Final Technical Manual

2004–2005

South Dakota

Statewide Team-Led Alternate Assessment and Reporting System

(STAARS)

July 29, 2005

Table of Contents

ABSTRACT ..... **I**

PART 1: ASSESSMENT DEVELOPMENT **1–1**

OBJECTIVE 1–1
LEGAL CONTEXT AND TECHNICAL CHALLENGES 1–1
CHALLENGE 1: DECIDING WHO SHOULD PARTICIPATE IN ALTERNATE ASSESSMENTS 1–2
CHALLENGE 2: DECIDING WHAT CONTENT ALTERNATE ASSESSMENTS SHOULD MEASURE 1–2
CHALLENGE 3: CREATING RELIABLE AND VALID ALTERNATE ASSESSMENTS 1–3
CHALLENGE 4: DEFINING PROFICIENT PERFORMANCE ON ALTERNATE ASSESSMENTS 1–4

PART 2: DESCRIPTION OF SELECTED APPROACH **2–1**

OVERVIEW OF MAJOR OBJECTIVES AND DEVELOPMENT PLAN FOR AN ALTERNATE ASSESSMENT 2–1
APPROACH SELECTED 2–2
PHASES OF IMPLEMENTATION 2–3
Phase 1 (July 27, 2004–July 31, 2005) *2–3*
Phase 2 (October 2004–July 31, 2006) *2–3*
Phase 3 (July 2006–July 31, 2007) *2–3*
TEST DEVELOPMENT 2–4
VISION AND DESIGN 2–4
TECHNICAL CONSIDERATIONS–VALIDITY, RELIABILITY, AND USABILITY 2–5
VALIDITY 2–6
Content Validity *2–6*
Criterion-related Validity *2–6*
Construct Validity *2–6*
Evidence of Validity *2–7*
Key Aspects of Validity *2–7*
RELIABILITY 2–8
Standard Error of Measurement *2–9*
Factors Influencing Reliability *2–9*
Key Aspects of Reliability *2–10*
USABILITY 2–10

PART 3: VALIDATION PLAN **3–1**

VALIDATION PLAN: ANSWERING BASIC QUESTIONS AND APPLYING THE DESIGN IMPERATIVES 3–1
The Content Question *3–1*
The Consistency Question *3–1*
The Test-Criterion Relationship Question *3–1*
The Construct Question *3–2*
The Consequences Question *3–2*
VALIDITY STUDIES 3–3

PART 4: ABAS II **4–1**

INTRODUCTION 1
ADMINISTRATION AND SCORING 15
INTERPRETATIONS AND INTERVENTIONS 31
DEVELOPMENT AND STANDARDIZATION 59
RELIABILITY AND VALIDITY 75
APPENDICES AND REFERENCES 173

PART 5: TEST ADMINISTRATION 5–1

DETERMINING ELIGIBILITY FOR SPECIAL EDUCATION IN SOUTH DAKOTA: A TECHNICAL ASSISTANCE MANUAL 5–1
DECISION MAKING PROCESS 5–1
TIMELINES 5–1
RATING FORM 5–1
DIRECTIONS FOR ADMINISTRATION 5–1
TEST COORDINATORS MANUAL 5–2

PART 6: SCORING PLAN—FINAL SUMMARY SCORING OF STAARS 6–1

OVERVIEW OF SOUTH DAKOTA'S EXTENDED STANDARDS 6–1
The Purpose of the South Dakota Standards 6–1
Workgroup 6–1
What, Who, How and Entry Points 6–2
Performance Levels 6–4
Guide to the Numbering and Symbol System Used 6–5
Evidence of Student's Work Data Collection and Teacher Scoring 6–5
Scoring Alternate Assessments 6–6
SCORING FOR EVIDENCE OF STUDENT WORK 6–8
STAARS STANDARD SETTING REPORT 6–9
Methodology 6–9
Composition of the Committees 6–9
Standard Setting Method 6–9
Standard Setting Process 6–10
Day1—Introduction to the Process and Training 6–11
Day 2—Standard Setting Process: Comments, Corrections, and Results of Scoring Alternate Assessments 6–13
Conference Schedule 6–16
Rater Form and Cumulative Score Distributions and Graphs 6–17
SAMPLE REPORTS 6–19
Student
Class
School
State

