1.368	43.6	45.0	–1.913	.056	No	No
Responsible Decision Making	–3.336	44.9	48.2	–4.704	<.001	Yes	Yes
Optimistic Thinking	–1.468	47.9	49.4	–2.062	.039	Yes	No

significant predictor of the DESSA-MSE SSR SEC *T*-score at the $\alpha = .05$ significance level. After controlling for birth sex and free or reduced-price lunch eligibility, the Hispanic/Latinx youths in the sample received SEC *T*-scores that were, on average, 2.36 *T*-score points lower than the non-Hispanic youths in the sample. Three of the six scales (Self-Awareness, Social Awareness, and Responsible Decision Making) showed a significant difference between Hispanic/Latinx and all other youths ($\alpha < .001$). These differences of 3.19, 1.83, and 3.34 *T*-score points on the Self-Awareness, Social Awareness, and Responsible Decision Making scales, respectively, were statistically significant but small differences and not explained by birth sex or free or reduced-price lunch eligibility.

Summary

When controlling for birth sex and free or reduced-price lunch eligibility status, there were significant differences in one of the six DESSA-MSE SSR scale scores between Black/African-American and all other youths. There were also significant differences on three of the six DESSA-MSE SSR scale scores between Hispanic/Latinx and all other youths. These differences, though statistically significant, were small in magnitude. When examining differences obtained on the SEC, Hispanic/Latinx youths received lower scores than non-Hispanic youths. The small difference of 2.36 *T*-score points was statistically significant and not explained by birth sex or free or reduced-price lunch eligibility.

Validity Study Summary

The content-related validity evidence provided in this chapter associated the DESSA-MSE SSR items with both the research and practice literature on social and emotional competence in youths and was supported through expert review of the content. The construct-related validity studies provide evidence in support of the six-scale model structure of the DESSA-MSE SSR and demonstrate that the DESSA-MSE SSR scales show convergent validity with a similar strength-based measure. Lastly, the race/ethnicity group analyses indicated small differences on one of the six DESSA-MSE SSR scales between Black/African American youths and all other youths, and on three of the six scales between Hispanic/Latinx youths and all other youths after controlling for birth sex and free or reduced-price lunch eligibility. A small difference of 2.36 *T*-score points was also observed between Hispanic/Latinx youths and all other youths on the DESSA-MSE SSR SEC.

The authors of the DESSA-MSE SSR welcome any opportunities to assist other researchers in further exploring the validity and utility of the DESSA-MSE SSR in assessing and ultimately helping to promote the social and emotional competence of youths. The authors can be reached through Aperture Education at **www.ApertureEd.com**.

Chapter 4

ADMINISTRATION AND SCORING

CHAPTER 4

Administration and Scoring

General Administration Guidelines

The DESSA-MSE SSR can be completed by middle school-age youths. This will typically include youths in the sixth through the eighth grades. For simplicity, these raters are referred to as "students" on the DESSA-MSE SSR and associated materials. The person who completes the DESSA-MSE SSR and provides the ratings is referred to as the "rater." The person who interprets and uses the DESSA-MSE SSR ratings is referred to as the "user" and is often the same person as the rater. The qualifications of raters and users of the DESSA-MSE SSR were described in Chapter 1.

To implement the DESSA-MSE SSR effectively, students need to be prepared to complete their ratings, and a plan is needed for teachers, SEL coaches, and building leaders to review and respond to the data. This plan should also include ongoing support to students as they review their data, create a growth plan, and implement student-directed SEL strategies, as well as the logistical and technological aspects of implementation. It is imperative that middle school or SEL team leaders plan for and communicate information about these broader implementation activities prior to the beginning of the school year. A detailed description of these activities is beyond the scope of this chapter; however, we recommend users of the DESSA-MSE SSR review recommendations provided within the guide titled *The Aperture Education Guide to Data-Driven SEL: Middle School Edition.* This resource is available for download in the Aperture System Support Portal.

The following general guidelines for completing the DESSA-MSE SSR are recommended:

- First, student raters should be provided with training on the importance of social and emotional skills for school and life success. Trainers should clearly communicate why it is important for the student raters to complete the DESSA-MSE SSR and how the information will be used. Furthermore, student raters should understand that they will be

receiving immediate feedback on their social and emotional skills that can be used to create a personalized growth plan. An editable PowerPoint slide deck with key information is available to assist educators and SEL leaders as they introduce the DESSA-MSE SSR to students.

- Second, student raters should have a scheduled time to complete their ratings. Ratings should be completed during a quiet time when there are few distractions.
- Third, student raters should be told that they need to provide an answer to every item. If a rater has difficulty completing the items, they should be instructed to tell their teacher or staff member that they need assistance. The Student Portal does not allow items to be left blank (see "Treatment of Missing or Blank Items" on page 58).

Specific Directions for Completing the DESSA-MSE SSR

The DESSA-MSE SSR is available only through the online Student Portal; there is no hand-scorable paper record form available. A PDF of the DESSA-MSE SSR items can be generated through the Aperture System Support Portal as needed to collect pencil and paper responses for entry into the online system. There is only one form, which is used for all youths in the sixth through the eighth grades. In nongraded programs, the DESSA-MSE SSR can be used with youths ages 11 through 14, inclusive. Specific directions for completing the online ratings are provided below. This information can also be found in Aperture Education professional learning sessions and other documents in the Aperture System Support Portal.

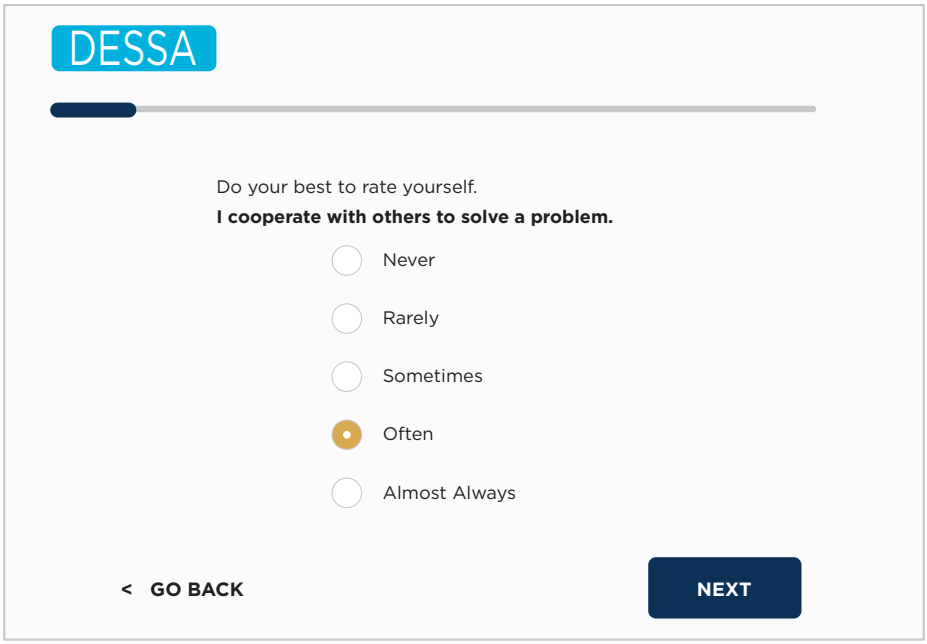
Completing the Ratings

When students first log in to the Student Portal to complete a DESSA-MSE SSR rating, they are presented with a brief letter that introduces social and emotional skills and why they are important, the DESSA-MSE SSR and the feedback they will receive on their social and emotional skills, and how they can use this feedback to select and use SEL strategies (referred to as "Challenges") to set goals for themselves to improve their skills. A short video is also provided that reinforces the written information and provides a deeper introduction to the Student Portal, how to set goals, and how to choose SEL strategies.

Students are instructed to click "Begin" when they are ready to complete the DESSA-MSE SSR rating. The online DESSA-MSE SSR record form contains the following directions to the rater:

> This form describes a number of behaviors seen in some youths. Read each question and **do your best to rate yourself**. Click on the button next to the word that tells how often you do, say, or think about each thing. Please answer each question carefully. There are no right or wrong answers. If you want to change your answer, just click on the button for your new choice.

FIGURE 4.1
DESSA-MSE SSR Record Form Presented in the Student Portal



The 50 items that comprise the DESSA-MSE SSR are presented one item at a time (see Figure 4.1). The rater responds to each item by clicking on the appropriate "radio button" (circle) next to the words Never, Rarely, Sometimes, Often, or Almost Always. As soon as a choice is selected for an item, the system automatically takes the rater to the next item. A "Go Back" button is available if a rater wishes to return to a previous item and change their response. When all items have been completed, the rater clicks on the "Submit" button to save and score the DESSA-MSE SSR. To ensure security of the Student Portal and to protect sensitive student information, ratings must be completed in one session. The system will not store partially completed ratings.

Use of the DESSA-MSE SSR With Raters Who Have Difficulty Reading English

If the rater has difficulty reading and completing the DESSA-MSE SSR, the items may be read to them. The person reading the DESSA-MSE SSR for the rater should try not to influence the ratings. The items should be read in an even, neutral tone of voice and explanations of the items or examples should not be given. The person reading the DESSA-MSE SSR should also not provide any feedback or react in any way to the rater's responses.