PART 7: DATA FROM SPRING 2005 ADMINISTRATION OF STAARS 7–1

STUDENT DEMOGRAPHICS 7–1
TEACHER DEMOGRAPHICS 7–7

PART 8: ADJUSTMENTS TO THE ASSESSMENT PLAN FOR 2005–2006 8–1

PART 9: REFERENCES 9–1

APPENDIX A: TECHNICAL ASSISTANCE MANUAL A–1

APPENDIX B: EXTENDED STANDARDS B-1

APPENDIX C: RATING SCALE C–1

APPENDIX D: DIRECTIONS FOR ADMINISTRATION D–1

APPENDIX E: TEST COORDINATOR'S MANUAL E–1

List of Tables

Table 1. Number of Items in ABAS Skill Areas ii
Table 2: Modified Rating Scale Skill Areas 2–3
Table 3. Validity Study for the STAARS During Phase 1 3–4
Table 4. Criteria Used to Evaluate Alignment between the STAARS and the South Dakota Extended Content Standards 3–5
Table 5. Reading 6–8
Table 6. Math 6–8
Table 7. Final Results for Reading Based on Percent Correct Score 6–15
Table 8. Final Results for Math Based on Percent Correct Score 6–15
Table 9. Summary of Students by Grade 7–1
Table 10. Summary of Students by Gender 7–2
Table 11. Number and Percent of Students by Ethnicity 7–3
Table 12. Reading Performance Level by Ethnicity 7–4
Table 13. Math Performance Level by Ethnicity 7–4
Table 14. Reading Performance Level by Gender 7–5
Table 15. Math Performance Level by Gender 7–5
Table 16. Reported Accommodations by Grade 7–6
Table 17. Rater Information by Grade 7–7
Table 18. Years in Position and Years of Experience by Grade 7–7
Table 19. Number of Years in Current Position 7–8
Table 20. Number of Years Experience 7–8

Abstract

The South Dakota Department of Education (SD DOE) and Harcourt Assessment (Harcourt) began partnering on the State's Alternate Assessment System (STAARS) at the end of July 2004. The objective was to create a transitional system for use beginning October 2004 and to have a technically sound, multiple-measure system in place by the 2006–2007 school year.

The culminating multiple-measure system will consist of:

1. a rating scale (to be completed by three raters each time)
2. Evidence of Student Work for each content area (Evidence of Student Work)

Implementation Phases

The system will be built in three phases.

Phase 1 (July 27, 2004–July 31, 2005)

Harcourt modified its *Adaptive Behavior Assessment System,* second edition (ABAS II), which was called the Rating Scale. Selected skill areas from the ABAS II and its national norms were utilized as a statistical anchor. Harcourt added Academic Reading/Language Arts and Mathematics sections based on a working draft of the South Dakota's Extended Standards.

The Extended Standards were drafted by teachers in the Spring of 2004 and aligned by Buros Center for Testing in June 2004. The State Board revised and approved the Extended Standards in October 2004. Please see Appendix B for the draft of Extended Standards.

During Phase 1, Harcourt and the SD DOE trained teachers to use the rating form and data collection materials. The teachers collected data November 1–December 15, 2004 and again on January 15–April 15, 2005. Harcourt scored and issued reports on the results and proficiency levels in June 2005.

A second data collection instrument (Evidence of Student Work) allowed South Dakota to collect multiple work samples providing documentation of a student's skill level in Reading/Language Arts and Mathematics and on specific goals and objectives. Teachers rated students' work, and Harcourt also scored it. The material collected was used as a basis to develop performance and scoring events. (see Phase 2).

Phase 2 (October 2004–July 31, 2006)

During this phase, the Rating Scale was revised to reflect the grade-level Extended Standards developed in February and March 2004. The State Board of Education approved the new standards in May 2005. Further, the South Dakota Department of Education and groups of teachers revised the Reading and Mathematics Extended Standards to be grade-based. Data Collection forms will be revised as needed. The entire system will be field tested and studied to assure that a student's performance on the

Standards is measured and accessible to all students. During this phase, South Dakota norms will be created. Revisions to the Extended Standards will be incorporated.

Harcourt and South Dakota will train the teachers and test coordinators to use the system for the 2005–2006 school year as well as train staff on how to use the information. Score reports parallel to the general assessment will be issued in May 2006. A Technical Report for Phase 2 will be completed August 2006.

Phase 3 (July 2006–July 31, 2007)

The revised assessment system will be fully operational in Phase 3. Training on how to use and interpret the results will be conducted jointly by the SD DOE and Harcourt. Score reports will be issued in May 2007. A Technical Report will be completed by July 2007.

Instruments

Rating Scale

Harcourt and South Dakota created a test blueprint based on the June 2004 alignment study of the South Dakota Extended Standards conducted by the Buros Center for Testing (BUROS) and the Extended Standards in Reading/Language Arts and Mathematics. The skill areas of the ABAS Rating Scale were pared down from ten to five. All skill areas retained were from the conceptual and social domains — all contained items that could be mapped to the STAARS Extended Standards in Reading/Language Arts and Mathematics. Harcourt added Academic Reading/Language Arts and Academic Mathematics to have full coverage of the Extended Standards. Further, the selection of the retained ABAS items, which had been standardized on a similar population, was based on their content and cognitive level.

Table 1 summarizes the skill areas and the number of items found in each skill area.

Table 1. Number of Items in ABAS Skill Areas

Skill	Number of Items
Communication	22
Community Use	15
Functional Academics	22
Leisure	17
Social	20
Reading/Language Arts	32
Mathematics	40
Total:	**168**

Since the Rating Scale has as its base a norm-referenced assessment (ABAS II), it served as the statistical anchor for the assessment system in this transitional period. The Rating Scale has the added benefit of having been standardized on a representative national

sample. Further, Harcourt has validity data for special samples of individuals with disabilities, including mental disabilities and developmental disabilities. Norm-referenced scores include scaled scores, average guessing rates, standard scores, 90% and 95% confidence intervals, and percentile ranks. The skill areas have high internal consistency and test–retest reliability.

The items in the added sections, Academic Reading/Language Arts and Academic Mathematics, were mapped to the Extended Standards to ensure coverage of all skills. Independent content specialists mapped the Rating Scale items separately from the item developers. Harcourt achieved *75% coverage in Reading/Language Arts and 68% in Mathematics.*

The independent content specialists also crosschecked the Rating Scale against the Alignment Study by Buros Center for Testing.

The Data Collection Summary Forms for Reading/Language Arts and Mathematics were based on the forms used previously by South Dakota. These forms serve as a summary document for teachers to indicate which indicators were targeted by the IEP committee in Reading/Language Arts and Mathematics. Harcourt scorers summarized the different types of documentation the teacher submitted (class work, classroom tests, video, audio) and what the teacher believed was the proficiency rating for that skill. Two Harcourt scorers analyzed those materials using rubrics and assured inter-rater reliability.

Scoring

The Rating Scale was filled out in the fall and then again in the spring by three separate qualified individuals who knew the child. This was designed to assure reliability and validity. In addition, the Evidence of Student Work enriched the data and increased reliability of the scores.

Score reports were provided at the students' home, classroom, school, district, and state levels.

Transition – Next Steps

The Rating Scale will be revised for year 2 to reflect the revisions in the Extended Standards. Further, once the Extended Standards are approved by the State Board, Harcourt will revise the numbering systems so that items are easily mapped to indicators.

Further, Harcourt and South Dakota will apply the Webb alignment methodology to the Extended Standards to assure that the STAARS Alternate Assessment model has the same rigor as the general South Dakota assessment system. Further, as contractor for all aspects of the system (regular and alternate assessment), Harcourt will ensure horizontal and vertical alignment to the whole assessment system.

Harcourt and South Dakota will work collaboratively to ensure that the Alternate Assessment goes through the same rigorous bias and sensitivity review that the general assessment goes through. Further formal, rigorous specifications and blueprints will be created to assure that the STAARS has the depth and breadth needed for a technically sound accountability system. Rubrics and inter-rater reliability will be reviewed to achieve the highest standards possible.

Harcourt and the SD DOE will develop statistics specific to the population in South Dakota to ensure fairness and equity. Further, Harcourt will review the instruments and system to ensure that all types of validity and reliability are documented.

The Rating Scale was revised for Phase 2 to reflect state changes in the Extended Standards. The standards were revised to ensure compliance with *No Child Left Behind* Act of 2001 (NCLB). The new Extended Standards are grade-based and anchored to the general education standards.

For Phase 3, Science and Social Studies will be added to the assessment. At that point, the entire system will be transitioned to report scores for students by strands, as we do now for the general assessment system.

Finally, South Dakota has elected to utilize an Alternate Assessment System that is based on state developed Extended Standards. Their multiple measures system (Rating Scale, Evidence of Student Work, and Performance Events) will collect data using grade-based instruments for grades Kindergarten through 12.

Scoring–Transition

Analyses necessary to the generation of score reports will be performed on a data file containing approximately 100% of the target population. The derived data set will be used to produce the score reports.

Key-Check Analyses

While Harcourt employs multiple checks to ensure the accurate entry of information into our scoring system, it is still possible (though unlikely) that inaccurate keys could exist in our systems. To guard against this, the first analysis performed on the operational data sets is one that checks for possible typos. Key-Check in the Rating Scale is accomplished through software that calculates each category using a range of possible scores for various age levels, the percentage of scores for the entire population, and the raw scores that are ordered into five groups.