As of the date of publication, the DESSA-MSE SSR is available in 11 languages including English, Spanish, Chinese Simplified and Traditional, Arabic, Bengali, French, Haitian Creole, Korean, Russian, and Urdu. Students can choose their preferred language during setup of the Student Portal and if desired, toggle between English and their preferred language throughout the Student Portal using the "Language" button in the bottom right-hand corner. For more detailed and updated information about these translations and cultural adaptations, please visit **www.ApertureEd.com**.

Treatment of Missing or Blank Items

The Student Portal does not allow DESSA-MSE SSR items to be left blank. A response to each item must be selected or the system will not proceed to the next item to complete and submit the rating. Raters should be instructed to tell their teacher or other staff member if they have difficulty completing DESSA-MSE SSR items.

Scoring the DESSA-MSE SSR

The Student Portal automatically saves the DESSA-MSE SSR administration as soon as the "Submit" button is clicked. DESSA-MSE SSR scores are computed in the following way:

Calculating the DESSA-MSE SSR Scale Raw Scores

Scale raw scores for the six scales (Self-Awareness, Self-Management, Social Awareness, Relationship Skills, Responsible Decision Making, and Optimistic Thinking) are obtained by adding the raw scores for all of the items that comprise each scale using the following item raw score values: Never = 0, Rarely = 1, Sometimes = 2, Often = 3, and Almost Always = 4.

Determining DESSA-MSE SSR T*-Scores and Percentile Ranks*

The scale raw scores are converted to *T*-scores and percentile ranks for each scale using a norms table based on the national standardization sample. (See Chapter 2 for details on the standardization sample and norms creation.) There is one DESSA-MSE SSR norms table for student raters; the same norms are used for grades 6 through 8 and all genders. There are no subgroup norms based on student demographics or special education status, although the interactive reporting features of the Aperture System may be used to disaggregate DESSA-MSE SSR results by student demographics and other features.

Determining the T*-Score and Percentile Rank for the Social-Emotional Composite*

The *T*-score and percentile rank for the Social-Emotional Composite (SEC) are based on the sum of the *T*-scores of the six DESSA-MSE SSR scales. That is, the sum of the scale *T*-scores is treated as a raw score for calculating the corresponding *T*-score and percentile rank based on the national norms. This method is used to determine the standard scores for the SEC because it gives equal weight to each of the six DESSA-MSE SSR scales.

Determining the Descriptive Range for Each Scale

For each scale, high scores (*T*-scores of 60 and above) are referred to as *strengths*. *T*-scores that fall between 41 and 59 inclusive are described as *typical*. For student-facing DESSA-MSE SSR results in the Student Portal, the typical range has been further split into three ranges: *emerging typical* (*T*-scores of 41–45), *typical* (*T*-scores of 46–54), and *emerging strength* (*T*-scores of 55–59). These more discrete categories have been used to help students better understand their results. Low scores (*T*-scores of 40 and below) are described as a *need for instruction* (on student-facing reporting, the term *growth opportunity* is used). Table 4.1 provides the

TABLE 4.1
Descriptive Categories and Interpretations of the DESSA-MSE SSR *T*-Scores

T-Score Range	Descriptive Ranges for Adult Users	Descriptive Ranges for Student Users
60 and above	Strength	Strength
41–59	Typical	Emerging Strength (55–59) Typical (46–54) Emerging Typical (41–45)
40 and below	Need for Instruction	Growth Opportunity

descriptive categories for the *T*-score ranges for both student-facing and adult-facing reporting. The presentation, interpretation, and use of these scores in providing data-driven social and emotional learning, monitoring progress, and evaluating program outcomes is described in the next chapter.

Note for Researchers: Aperture Education encourages the use of the DESSA suite of assessments, including the DESSA-MSE SSR, in research. Please contact our team at Aperture Education regarding research policies, licensing agreements, and availability of syntax for scoring DESSA research protocols.

Chapter 5

INTERPRETATION

CHAPTER 5

Interpretation

Effective interpretation of any rating scale demands that the user be familiar with what is being measured, the scores that are provided, and how these scores should be interpreted and used to improve outcomes for children and youths. There are two user groups of the DESSA-MSE SSR: (1) middle school students, and (2) adults, which typically include educators, administrators, coaches, program directors, and evaluators. Each user group receives and uses DESSA-MSE SSR results, but they do so in different ways (e.g., adults have access to aggregated reports whereas students only access their own results). To facilitate interpretation and ease of use, the language used to describe the results varies to reflect the user's point of view. Therefore, throughout this chapter we will present information separately, first for student users and second for adult users, where necessary.

General Interpretation Guidelines

When interpreting DESSA-MSE SSR scores, the DESSA-MSE SSR user should always consider the following general guidelines. We will first consider guidelines for student users. We will then consider guidelines for adult users.

Guidelines for Student Users

For student users of the DESSA-MSE SSR, students should receive instruction on the importance of social and emotional competence generally, as well as on the six competencies included in the DESSA-MSE SSR. Training materials are included in the Student Portal, but in general, the student should be provided with the opportunity to understand why completing the DESSA-MSE SSR is important, how to interpret their results, and how to set goals and engage in the social and emotional learning (SEL) strategies (referred to as "SEL Challenges") included in the Student Portal to further develop their social and emotional competence.

Guidelines for Adult Users

First, the DESSA-MSE SSR user should have a thorough understanding of the meanings and appropriate uses of the various standard scores and descriptive ranges. Although the DESSA-MSE SSR meets or exceeds accepted professional standards for reliability, the user needs to realize that all rating scales contain some degree of measurement error that should always be considered in interpreting results and making data-based decisions.

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

The Center for Mental Health Services of the federal Substance Abuse and Mental Health Services Administration (SAMHSA) has published Cultural Competence Standards (2000). Although these standards are more than 20 years old, they remain pertinent and useful. Among the provider competencies, the following are particularly relevant to DESSA-MSE SSR users:

- An understanding of psychosocial stressors and traumas such as the COVID-19 pandemic, 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 youth and family's culture will result in more sensitive interpretations of DESSA-MSE SSR findings, and more useful recommendations to youths, parents, and educators.

Third, users should appreciate that the DESSA-MSE SSR is one source of information about the social and emotional competence of youths. Each set of DESSA-MSE SSR scores is based on a student's self-reported perception of their social and emotional skills likely reflecting all aspects of their lives (home, school, extracurricular or community activities, etc.). An educator who completes a DESSA educator rating in a particular context, often the classroom, may well provide somewhat different ratings. Therefore, we recommend the DESSA-MSE SSR adult users interpret scores in light of other information (e.g., observations, discussions with the student, developmental and social histories, and results from other assessment instruments) related to the youth. We also strongly recommend the evaluation of the consistency of the youth's behavior across environments, using multiple raters, both to enhance understanding and to facilitate conversation with youths.

Considerations Regarding the Use of the DESSA-MSE SSR with Students with Special Needs

Although the DESSA-MSE SSR is not intended to be used as part of a special education eligibility determination, knowledge of a youth's social and emotional strengths and needs can be helpful in informing an individual education plan (IEP) or other support plans. The DESSA-MSE SSR can provide critical information about how the youth's disability is impacting their social and emotional functioning. By identifying specific social and emotional skills that were rated in the strength range, the DESSA-MSE SSR assists IEP teams in meeting the requirements of section 300.324 of the Individuals with Disabilities Education Act (IDEA), which requires educators to consider the strengths of the student when creating the IEP. Similarly, items that were rated in the need for instruction range can be incorporated into the IEP as functional goals. Used in this way, the DESSA-MSE SSR can inform the IEP, resulting in student-specific, empirically grounded, data-driven strength and goal statements.

More specific issues regarding the interpretation of the DESSA-MSE SSR 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

Note Regarding Raw Scores

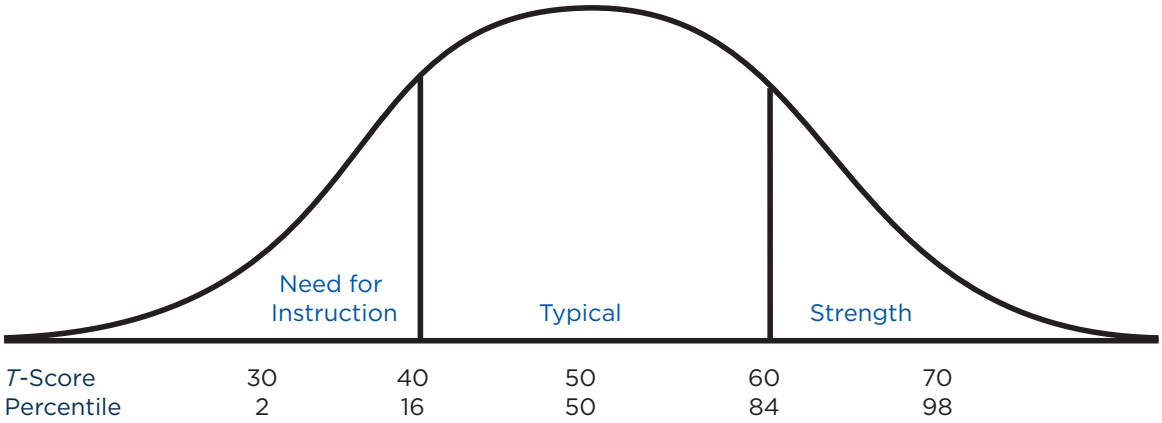
Although the Student Portal (the online platform that supports the DESSA-MSE SSR for students) and the Aperture System (the online platform that supports the DESSA-MSE SSR data for educators and administrators) do not display raw scores, they are discussed here because they are the bases for determining the standard scores that are provided. Scale raw scores are determined by adding the item raw score values (Never = 0; Rarely = 1; Sometimes = 2; Often = 3; and Almost Always = 4) for all the items comprising a scale. Because the number of items comprising the various scales differs, raw scores cannot be directly compared and provide little information about the overall level of the youth's social and emotional competencies. For instance, the Self-Awareness scale has 9 items. Therefore, an average rating of "Sometimes," which has an item raw score value of 2, would result in a Scale Raw Score of 18. In contrast, an average rating of "Sometimes" on the 8-item Relationship Skills scale would result in a Scale Raw Score of 16.