Special Analyses

We anticipate that realignments will take place in the subjects measured in the Alternate Assessment. There are several assumptions that data must satisfy for the generation of accurate parameters. One assumption is that the test items within an exam area all measure the same skill or ability. In other words, the items within an exam must be “unidimensional.” When items from two knowledge areas are combined, psychometric best practices requires that the items in the new exam be verified as being unidimensional. This verification can be approached in several ways. Harcourt will conduct two statistical analyses to investigate the dimensionality of this test. The first analysis consists of a simple correlation coefficient calculated between the total scores for the ABAS items versus the added items. This coefficient calculated over all students with a valid score on the assessment should be equal to 0.80. If Harcourt squares the correlation coefficient, the result is the percent of variation in one of the variables that can be explained solely by the variation in the second variable. In this case, the square of the correlation coefficient would be 0.64, or 64%.

Conclusion

Clearly, what South Dakota and Harcourt have done so far represents an enormous amount of energy expended to build an assessment system in a few months rather than the 18 months it normally takes. Both partners are committed to taking the steps necessary to move this transition system to a coherent system using multiple measures. Its technical adequacy is a reflection of an unusual amount of effort by the SD DOE, South Dakota teachers, Buros staff, and Harcourt staff. The technical summary documents the effort to create the system, specifications for development, and scoring. By Phase 3 of the project, South Dakota will have an alternate assessment system in place that will exceed federal requirements for technical adequacy, Adequate Yearly Progress (AYP), and accountability.

Part 1: Assessment Development Objective

Part 1: Assessment Development

Objective

The objective of the State Team-led Alternate Assessment and Reporting System (STAARS) was to develop an efficient assignment system that yields valid and reliable results. Further, it was essential to facilitate the inclusion of students with significant disabilities in South Dakota's statewide educational accountability system.

Legal Context and Technical Challenges

For the majority of students with disabilities, participation in state and district assessments involves taking existing standardized tests with testing accommodations. A small percentage of students, however, have disabilities that make their participation in general state- and district-wide tests impractical, if not impossible, and likely to result in inaccurate measures of their academic achievement. Alternate assessments are intended for use with students who are unable to participate in general state and district assessment systems even with accommodations. In fact, alternate assessments have been described as the ultimate accommodation for promoting the inclusion of students with significant disabilities in standards-based assessments and school reform efforts (Yssledyke, Thurlow, McGrew and, Vanderwood, 1994).

Alternate assessments are an important element of each state's assessment system and, as such, are required to meet the federal regulations outlined in Title I of the *Elementary and Secondary Education Act* (ESEA), most recently reauthorized as NCLB. Title I mandates that "State assessments shall be aligned with the state's challenging content and student performance standards and provide coherent information about student attainment of such standards" (§ 1111 [b] [3] [B]). In 2002, NCLB increased the federal government's emphasis on assessment and accountability systems. NCLB includes requirements for annual statewide assessments of all students in grades 3–8 in Reading/Language Arts, Mathematics, and, by 2007, Science. In addition, NCLB requires a disaggregated annual reporting of students' performance to ensure that all groups (including students with disabilities) are making adequate progress towards the goal of all students being proficient on statewide assessments within the next 12 years. Recent interpretations of the NCLB requirements by the United States Department of Education (USDOE, 2003) also suggest that up to 1% of students in states, school districts, and schools may demonstrate proficient performance through participation in statewide alternate assessment.

Although the development and implementation of standards-focused alternate assessments represent a promising strategy to increase the inclusion and achievement of students with significant disabilities, it is not without challenges for policymakers and practitioners. To provide context for the work ahead in South Dakota, we briefly examine four challenges in designing and implementing alternate assessments for students with disabilities. Our Design and Validation Plan for the South Dakota STAARS directly addresses each of these challenges.

Challenge 1: Deciding Who Should Participate in Alternate Assessments

An essential element in creating an alternate assessment system is the development of a meaningful decision-making framework for determining which students qualify for participation in an alternate assessment. Specifically, the *Individuals with Disabilities Education Act* (IDEA) instructs states to develop "guidelines for participation of students in alternate assessment for those children who cannot participate in state- and district-wide assessment programs" (§ 300.138; Part B). In addition, IDEA requires documenting in students' Individualized Education Programs (IEPs) the justification for exclusion from the general large-scale assessment and a description of how the students will be assessed using an alternate method.

In response to this legislation, states have developed a wide variety of frameworks for identifying students for participation in alternate assessments. Typically, states have chosen to use a checklist (or series of questions) that is completed by a student's teacher. These decision-making templates vary widely across states, ranging from a few general questions regarding a student's level of functioning to extensive, multi-step procedures that require consideration of the students' curriculum and documentation of considered testing accommodations. Unfortunately, relatively little is known about the validity of these frameworks or whether different state's processes result in comparable decisions about participation.

Currently under NCLB, the performance on alternate assessments of no more than 1% of students may be included in a school, district, or state's AYP reporting. Thus, it is essential that IEP teams identify the "right" students for participation in alternate assessment. To make informed decisions about the appropriateness of alternate assessment versus accommodation on a large-scale standardized test for an individual student, IEP teams need to be familiar with the format and content of their state assessments as well as their state's policies on testing accommodations.

The South Dakota Department of Education has delineated: which children are eligible for alternate assessment, how to determine eligibility and document eligibility for participation, and how to select Extended Standards (see Appendix B).

Challenge 2: Deciding What Content Alternate Assessments Should Measure

IDEA-97 clearly suggests that students with disabilities should have access to the general education curriculum and academic standards. Moreover, this legislation requires that all students have opportunities and instruction that allow them to make progress in acquiring and mastering those skills and concepts included in state and district academic standards. This emphasis on attaining academic achievement represents a change in emphasis from the curriculum and inclusion practices that traditionally have been provided to many students with significant disabilities. "Although the law still maintains the right of each student with disabilities to an individually referenced curriculum, outcomes linked to the general education program have become the optimal target. It is no longer enough for students with disabilities to be present in a general education classroom" (Pugach and Warger, 2001, p. 194). Students with significant disabilities must have instruction and

accommodations that promote their progress, no matter how modest, towards the educational expectations of the larger student population.

A related concern has been the content and focus of each state's alternate assessment processes. Specifically, test developers and policymakers must determine whether assessments for students who are unable to take the general assessment with or without accommodations should be focused on "the content standards (or core learning outcomes) identified for all students; or, conversely, whether alternate assessments should be based on a separate, more 'functional' set of learner outcomes" (Kleinert and Kearns, 1999, p.101). If the alternate assessments are intended to function as one component of a larger accountability system and to measure the progress towards the same educational expectations as those desired of the larger student population, then a state's general education academic standards should form the foundation for the alternate assessment.

IDEA and NCLB provide support for the design of alternate assessments as an extension or modification of the states' standards-based assessment systems. In response to this legislation, states are to be developing and refining their alternate assessments to be more standards-focused. "In 1992, 32% of states were using only functional skills for their alternate assessments with no link to state standards, [and] by 2001 only 8% were doing so" (Browder, Fallin, Davis, and Karvonen, 2003, p. 259). One participant to a survey of national authorities on the education of students with significant disabilities commented, the "more these (alternate assessment) performance indicators are tied to [state] standards, the more important I believe they are" (Kleinert and Kearns, 1999, p. 105). In the same survey of experts, 20% of respondents questioned the Kentucky Alternate Assessment's focus on functional skill domains and recommended that these skills be integrated with participation in and mastery of general education curriculum standards. A 2003 (NCEO) survey of State Departments of Education indicated that 80% of states were adhering to this advice using academic content standards as the basis for their alternate assessments or linking functional skills to content standards (Thompson and Thurlow, 2003).

South Dakota created Functional Standards for use in the 2003–2004 school year. In April and May of 2004, the state and teachers created Extended Standards in reading and mathematics for 2004–2005. The SD DOE and teachers are currently revising the standards by grade level for use in 2005–2006.

Challenge 3: Creating Reliable and Valid Alternate Assessments

In a review of states' alternate assessment practices completed by NCEO, 46% of states indicated they were using some form of portfolio assessments (Thompson and Thurlow, 2003). Performance and portfolio assessments are appealing because of their potential to provide rich descriptions of students' real-life knowledge and skills (Fuchs and Elliott, 1997). Browder et al. (2003), however, expressed concerns with performance-based approaches and suggested the technical characteristics of these alternate assessments may influence students' and schools' outcome scores. Initial data from Kentucky's efforts suggests that reliability of scores may be a source of challenge for states' portfolio-based alternate assessments (Browder et al., 2003). Challenges with the reliability of ratings were also observed by states attempting to use portfolios and performance assessments as part of their general large-scale assessment systems (e.g., Vermont and Arizona). These difficulties resulted in states' inability to publicly report assessment results (Koertz et al.,

1993; Tindal et al., 2003). Moreover, in order to demonstrate adequate alignment to state standards, performance assessments may need to include numerous tasks and work samples, resulting in an extensive and time-consuming assessment process. Browder et al.'s (2003) review also identifies students' risk factors (e.g., instability of student behavior or health status) as potential influences on students' alternate assessment results. In the case of on-demand performance tasks, fluctuations in student behavior or physical well being could potentially result in inaccurate and invalid assessment results.