Standard Scores

The DESSA-MSE SSR provides standard scores derived from the national standardization sample so that the scores on the six separate scales of the DESSA-MSE SSR can be directly compared. Standard scores also enable the comparison of a given youth's behavior to that of the youths in the standardization sample. The DESSA-MSE SSR provides two standard scores: *T*-scores and their corresponding percentile ranks. Figure 5.1 shows the relationships between

FIGURE 5.1

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



T-scores, percentile ranks, the normal distribution, and the *T*-score range descriptions for the DESSA-MSE SSR scales. These standard scores and range descriptions are described below.

T-*Scores*

Each DESSA-MSE SSR *T*-score is a standard score set to have a mean of 50 and a standard deviation of 10. Like the percentile ranks, *T*-scores are based on the raw score ratings received by the youths in the standardization sample. In contrast to percentile ranks, however, DESSA-MSE SSR *T*-scores have the same meaning throughout their range. That is, the 5-point difference between the *T*-scores of 50 and 55 is equivalent to the 5-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 DESSA-MSE SSR results and when comparing scores earned on the various scales. On the DESSA-MSE SSR, *T*-scores can range from 28 to 72.

Percentile Ranks

Percentile ranks compare the youth's behavior to that of other youths who have been rated using the DESSA-MSE SSR. The percentile rank indicates the percentage of youths in the standardization sample who earned the same or lower raw score. For example, if a youth earns a percentile rank of 65, that means that 65% of the youths in the standardization sample earned the same or a lower raw score. DESSA-MSE SSR percentile ranks range from a minimum of 1 to a maximum of 99.

Percentile ranks 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 ranks is that the differences between the ranks do not have the same meaning across the 1–99 scale. This means that comparing two DESSA-MSE SSR scales using percentile ranks will likely mislead the practitioner to conclude that a significant difference exists when it does not. Consequently, although percentile ranks are useful for describing the relative standing of a youth versus other youths in the standardization sample, they should not

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

It should be noted that the DESSA-MSE SSR standard scores described in this section are only visible to adult users (educators, administrators, etc.) of the Aperture System. Rather than sharing numerical scores (*T*-scores and percentile ranks) with students that would require instruction to interpret correctly, students are instead presented with a visual depiction of their results and the associated *T*-score range descriptions discussed in the next section.

T-Score Range Descriptions for the DESSA-MSE SSR Scales

The DESSA-MSE SSR is a strength-based assessment tool in which the items reflect positively valued social and emotional competencies; therefore, high scores are desirable. For example, when a youth rates how often they "keep trying when unsuccessful" or "show appreciation for others," 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 provide descriptions for the *T*-score ranges. These *T*-score ranges and corresponding descriptions are presented in Table 5.1. Importantly, we recommend slight language differences between these descriptions for student and adult users of the DESSA-MSE SSR. For student users, these differences reflect a desire to use language in the Student Portal that is more meaningful, approachable, and growth-oriented. For adult users, the recommended language is designed to align with the *T*-score ranges and descriptions used when interpreting results for all other educator-completed DESSA assessment tool ratings, including the DESSA-MSE Educator form. We will first present the *T*-score range descriptions when reporting DESSA-MSE SSR results for student users. This will be followed by the recommendations when reporting results for adult users.

T-*Score Range Descriptions for Student Users*

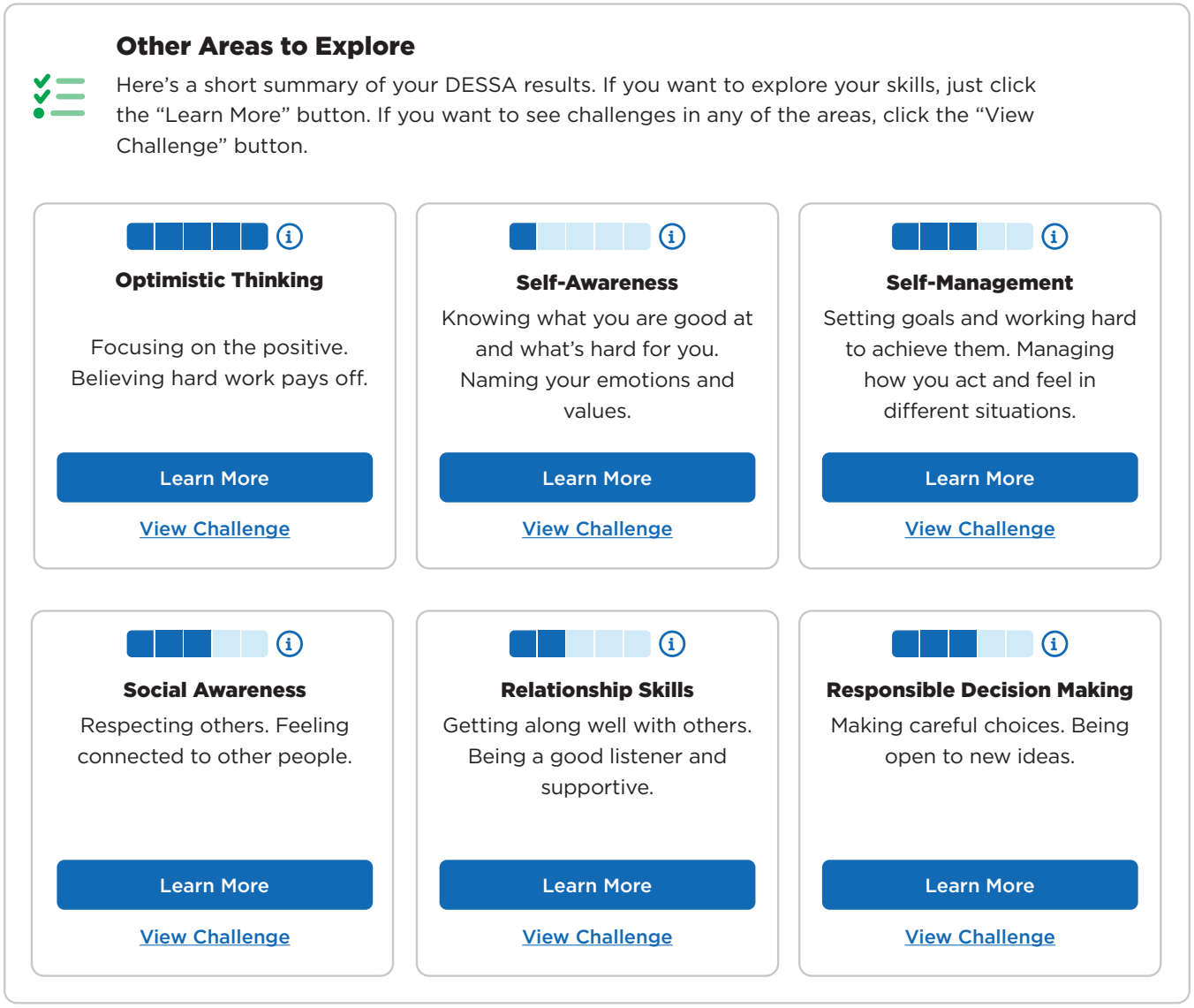
The term *growth opportunity* is used to describe DESSA-MSE SSR scale *T*-scores of 28 to 40 inclusive in the Student Portal. Scores in this range are visually depicted with one shaded bar on a five-bar graphic, as shown in Figure 5.2. *T*-scores of 40 or less mean that the youth rated themselves as showing few behaviors associated with the particular social and emotional

TABLE 5.1
Descriptive Categories and Interpretations of the DESSA-MSE SSR *T*-Scores

T-Score Range	Descriptive Ranges for Adult Users	Descriptive Ranges for Student Users
60 and above	Strength	Strength
41–59	Typical	Emerging Strength (55–59) Typical (46–54) Emerging Typical (41–45)
40 and below	Need for Instruction	Growth Opportunity

FIGURE 5.2

A Sample DESSA-MSE SSR Individual Student Rating Report as Presented to Students in the Student Portal



competency. Youths with scores in this range can be considered at risk for exhibiting or developing social and emotional problems (Shapiro et al., 2017). Similarly, they can be considered at promise for developing social and emotional competency in this area (LeBuffe et al., 2021). On each scale, approximately 16% of the youths in the standardization sample received scores in the growth opportunity range. If a youth receives a scale score in the growth opportunity range, they will benefit from choosing and implementing one or more SEL Challenges aligned to that scale domain (e.g., Self-Management) in the Student Portal. The SEL Challenges are meant to develop their social and emotional skills. These students will also benefit from adult-directed social and emotional supports and programming, as will be discussed in the "*T*-Score Range Descriptions for Adult Users" section on page 67.