The most recent review by Thurlow and Case (2004) of state alternate assessment practices indicates that 30% of states are using a rating scale as part of their alternate assessment for students with disabilities. A substantial body of evidence on the validity of teachers' judgments of student behavior and academic performance provides support for this approach. A review of the literature on teacher judgments of students' academic performance by Hoge and Coladarci (1989) found direct teacher judgments (i.e., ratings that entailed an explicit link between a performance criterion and judgment) yielded a median correlation of 0.70. In that same review, studies that included indirect teacher judgments (i.e., ratings of student achievement without explicit definition of the behavior or skill to be evaluated) produced a median correlation of 0.62. In both cases, the correlations exceeded the convergent and concurrent validity coefficients normally reported for psychological tests. In addition, rating scale-based alternate assessments in Idaho and Wisconsin have both been judged as adequately aligned to state content standards using the nationally recognized Webb approach to alignment analysis (Roach, Elliott, and Webb, 2003). This outcome is particularly desirable for meeting the NCLB and IDEA requirements for standards-based alternate assessments.

Extended Reading and Math Tasks, as described by Tindal et al. (2003), represent another option for conducting an alternate assessment. Based on curriculum-based measurement (CBM) technology, this approach consists of a continuum of tasks that measure students' basic skills in reading and mathematics. An extensive literature on the validity and utility of CBM monitoring students' academic progress provides support for this approach (Shinn, 1995). By including assessment tasks at a range of skill levels, this alternate assessment strategy allows test users to individualize assessment by administering only those tasks that are considered appropriate to the student's current skills and instructional experiences (Tindal et al., 2003).

South Dakota elected to use a combination of Rating Scale and Evidence of Student Work for 2004–2005 as they transitioned to a custom instrument in 2005–2006.

Challenge 4: Defining Proficient Performance on Alternate Assessments

In May 2003, the U.S. Department of Education issued a proposed change in policy concerning NCLB and students with significant disabilities entitled "Accountability for Children with the Most Specific Cognitive Disabilities." This document included the recommendation that states be permitted "to define alternate achievement standards for students with the most significant cognitive disabilities. Such students will also take an alternate assessment. These alternate achievement standards must be aligned with the state's academic content standards and reflect professional judgment of the highest learning standards possible for those students" (USDOE, 2003). In addition, as previously

noted, this document suggested that up to 1% of the student population might demonstrate proficient performance through participation in statewide alternate assessments.

While this change to NCLB's requirements was welcomed because students with the most significant disabilities would generally be unable to demonstrate their knowledge and achieve proficiency on states' paper-and-pencil standardized tests. This document also challenges policymakers and practitioners to define what proficient performance and AYP should mean for students who take an alternate assessment.

To address this challenge, several states undertook standard-setting procedures for their alternate assessments (Lewis, Mitzel, and Green, 1996; Roach and Elliott, 2004). Standard setting is the process of determining appropriate cut scores that correspond to a specified level of performance. The purpose is to establish cut scores that are based on what students in each performance level should know and be able to perform. For example, if a student obtained or exceeded the cut score corresponding to the proficient performance level, then that student should have demonstrated knowledge, skills, and competencies sufficient to be called proficient. This requires educators to first specify what the proficient student should be expected to understand and perform, and then to determine the test score that corresponds to those expectations.

The most important outcome of a standard setting is not the cut scores associated with proficiency levels in each content area, but instead the descriptors of what students who achieve the various performance levels typically know and are able to do. By examining the description of typical student performance in a given performance level, one can gain an understanding of the knowledge, skills, and abilities typically held by students in that performance level and identify skills and abilities that a given student is not yet able to perform consistently. This type of information helps teachers communicate with others about a student's progress, next year's instructional goals for the student, and the status of the student relative to the state's learning standards (Roach and Elliott, 2004).

Harcourt conducted standard setting for South Dakota on May 17–18 of 2005.

Part 2: Description of Selected Approach

Part 2: Description of Selected Approach

Overview of Major Objectives and Development Plan for an Alternate Assessment

The successful development and implementation of an alternate assessment system requires collaborative and sustained work among assessment experts, university representatives, experienced teachers who represent several grades and school districts, parents of students with disabilities, and leaders from the Department of Education and representative school districts. The typical project requires 18 to 24 months of ongoing work and one year of follow-up for validity studies to refine proficiency standards and to provide on-going professional development for teachers and other educators.