Scale *T*-scores of 41 to 59 inclusive are considered to be within the "typical" range. To help students better understand scores within this range, scores of 41 to 45 should be described as "emerging typical," scores of 46 to 54 should be described as "typical," and scores of 55 to 59 should be described as "emerging strengths." In the Student Portal, scores in the emerging typical, typical, and emerging strength ranges are visually depicted with two, three, or four shaded bars on a five-bar graphic, respectively. Approximately 68% of youths in the standardization sample received scores in this range. Youths who receive scores in the typical range will likely benefit from implementing the SEL Challenges in the Student Portal, which will provide opportunities to expand and reinforce their social and emotional skills. They will likely also benefit from universal SEL strategies led by educators.

DESSA-MSE SSR scale *T*-scores of 60 to 72 inclusive should be described as "strengths" and are visually depicted with five shaded bars on a five-bar graphic in the Student Portal. Approximately 16% of the youths in the standardization sample received scale scores in the strength range. Youths may choose to implement SEL Challenges to support, sustain, and broaden social and emotional competencies that are rated in the strength range. Similarly, youths will benefit from educator-led universal SEL strategies to reinforce and build on their skills.

T-*Score Range Descriptions for Adult Users*

The term "need for instruction" (or "need" for short) is used to describe DESSA-MSE SSR scale *T*-scores of 28 to 40 inclusive in adult-facing reports in the Aperture System. In these reports, scores in the need for instruction range are color-coded as red. *T*-scores of 40 or less mean that the youths rated themselves as showing few behaviors associated with the particular social and emotional competency. Youths with scores in this range can be considered at risk for exhibiting or developing social and emotional problems (Shapiro et al., 2017). Similarly, they can be considered at promise for developing social and emotional competency in this area (LeBuffe et al., 2021). On each scale, approximately 16% of the youths in the standardization sample received scores in the need for instruction range. If a youth receives a scale score in the need for instruction range, an individualized plan should be developed and implemented to assist the youth in developing these important skills. Within a multi-tiered system of support (MTSS) framework, these youths might receive Tier 2 or Tier 3 social and emotional supports in addition to Tier 1 programming. The educator SEL Strategies provided in the Aperture System are designed for this purpose. The SEL Challenges in the Student Portal are also designed for students to engage in self-directed SEL strategies.

Scale *T*-scores of 41 to 59 inclusive should be described as "typical" and are color-coded as blue in adult-facing reports in the Aperture System. Approximately 68% of youths in the standardization sample received scores in this range. Youths who receive scores in the typical range will likely benefit from universal strategies designed to promote the social and emotional competence of all youths, such as those found in the SEL Strategies section of the Aperture System and the SEL Challenges section of the Student Portal.

DESSA-MSE SSR scale *T*-scores of 60 to 72 inclusive should be described as "strengths" and are color-coded as green in the Aperture System. Approximately 16% of the youths in the standardization sample received scale scores in the strength range. Educators should consider

and implement strategies to support, sustain, and broaden social and emotional competencies that are rated in the strength range. Similarly, youths may also choose to implement SEL Challenges to reinforce and build on social and emotional competencies that they rated in the strength range.

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

The Meaning and Interpretation of the DESSA-MSE SSR Scales

The DESSA-MSE SSR Scales

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

- ***Optimistic Thinking:*** Optimistic Thinking is the belief and demonstration of confidence, hopefulness, and positive thinking regarding oneself, others, and one's life situations in the past, present, and future.
- ***Self-Awareness:*** Self-Awareness is the ability to understand emotions, thoughts, and values and how they influence one's behavior; recognize strengths and limitations; and develop healthy identities and a sense of purpose.
- ***Self-Management:*** Self-Management is the ability to manage emotions and behaviors across different situations and environments and to demonstrate agency as one works to set and achieve personal and collective goals.
- ***Social Awareness:*** Social Awareness is the understanding of social norms for behavior; the ability to empathize with, respect, and take the perspectives of others; and the feeling of connection and belonging with family, peers, schools, and community groups.
- ***Relationship Skills:*** Relationship Skills are the abilities to establish and maintain healthy and positive relationships, including effective communication, collaborative problem-solving, negotiating conflict, and demonstrating helpful and supportive behaviors.
- ***Responsible Decision Making:*** Responsible Decision Making is the ability to make careful, reliable, and constructive choices about personal and social behavior that are appropriate across diverse situations; to consider the personal, social, and collective impact of one's actions; and to demonstrate curiosity and open-mindedness to learning.

The Social-Emotional Composite

This scale gives an overall indication of the youth's social and emotional competence. It is the most reliable and valid overall indicator within the DESSA-MSE SSR. Because it characterizes the youth's social and emotional competence with a single number, the Social-Emotional Composite (SEC) is particularly useful in outcome measurement and program evaluation.

Basic Interpretation of the DESSA-MSE SSR

As noted above, the interpretation of the DESSA-MSE SSR results differs slightly depending on whether the student or an adult (educator, administrator, etc.) is reviewing results. This section will first describe the process from the perspective of a student reviewing their own DESSA-MSE SSR results in the Student Portal. We will then describe the process from the perspective of an adult reviewing a youth's results in the Aperture System.

Basic Interpretation by a Student

After completing the DESSA-MSE SSR, students receive immediate access to their results. Two key differences between student-facing and adult-facing results should be noted. First, students are presented with a visual depiction of their scores across the six scales. Unlike adult-facing reports in the Aperture System, students are not shown information about their overall SEC score. By removing this overall indication of "strength, typical, or growth opportunity," we aimed to avoid the possibility that youths would label themselves as definitively "good" or "bad" at social and emotional competence. Instead, we hoped to create a mindset that encouraged youths to work towards building their specific "growth opportunity" skills or continue to strengthen their existing skillsets. For similar reasons, the Student Portal does not provide *T*-scores or percentile ranks to students.

Figure 5.2 displays a sample of results as presented to a youth in the Student Portal. As can be seen, the six DESSA-MSE SSR scale scores are depicted with a five-bar graphic. By clicking the (i) next to the graphic (as shown in Figure 5.2), youths are provided the following explanation to aid understanding of their results:

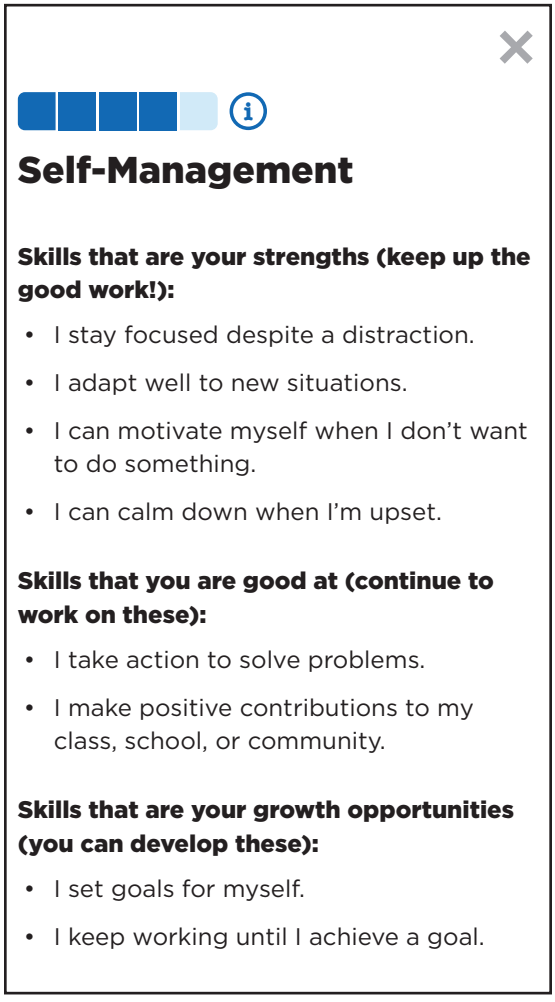
- Five bars means that you have a "Strength" in this area.
- Four bars means that this area is an "Emerging Strength" for you.
- Three bars indicate that you are demonstrating a "Typical" amount of this competency. That is, this is what most middle school students report.
- Two bars means that this is an "Emerging Typical" area for you.
- One bar indicates that this is a "Growth Opportunity" for you. You are not yet demonstrating a lot of these behaviors.

Youths can further explore their specific behavioral strengths and needs by clicking on "Learn More" for each of the six scales. This opens a pop-up window that displays detailed item-level information. Using a method referred to as Individual Item Analysis, which is

explained in detail in the next section, youths are provided with a simplified explanation of the specific behaviors (items) on the DESSA-MSE SSR that are their strengths, typical behaviors, or growth opportunities. Figure 5.3 provides an example of this functionality.

The DESSA-MSE SSR results as presented to students are designed to facilitate students' understanding about their current social and emotional skills and serve as a foundation for choosing and implementing SEL challenges to build their skills. Because the Student Portal is student-directed, students have the option to view and accept an SEL Challenge in any of the six social and emotional competency domains. They may choose to select a Challenge in a domain that allows them to leverage their strengths to build their skills. Alternatively, they may also choose to select a Challenge in an area that presents a growth opportunity. This student-directed platform is designed to provide students with a voice and choice in their own learning and development.

FIGURE 5.3
Item Level Identification as Shown on the Individual Student Rating Report in the Student Portal



Basic Interpretation by an Adult

Interpretation of the DESSA-MSE SSR results by an adult proceeds in a stepwise fashion from the most general indicator of the youth's social and emotional status to increasingly more specific information.

Step 1: The Social-Emotional Composite

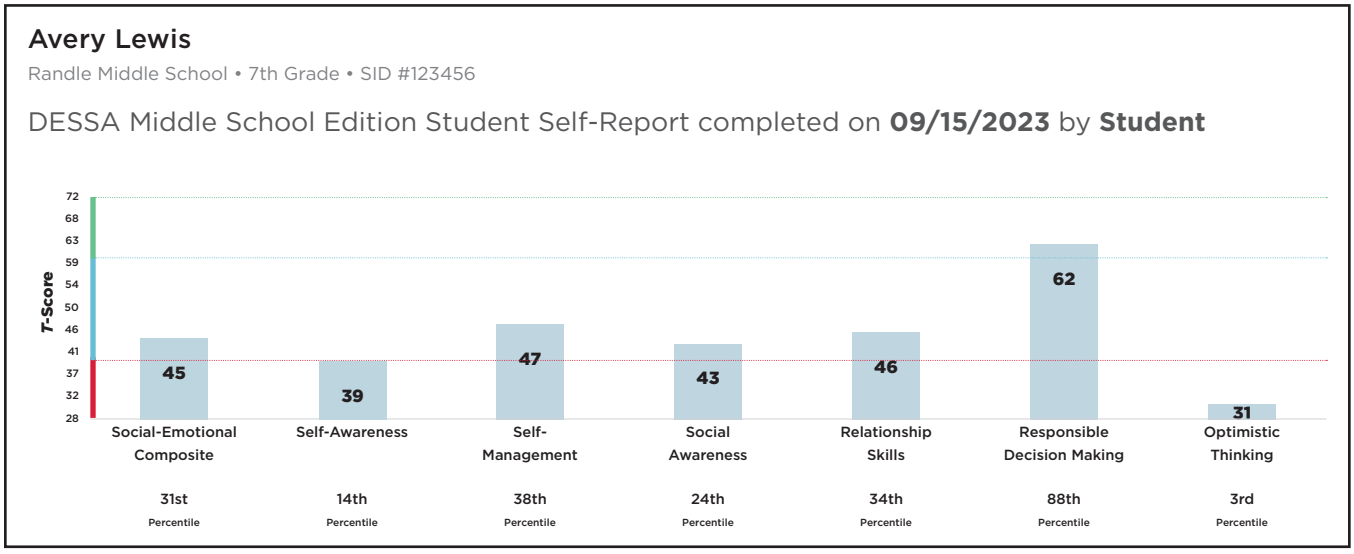
First, examine the SEC *T*-score and note the corresponding range description (i.e., strength, typical, and need for instruction). This is the broadest and the most reliable index of the youth's self-reported social and emotional well-being. The SEC *T*-score is a highly reliable indicator of the youth's overall social and emotional functioning and serves as the starting point in interpreting the DESSA-MSE SSR. The score a youth receives on the SEC also provides a frame of reference for the remaining interpretive steps.

Step 2: Examining Scale Scores

Next, examine the six separate DESSA-MSE SSR scales, and note the *T*-scores and corresponding strength, typical, and need for instruction ranges. Examination of the separate DESSA-MSE SSR scale *T*-scores provides useful information about the youth's specific self-reported social and emotional competencies. For instance, the scores can suggest whether a youth's strengths or needs are primarily intrapersonal (as evidenced by high or low scores on the Optimistic Thinking, 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-MSE SSR Individual Student Rating Report is particularly useful at this step, as the visual depiction of the scale scores can make patterns easier to discern. Figure 5.4 provides a sample Individual Student Rating Report as presented in the Aperture System.

FIGURE 5.4

A Sample DESSA-MSE SSR Individual Student Rating Report as Presented to Adults in the Aperture System



Step 3: Identifying Specific Strength and Need for Instruction Items

Each of the six DESSA-MSE SSR scales represents a group of items that relate to a common social and emotional competency (e.g., Self-Management). However, these competencies are broad categories that encompass varying and more specific social and emotional skill sets. For example, a youth with a need for instruction on the Self-Management scale may have difficulties managing their emotions and behaviors across different situations (e.g., item #5, I stay focused despite a distraction; item #34, I can calm down when I'm upset) or in setting and achieving a goal (e.g., item #23, I set goals for myself; item #30, I keep working until I achieve a goal).

Step 3 enables the DESSA-MSE SSR user to move beyond scale scores to gain an understanding of the specific behaviors that are strengths (i.e., in the youth's behavioral repertoire) or needs for instruction (i.e., not yet acquired) for the youth.

Identification of specific behavioral strengths and needs for instruction involves a method called Individual Item Analysis. Any item can represent a need for instruction if the rating the youth received is substantially lower than the rating given to youths who have typical scores. That is, an individual item is considered to indicate a need for instruction if the score the youth received is at least one standard deviation below the mean for that item in the national standardization sample. Less than 16% of the youths in the standardization sample received scores in the need for instruction range on each item on the DESSA-MSE SSR. Such a score on an individual item indicates that the youth has reported they do not yet demonstrate this behavior to the extent considered typical as reported by other youths. Individual items rated in the need for instruction range should be considered as targets for social and emotional instruction.

Similarly, any item can represent a strength if the rating is substantially higher (at least one standard deviation above the national mean) than that given to youths with typical scores. For each item, no more than 16% of youths in the national standardization sample received ratings in the strength range. DESSA-MSE SSR users should consider how these focal strengths can be leveraged or built upon in a support plan. Youths should be given many opportunities to demonstrate and reinforce their strengths. The item score values associated with the need and strength ranges are found in Table 5.2.

The primary advantage of this method is that it allows for the identification of specific behaviors that can be leveraged (strengths) or acquired (needs for instruction) by specific interventions. Individual item identification facilitates the development of support plans that are individualized and behaviorally grounded. For instance, if the youth's rating on item #2, "I prepare for school, activities, or upcoming events," was in the need for instruction range, then developing or improving planning skills can become a goal, and each component skill (e.g., creating a calendar, task analyzing larger activities) can become an objective on the support plan. Conversely, if item #17, "I encourage my friends or classmates," is a strength for the youth, 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-MSE SSR assessment results to SEL strategies and tiered interventions.

TABLE 5.2
Individual Item Analysis Values for the DESSA-MSE SSR

Item Number	Item	Need for Instruction	Typical	Strength
1	I can recognize my strengths.	0, 1	2, 3	4
2	I prepare for school, activities, or upcoming events.	0, 1	2, 3	4
3	I believe I can overcome setbacks.	0, 1	2, 3	4
4	I get along well with different types of people.	0, 1	2, 3	4
5	I stay focused despite a distraction.	0, 1	2, 3	4
6	I can recognize my emotions.	0, 1	2, 3	4
7	I can imagine a positive future for myself.	0, 1	2, 3	4
8	I feel comfortable asking for help when I don't understand something.	0, 1	2, 3	4
9	I respect a person's right to have a different opinion.	0, 1, 2	3	4
10	I ask questions when learning new things.	0, 1	2, 3	4
11	I can describe the things that matter most to me.	0, 1, 2	3	4
12	I show appreciation for others.	0, 1, 2	3	4
13	I can update my thinking as I learn more about something.	0, 1	2, 3	4
14	I take action to solve problems.	0, 1	2, 3	4
15	I seek out things that challenge me.	0, 1	2, 3	4
16	I respond to others' feelings in kind and safe ways.	0, 1	2, 3	4
17	I encourage my friends or classmates.	0, 1, 2	3	4
18	I ask for advice when needed.	0, 1	2, 3	4
19	I help make my class a place where everyone can learn.	0, 1	2, 3	4
20	I adapt well to new situations.	0, 1	2, 3	4
21	I listen to feedback so I can improve.	0, 1	2, 3	4
22	I can list the personal traits that are most important to me.	0, 1	2, 3	4
23	I set goals for myself.	0, 1	2, 3	4
24	I listen to others.	0, 1, 2	3	4
25	I can make a positive difference in the world.	0, 1	2, 3	4
26	I feel like I belong in my school.	0, 1	2, 3	4
27	I can motivate myself when I don't want to do something.	0, 1	2, 3	4
28	I know how my emotions influence my behavior.	0, 1	2, 3	4
29	I compliment or congratulate others.	0, 1, 2	3	4

(continued)