The major objectives or steps in the development of a technically sound and instructionally useful alternate assessment are:

1. Establish alternate content standards that are downward extensions of the state's academic standards in reading, language arts, math, and science.
2. Identify key knowledge and skills that enable students to demonstrate they have achieved the various content standards. Also identify typical classroom activities that provide students the opportunity to learn these skills.
3. Write a large pool of test items that adequately represent and sample the knowledge and skills for the various content areas.
4. Conduct an evaluation of the importance and relevance of the items. Select a representative sample of items in each content area and refine them to ensure universal access and opportunity.
5. Develop a rating scale format and the related proficiency rating and summary score rubrics.
6. Design and field test the new alternate assessment to evaluate the utility of the instrument and the reliability of the ratings.
7. Revise the rating scales and scoring rubrics based on the field-test results. Continue to conduct validity studies to establish the content, concurrent, construct, and instructional validity of the assessment tool.
8. Conduct an alignment study.
9. Develop proficiency standards and a score reporting system that is compatible with the state's regular assessment system.
10. Write an administrative guidebook to facilitate reliable administration and scoring of the assessment.
11. Design professional development materials to train teachers how to use the new assessment. Three case studies are the core of the training materials that can be shared with teachers and administrators.
12. Conduct professional development training sessions to facilitate the appropriate administration, scoring, and use of the resulting alternate assessment scores.

13. Implement the assessment statewide and conduct an implementation survey with consumers.
14. Design studies to evaluate the reliability and validity of the results of the assessment after the completion of the first year of statewide use.
15. Develop score reports and tools (e.g., brochures, a website) to communicate with teachers and parents about the purpose and outcomes of the alternate assessment.
16. Conduct analyses and write a technical report summarizing the psychometric qualities of the alternate assessment and affirming the proficiency standards used for AYP calculations.
17. Obtain the approval of standards and approach by the State Board of Education.
18. Revise the assessment system, if necessary, based on evaluation of results and feedback from consumers. Produce and distribute copies of the revised assessment and support materials to educators.
19. Provide regular professional development opportunities so potential users will be well trained to make decisions about who should participate in an alternate assessment and to administer, score, and report results of the assessment for AYP purposes.

Approach Selected

South Dakota elected to use a combination Rating Scale and Evidence of Student Work for the 2004–2005 school year. The instruments were based on the Extended Standards developed by South Dakota educators in April and May of 2004.

The SD DOE requested Harcourt to help develop their state alternate assessment system for students with cognitive disabilities. SD DOE wanted the system to be called Statewide Team-led Alternate Assessment and Reporting System (STAARS). South Dakota teachers met with representatives of the SD DOE in April and May 2004 to develop Extended Standards to provide a downward extension of the general South Dakota Standards in Reading and Mathematics. The Extended Standards were for assessing and reporting the progress of students with severe cognitive disabilities in order to meet the accountability regulations of NCLB.

Buros conducted an alignment study on June 15, 2004, to assess the alignment between the Extended Standards and target skills to the Core Content Standards. The final report was completed on August 31, 2004.

Because SD DOE needed an instrument developed for use beginning in October 2004, Harcourt proposed using a modified/augmented ABAS II (Rating Scale). The skill areas in the Rating Scale were pared down from ten to five. All skill areas retained were from the conceptual and social domains. All contained items which were mapped to the Extended Standards in Reading and Mathematics. The skill areas, domains, and numbers of items in each area are summarized in Table 2.

Table 2: Modified Rating Scale Skill Areas

Conceptual Domain		**Social Domain**	
Skill	***Number of Items***	***Skill***	***Number of Items***
Communication	22	Leisure	17
Community Use	15	Social	20
Functional Academics	22		
Total	**59**	**Total**	**37**

To augment the Rating Scale, sections were added in reading/language arts and mathematics. The items were culled from the SD Extended Standards access (entry level) and target (higher level) skills generated by the teachers in May and June of 2004. For reading, 32 items were selected and 40 items were selected for mathematics.

A second data collection instrument (Evidence of Student Work) was used that was similar to what the teachers used in 2003–2004. This instrument allowed us to collect data and samples of work targeted to specific skills. It remains the critical nexus between the IEP, Extended Standards, and empirical Evidence of Student Work.

Phases of Implementation

The project has three phases.