Item Number	Item	Need for Instruction	Typical	Strength
30	I keep working until I achieve a goal.	0, 1	2, 3	4
31	I do the right thing in a difficult situation.	0, 1	2, 3	4
32	I do nice things for people.	0, 1, 2	3	4
33	I make others feel welcome or included.	0, 1, 2	3	4
34	I can calm down when I'm upset.	0, 1	2, 3	4
35	I can compromise for the good of the group.	0, 1	2, 3	4
36	I accept responsibility for my actions.	0, 1, 2	3	4
37	I believe my contributions to a group or team matter.	0, 1	2, 3	4
38	I am able to resolve conflicts positively.	0, 1	2, 3	4
39	I can tell when my emotions make it hard to pay attention.	0, 1	2, 3	4
40	I believe I can achieve my goals.	0, 1	2, 3	4
41	I can adjust my behavior to match different settings.	0, 1	2, 3	4
42	I cooperate with others to solve a problem.	0, 1	2, 3	4
43	I focus on the positive side of things.	0, 1	2, 3	4
44	I agree to and follow expectations for my behavior.	0, 1, 2	3	4
45	I am good at making and keeping friends.	0, 1	2, 3	4
46	I expect that I will be successful.	0, 1	2, 3	4
47	I feel comfortable being myself in different situations.	0, 1	2, 3	4
48	I make positive contributions to my class, school, or community.	0, 1	2, 3	4
49	I gather information before making an important decision.	0, 1	2, 3	4
50	I believe working with others leads to greater success.	0, 1	2, 3	4

Another advantage of the Individual Item Analysis method is that it allows the DESSA-MSE SSR user to identify specific needs for instruction even if the youth's scale scores are not in the need for instruction range. That is, even though a scale score may be in the typical or even strength range, examination of the individual items may identify specific behaviors that were rated in the need for instruction range. These specific skills can then be taught resulting in a more complete repertoire of social and emotional skills. This approach is particularly important for schools and programs that are committed to thriving; that is maximizing the social and emotional competence of each student.

In the Aperture System, the results of the individual item analysis are available on the Individual Student Rating Report. The DESSA-MSE SSR user has the option of viewing the item-level results for an individual competency or all six competencies. Within each competency, the item-level results are sorted by their descriptive range so that all the strengths, typical ratings, and needs for instruction are presented together. Figure 5.5 provides an example of this functionality.

FIGURE 5.5

Item Level Identification as Shown on the Individual Student Rating Report in the Aperture System

Individual Item Analysis **Self-Management**

Competency	Item	Response	Category
Self-Management	I stay focused despite a distraction.	Almost Always	Strength
Self-Management	I adapt well to new situations.	Almost Always	Strength
Self-Management	I can motivate myself when I don't want to do something.	Almost Always	Strength
Self-Management	I can calm down when I'm upset.	Almost Always	Strength
Self-Management	I take action to solve problems.	Sometimes	Typical
Self-Management	I make positive contributions to my class, school, or community.	Often	Typical
Self-Management	I set goals for myself.	Rarely	Need
Self-Management	I keep working until I achieve a goal.	Rarely	Need

Advanced Interpretation of the DESSA-MSE SSR by Adults

Progress Monitoring with the DESSA-MSE SSR

Progress monitoring is a key component of the response to intervention (RTI) framework. The goal of progress monitoring is to determine if the interventions (in the case of the DESSA-MSE SSR, social and emotional skill instruction) are being effective in enhancing the youth's social and emotional competence by comparing scores on successive assessments. Rather than waiting until the end of the year to determine if growth has occurred, progress monitoring provides opportunities throughout the school year to evaluate growth and make any indicated changes to improve end-of-year outcomes. The DESSA-MSE SSR can be used if the goal is to improve either overall social and emotional competence or improvement in one or more specific social and emotional competencies.

To evaluate progress the administrations of the DESSA-MSE SSR must be separated by at least four weeks so that the second administration is based on a different sample of behaviors. To allow for sufficient time for social and emotional skill instruction, six to eight weeks is recommended between administrations. Many school districts and OST programs have adopted the practice of monitoring progress one or two times during a school year. A typical schedule might be the initial DESSA-MSE SSR administration in October. First progress monitoring prior to the holiday break in December. Second progress monitoring in early March, followed by an end-of-year summative assessment in late May or June.

Cohen's *d*-ratio, which was introduced in Chapter 2, is used to evaluate the progress made between successive administrations. Using the *T*-scores on the scale(s) of interest, the pretest or earlier administration scale score is subtracted from the posttest or more recent administration. If the youth's score has increased (i.e., shown progress or growth) the resulting difference will be positive. Cohen (1988) suggested that *d*-ratios of 0.2, 0.5, and 0.8 be considered small, medium, and large changes respectively. Because *T*-scores have a standard deviation of 10, these ranges are equivalent to 2–4, 5–7, and 8 or more *T*-score units (changes of 0 or 1 *T*-score unit are considered to be "negligible"). As shown in Table 5.3, DESSA-MSE SSR users can modify their social and emotional instruction (e.g., supplementing universal instruction with small group targeted supports) based on the degree of progress shown by the student. The thoughtful use of this progress monitoring technique can result in better end-of-year outcomes. Progress monitoring data and interpretation guidance is provided to adult users of the DESSA-MSE SSR in the Aperture System.

Evaluating Programmatic Outcomes and Impact with the DESSA-MSE SSR

Whereas the progress monitoring technique previously described is a formative evaluation approach with a goal of improving individual youth outcomes, the information in this section describes a summative evaluation approach designed to assess program effectiveness, evaluate impact, and inform continuous quality improvement (CQI) efforts for groups of youths. Like progress monitoring, summative evaluation involves comparing changes in scores over time but typically is used to compare the first or beginning-of-year rating with the last or end-of-year rating, with an intervention implemented in between.

The Impact Report in the Aperture System is designed to facilitate outcome evaluation with the DESSA-MSE SSR. It allows users to compare the progress of students from one rating to the next in the three *T*-score range descriptions of strength, typical, and need for instruction categories (see Figure 5.6). The Student Movement component of the Impact Report provides

TABLE 5.3
Interpretation and Guidance for Progress Monitoring

Magnitude of the Difference	Standard Deviation Unit	*T*-Score Units	Guidance
Negligible/None	Less than 0.20	Less than 2	Supports are ineffective; try new supports and strategies. Consult with student assistance personnel.
Small	0.20 to 0.49	2 to 4, inclusive	Supports are minimally effective. Increase frequency, duration, or intensity, or try new strategies. If using only group interventions/supports, consider individualized supports.
Medium	0.50 to 0.70	5 to 7 inclusive	Supports are moderately effective. Consider enhancing if resources, including time and personnel, permit.
Large	Greater than or equal to 0.80	8 or higher	Supports are working well. Continue current plans.

specific information on how many students from a given descriptive category (e.g., need for instruction) moved to a different category (e.g., typical, strength) between ratings (see Figure 5.7). Users may also run the Impact Report by student population (e.g., race/ethnicity, gender, special populations) and review results of disaggregated data across sub-groups of students. Data from the Impact Report can be exported from the Aperture System to enable users to conduct statistical analysis and compare to other district- or school-collected data such as academic achievement or behavioral data.

Outcome evaluation as applied to helping youths develop social and emotional competencies is a flexible and powerful tool. This approach enables the DESSA-MSE SSR user to look at the effectiveness of interventions on a scale-by-scale basis and across groups of youths. By using this method, we can determine which youths benefited from which interventions in which areas. This youth-specific information is especially useful for quality improvement efforts. By aggregating findings across youths, classrooms, schools, etc., schools and OST programs can determine the relative impact of their SEL efforts on differing social and emotional competencies. For example, aggregated data might show more improvement and better outcomes in the area of self-management as compared to relationship skills. Similarly, this approach can explore different SEL outcomes for different groups of youths. For example, the data might show that youths in the sixth grade are showing more growth than those in the eighth grade. The approach provides valuable data on youth outcomes that can inform both program evaluation/continuous quality improvement efforts as well as efforts to promote educational equity.

FIGURE 5.6
Sample Impact Report for DESSA-MSE SSR Data

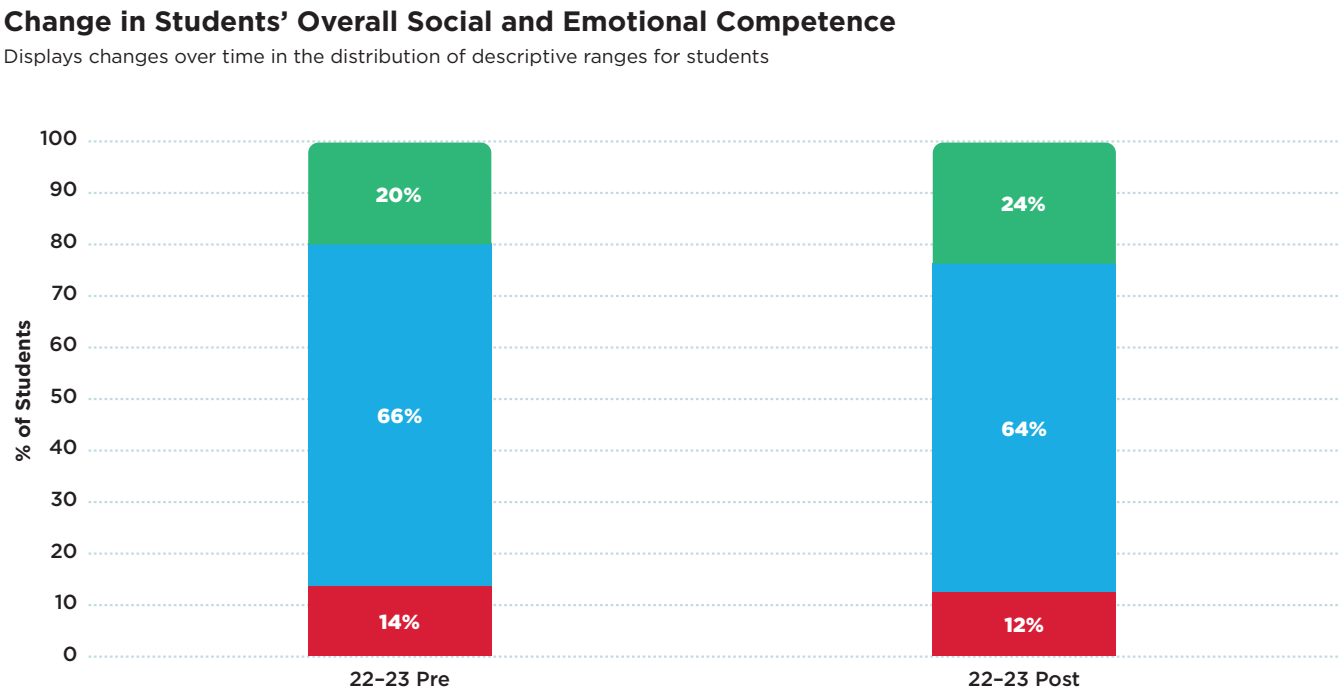


FIGURE 5.7

Sample Student Movement Report for DESSA-MSE SSR Data

Determining the impact of SEL strategies and curricula at the individual youth and group levels is essential to continuously improving professional practice, advancing the SEL field, and most importantly, improving outcomes for youths. Examining outcomes at the individual youth level and using this information to adjust or modify SEL instruction to ensure that each youth acquires a full repertoire of social and emotional skills is essential to efforts to promote educational equity; it lies at the heart of data-driven SEL.

Interpretation Examples

The following example illustrates the interpretation of the DESSA-MSE SSR and how results facilitate intervention planning. This example concerns a student in the eighth grade, Jayden. Jayden attends one of the middle schools in his district and does well academically. He excels at math and science. However, Jayden's science teacher, Ms. Hernandez, is concerned that he lacks the interpersonal skills to succeed in classes that require group labs. To better understand Jayden's self-reported social and emotional skills, Ms. Hernandez accesses Jayden's DESSA-MSE SSR results, which Jayden completed along with his classmates as part of the school's universal use of the DESSA-MSE SSR. Ms. Hernandez also completed a DESSA educator

rating, the results and interpretation of which can be reviewed in Chapter 5 of the DESSA K–8 manual. We will first present the interpretation of DESSA-MSE SSR results from Jayden's perspective. We will then present it from the perspective of Ms. Hernandez.

Interpretation Example from the Student's Perspective

As soon as Jayden completes his DESSA-MSE SSR rating, he can review his results across the six social and emotional competency domains. The first thing Jayden notices is that he has a strength in Responsible Decision Making. This does not surprise him, as he knows he works hard on his schoolwork and often asks for more information when he finds a topic interesting, particularly in his science classes. Jayden also sees that his scores in two areas—Self-Awareness and Self-Management—are either typical scores or emerging strengths for him. He clicks on the "Learn More" button and is interested to see specific skills he has in these areas (including staying focused despite distractions), as well as some behaviors he could still work on improving (such as making positive contributions to his class, school, or community). Lastly, Jayden sees that he has a growth opportunity in three areas—Optimistic Thinking, Social Awareness, and Relationship Skills. Again, he clicks the button to "Learn More" and sees some specific ways he can improve his skills, such as respecting a person's right to have a different opinion, cooperating with others to solve a problem, resolving conflicts positively, and believing that working with others leads to greater success.

After exploring his results, Jayden thinks about what skills he might want to improve. He decides on two areas. First, he wants to work in an area that is a growth opportunity. He chooses Relationship Skills because he knows he must collaborate often with his classmates on projects. Second, he selects Self-Management because he is interested in getting involved in an after-school club that will allow him to start making positive contributions to his school. He accepts the first SEL Challenges for these two areas which will provide him with activities to begin improving his skills. He also decides to set a goal within the Student Portal to join an after-school club before the mid-year holiday break. He plans to share his goal and progress on the two SEL Challenges with Ms. Hernandez when they meet later that week to talk about his DESSA-MSE SSR results.

Interpretation Example from the Educator's Perspective

Step 1: Examination of the Social-Emotional Composite

Ms. Hernandez began by examining the SEC score on the Individual Student Rating Report accessible in the Aperture System. She noted that Jayden received a *T*-score of 43, and corresponding percentile rank of 24, placing him in the lower end of the typical range. These scores confirmed Ms. Hernandez's concerns that Jayden's social and emotional skills were not commensurate with his academic performance.

Step 2: Examining Scale Scores

Although the SEC score was in the typical range, an examination of the six scale scores did show variability across the domains. Ms. Hernandez began by noting Jayden's strength in Responsible Decision Making. She also noted that, consistent with her concerns, Jayden was exhibiting a need for instruction in key interpersonal areas including Social Awareness and Relationship Skills in which he received his lowest scores—a *T*-score of 29, corresponding to a percentile rank of just 2. She was surprised, however, to note that Jayden was also exhibiting a need for instruction in Optimistic Thinking. The remaining two scales (Self-Awareness and Self-Management) were rated in the typical range.

Step 3: Individual Item Analysis

Although the review of scale scores in step 2 was very helpful in confirming Ms. Hernandez's concerns, identifying additional needs for instruction, and making her more aware of Jayden's strengths, she was still somewhat at a loss of how to help Jayden acquire the critical skills that were not yet in his repertoire. To gain a better understanding of what specific skills Jayden would benefit from learning, Ms. Hernandez reviewed the individual item analyses presented on the Individual Student Rating Report. Given Jayden's low score, Ms. Hernandez decided to focus her efforts on Relationship Skills. A review of the items on this scale that were rated in the need range suggested three behaviors to concentrate her efforts: items #4, "I get along well with different types of people," #24, "I listen to others," and #42, "I cooperate with others to solve a problem."

Wanting to both honor and leverage Jayden's strengths, Ms. Hernandez next looked at the items on the Responsible Decision Making scale, noting that Jayden "prepare(s) for school, activities, or upcoming events" (item #2), "asks questions when learning new things" (item #10), and "ask(s) for advice when needed" (item #18). She then decided on a strategy that would address the needs while leveraging the strengths in the context of her science class. She asked Jayden and two of his classmates to review the initial sections of "Collaboration & Team Science: A Field Guide" published by the National Institutes of Health (Bennett et al., 2010) and to discuss and then create class guidelines based on the Field Guide's reflection exercise, "Ask Yourself: Am I Ready to Participate on a Research Team?" Through this activity, Jayden and his peers would learn more about the importance of listening to and cooperating with others, and openly discussing issues and concerns. They would then work together to create and share their learnings and guidelines with their classmates. Through this strategy, driven by Jayden's DESSA-MSE SSR findings, Ms. Hernandez addressed Jayden's need for instruction in Relationship Skills while reinforcing his strengths in Responsible Decision Making. Most important, she is ensuring that Jayden is acquiring the specific social and emotional skills that he will need to excel in the science lab, his school, and in his high school classes beginning next year. She intends to talk through Jayden's DESSA-MSE SSR results with him later that week, the strategy she has selected for him, as well as talk through the SEL Challenges and goals Jayden has set for himself. She will plan to review Jayden's mid-year DESSA-MSE SSR results after he completes the strategies to see if they were effective in promoting his Relationship Skills.

Use of the DESSA-MSE SSR within a Multi-Tiered System of Support (MTSS)

The use of the DESSA-MSE SSR is not limited to the MTSS framework; however, the widespread adoption of MTSS provides a familiar and useful frame of reference for discussing the most common applications of the DESSA-MSE SSR.[2] The DESSA assessment suite and their applications at the three tiers of the MTSS framework are presented below.

Use of the DESSA-MSE SSR at Tier 1

Tier 1 or *universal* services and supports are provided to all students in a school or OST program. They provide the common foundation for effective SEL. Programs utilize the youth-completed DESSA-MSE SSR as a universal assessment and/or the educator-completed DESSA-mini (Naglieri et al., 2011) as a universal screener of social and emotional competence at Tier 1. The DESSA-mini consists of four equivalent eight-item forms and takes the educator about one minute to complete per youth. The mini has the advantage of brevity, but it yields only one score: the Social-Emotional Total (SET) that provides a measure of overall social and emotional competence. The results are used to identify those youths whose overall social and emotional competence is in the need for instruction range and who would benefit from a full educator-completed assessment with the DESSA. However, some programs have opted to use the full DESSA educator form at the universal level because of the rich information it provides on specific social and emotional competency domains (i.e., Self-Management, Relationship Skills). For these programs, this deeper understanding of each youth's social and emotional strengths and needs across the domains justifies the added time and effort of teachers.

For programs using either the DESSA-MSE SSR or the full DESSA, the classroom/group profile, available through the Aperture System, is a highly informative and useful report. This report enables the educator to identify the most common strengths and needs for instruction presented by the youths in the group. The most commonly occurring needs for instruction can then be addressed through the universal "growth strategies," which are aligned to the specific social and emotional competency and are available through the Aperture System. The home-based (i.e., family involvement) growth strategies can also be used at the universal level.

In addition to adult-led planning and instruction, programs using the DESSA-MSE SSR universally enable all youths to identify personal goals and corresponding SEL instructional strategies that they can implement on their own. This provides youths with a voice and choice in their own social and emotional growth and engages them as active participants in the SEL process.

Many schools and programs use the DESSA-MSE SSR to support their use of universal, evidence-based SEL curricula, adjusting their delivery of the curriculum based on DESSA-MSE SSR results. For example, universal and home-based growth strategies can supplement the lesson plans, or the most common needs for instruction can suggest areas that could be emphasized through extension activities or repetition throughout the school year.

[2] Readers who are unfamiliar with the MTSS framework may want to visit the website of the Center on PBIS (Positive Behavioral Interventions and Supports) at **https://www.pbis.org**

Educators may also want to do additional skills checks or knowledge assessments with youths demonstrating a need for instruction in a given area to ensure that they are acquiring the skills. Both the Collaborative for Academic, Social and Emotional Learning (**https://pg.casel.org/review-programs/**) and the Blueprints Program for Healthy Youth Development (**https://www.blueprintsprograms.org/program-search/**) provide searchable listings of evidence-based SEL programs.

It is important to recognize that SEL occurs in contexts such as a classroom, school, or OST program. This context can influence not only the demonstration of a youth's social and emotional skills but also the effectiveness of SEL instruction. Consequently, many programs incorporate school climate and culture surveys as part of their SEL initiatives. Information about school climate and culture can be used in conjunction with the *Foundational Practices*, universal strategies found in the Aperture System that are intended to create a classroom culture and climate that will support SEL. Whereas the growth strategies are aligned to a specific social and emotional competency, the foundational practices are nonspecific and can be implemented immediately at the beginning of the school year. They can also be reinforced and sustained throughout the year.

Use of the DESSA-MSE SSR at Tier 2

As mentioned above, most programs use the youth-completed DESSA-MSE SSR and/or the educator-completed DESSA-mini as universal measures of social and emotional competence. For programs using the DESSA-mini, those youths whose SET score indicates a need for instruction are then assessed with the full DESSA to identify the specific social and emotional competencies that are not yet being demonstrated to a sufficient degree. These youths, as well as youths receiving SEC scores in the need for instruction range on the DESSA-MSE SSR, then may receive Tier 2 or *targeted* supports that supplement the Tier 1 universal social and emotional instruction. Some programs will use the classroom/group profile to create small groups of youths with similar needs and then utilize the small-group growth strategies provided in the Aperture System (Adams, 2013). Periodic re-administration of the DESSA-MSE SSR, the DESSA, or the DESSA-mini is then used to monitor the progress of these youths in enhancing their social and emotional competence.

Use of the DESSA-MSE SSR at Tier 3

Tier 3 or *indicated* supports and services are provided to those youths who have not sufficiently benefited from Tier 1 and Tier 2 services. Tier 3 supports and services are typically intensive and individualized. The Individual Item Analysis technique described above is particularly useful at this stage. The DESSA-MSE SSR and/or the DESSA Individual Student Report identifies those specific items that were rated as strengths for youths as well as those rated as indicating a need for instruction. This information can be used to create highly individualized and data-based plans to reinforce and leverage the student's strengths while addressing their specific needs for instruction. The Aperture System provides individual student growth strategies that are aligned to the DESSA-MSE SSR scales.

It is important to note that at all three tiers we are recommending that the DESSA-MSE SSR (and DESSA) be used as a formative assessment. That is, assessment data is collected during the school or program year with the goal of better understanding youths' strengths and needs so that instruction can be differentiated and improved leading to better outcomes. Our goal is not to categorize or label youths based on DESSA-MSE SSR scores. Rather, our purpose is to understand better the unique constellation of social and emotional strengths and needs for instruction presented by individual youths, classrooms, schools, districts, and programs so that social and emotional instruction can be differentiated, progress monitored, and outcomes enhanced. Although the DESSA-MSE SSR can also be used as a summative assessment to evaluate programmatic outcomes and inform continuous quality improvement, our primary objective is ensuring that each student has a full complement of social and emotional skills to achieve success in school and in life after graduation.

The authors would like to thank our many colleagues and DESSA clients who have shared their challenges and successes with us since the publication of the DESSA for grades K–8 in 2009. Their feedback has deepened our understanding and led to many improvements in the Aperture System. We hope that you will continue to share thoughts, suggestions, and experiences with us. We can be reached through Aperture Education's website (**www.ApertureEd.com**).

Appendices

Appendix A has been redacted.

Please contact Jennifer Robitaille at JRobitaille@ApertureEd.com if you are in need of assistance.

APPENDIX B

List of Data Collection Sites by State

With deep appreciation, we would like to acknowledge the students and staff from the following schools, out-of-school time programs, and community organizations who participated in the development of the DESSA-MSE SSR:

CALIFORNIA

Alta Sierra Intermediate School, Clovis
Bella Vista Middle School, Murrieta
Kennedy Middle School, Cupertino
North Monterey County Middle School, Castroville
Stratford Online Academy (online)

COLORADO

International School of Denver, Denver
Manhattan Middle School, Boulder
Trailside Academy, Denver

CONNECTICUT

Martin Luther King Jr. Middle School, Hartford
Wooster Middle School, Stratford

FLORIDA

Academy Prep Center of Tampa, Tampa
Oak Park, Titusville

GEORGIA

DeSana Middle School, Alpharetta
Dodgen Middle School, Marietta
Long Cane Middle School, Lagrange
McClure Middle School, Kennesaw
North Gwinnett Middle School, Suwanee
Otwell Middle School, Cumming

IDAHO

East Minico Middle School, Rupert
Future Public School, Garden City
Grangeville Middle School, Grangeville
Mosaics Public School, Caldwell
Notus Jr/Sr High School, Notus

ILLINOIS

Bryan Middle School, Elmhurst
Franklin Fine Arts Center, Chicago
Glenview Middle School, East Moline
Gurrie Middle School, LaGrange
Hufford Junior High School, Joliet
Infant Jesus of Prague School, Flossmoor
Morton Junior High School, Morton
Nichols Middle School, Evanston
St. Michael Parish School, Wheaton
West Oak Middle School, Mundelein

INDIANA

Silver Creek Middle School, Sellersburg

MARYLAND

College Park Academy, Riverdale
Franklin Middle School, Owings Mills

MASSACHUSETTS

Watertown Middle School, Watertown

MICHIGAN

Jefferson Middle School, Midland
Scott Highlands Middle School, Apple Valley

MINNESOTA

Highview Middle School, New Brighton
Karner Blue Education Center, Circle Pines
Pankalo Education Center, Lake Elmo
Winona Middle School, Winona

MISSOURI

Our Lady of Lourdes Interparish School, Columbia

MONTANA

LaMotte School, Bozeman

NEBRASKA

Omaha Nation Public School, Macy

NEW YORK

Cooperstown Central School, Cooperstown
Gelinas Junior High School, Setauket
West Seneca East Middle, Buffalo
Westminster Community Charter School, Buffalo

NORTH CAROLINA

Beulaville Elementary School, Beulaville
Broad Creek Middle School, Newport
Bunn Middle School, Bunn
Hampstead Learning Academy, Hampstead
Oaklawn Language Academy, Charlotte
The Expedition School, Hillsborough
Voyager Academy, Durham

OHIO

Sandusky City Schools, Sandusky

OREGON

Gervais Middle School, Gervais

PENNSYLVANIA

Delta Program Middle School, State College
Pan American Academy Charter School, Philadelphia
William Penn Middle School, Yardley

RHODE ISLAND

Exeter West Greenwich Junior High School, West Greenwich
The Grace School, Providence

SOUTH CAROLINA

Dutchman Creek Middle School, Rock Hill
Oakridge Middle School, Clover
Riverwalk Academy, Rock Hill
St. Mary Help of Christians Catholic School, Aiken
Sullivan Middle, Rock Hill

TENNESSEE

Woodstock Middle School, Memphis

TEXAS

Blazier Intermediate School, Austin
Blue Ridge Middle School, Blue Ridge
Boerne Middle School, North Boerne
Brooks Wester Middle School, Mansfield
Davis Intermediate School, Wylie
Del Valle Middle School, El Paso
Fort Settlement Middle School, Sugar Land
Grand Prairie Fine Arts Academy, Grand Prairie
Krimmel Intermediate, Spring
Nichols Middle School, Burleson
One Day Academy, Marble Falls
UME Preparatory Academy – Dallas, Dallas
Voss Middle School, Boerne
Walnut Grove Middle School, Midlothian

UTAH

Kaysville Junior High, Kaysville
Mountain Ridge Junior High, Highland

VERMONT

Colchester Middle School, Colchester
Harwood Union Middle School, Duxbury

VIRGINIA

Robious Middle School, Midlothian
William Byrd Middle School, Roanoke

WISCONSIN

Audubon Technology & Communication Center Middle School, Milwaukee
Curtin Leadership Academy, Milwaukee

COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

DanDan Middle School, Saipan
Francisco M. Sablan Middle School, Saipan

Also with great appreciation, we would like to acknowledge the many parents home schooling their children across the nation!

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About Aperture Education

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.

To learn more, visit **www.ApertureEd.com**.