Phase 1 (July 27, 2004–July 31, 2005)

Harcourt modified and augmented the Rating Scale for use in the 2004–2005 school year. Harcourt prepared the materials and assessments and trained teachers November 1–4, 2004. Teachers and staff completed the modified Rating Scale and data collection form (Evidence of Student Work) in November and December 2004, and again from January to April, 2005. Harcourt scored the materials in January 2005 and again in April 2005 to assess student progress. Reports (student, class, school, district) were sent to schools in June 2005. State reports will be completed in mid-June 2005. The technical report will be completed and sent to SD DOE by August, 2005.

Phase 2 (October 2004–July 31, 2006)

This phase includes further refinement of the Rating Scale, including Reading/Language Arts and Mathematics, adding Science and Social Studies. The Evidence of Student Work will be refined. Harcourt will also be responsible for the training of teachers in January 2006.

Phase 3 (July 2006–July 31, 2007)

All materials and the system will be fully operational. A full, multiple system will be in place: the modified Rating Scale and the Evidence of Student Work.

The culminating alternate assessment includes:

1. Modified/augmented Rating Scale
2. Evidence of Student Work

Test Development

Due to the compressed time frame, steps had to be abbreviated for the 2004–2005 school year. The Extended Standards developed by South Dakota teachers and alignment by Buros were taken in total by Harcourt. In collaboration with South Dakota, Harcourt developed a draft rating scale based on ABAS II and augmented sections in Academic Reading and Academic Mathematics. Teachers were also asked to select two specific extended standards that they were developing (as documented in the IEP) in reading and two in mathematics. The teachers were also asked to submit a minimum of three passing samples of work and rate them (e.g., 1, 2, 3, 4). This information would be the foundation for future performance events.

Scoring procedures were determined. SD DOE had determined eligibility for the STAARS and IEP team procedures prior to this development process.

Vision and Design

The rating assessment system is ideal for meeting the federal requirements, will honor teachers' knowledge, is curriculum-relevant, will help advance instructional practices for students with significant disabilities, and can be built to yield reliable and valid scores that contribute to AYP. This rating scale approach is flexible and will include the use of one or two core embedded performance tasks in each content area. These performance tasks will evolve out of the development of the alternate content standards and item development phases of the project.

The design and format of the STAARS will be finalized through the collaborative work of experienced assessment consultants in Alternate Assessment Workgroup that represents teachers and educational leaders in South Dakota who are knowledgeable of students with significant disabilities and measurement professionals from Harcourt. Before embarking on the development of an alternate assessment for students with disabilities, it will be important to meet the assessment and accountability leaders in South Dakota to:

- establish a comprehensive explanation of how the existing system works (i.e., when tests are administered, score reporting framework and terminology, any specified rewards or consequences that follow from results) and which test results contribute to AYP calculations;
- discuss the number of levels (i.e., grades or grade clusters) used to assess students and aggregate results;
- discuss the administration timeframe for each assessment given that a teacher rating scale approach (which is often completed over a period of 6 to 10 weeks);

- discuss how results and related byproducts of the assessment will be managed; and
- discuss critical time lines that must be followed.

Technical Considerations–Validity, Reliability, and Usability

Once these issues are settled, the development of an enhanced alternate assessment will be driven by the design imperatives for technically sound assessments. Educational assessments come in many forms and serve a variety of purposes. Regardless of the type of assessment or its purpose, all good assessments should possess the characteristics of *validity, reliability,* and *usability.* The remainder of this section focuses on technical concepts that are central to assessing students and using the results of the STAARS with confidence. Reviewing issues of validity, reliability, and usability provides the technical context by which all tests and assessments are evaluated, especially new assessment tools such as the STAARS instruments.

Before examining these three key assessment concepts, let us first establish how achievement tests or rating scales and their resulting test scores are typically used. Basically, an achievement test is given once or possibly twice a year to a group of students with the intent of providing a score for each student that is indicative of his or her knowledge or ability in a given subject matter. *The resulting test scores are useful or good to the extent that the test (a) measures what the students have been studying in their classes and (b) that the resulting scores are accurate.* To the extent that the test measures subject matter content that is different from what students have been studying, students' test scores become less meaningful as indicators of their achievement and less useful in guiding teachers' future instructional efforts. Likewise, if the students' answers do not result in a test score that can be determined consistently and accurately, teachers' confidence in the score is lessened.

Alignment is a key element in the creation of standards-based achievement tests and rating scales. Alignment is the extent "to which expectations and assessments are in agreement and serve in conjunction with one another to guide the system toward students learning what they are expected to know and do" (Webb, Horton, and O'Neal, 2002, p.1). Determining the alignment between an assessment and the content it is meant to assess is an important piece of evidence in any validity argument. Lane (1999) outlined procedures for evaluating the validity of assessments designed to measure students' mastery of state content standards. According to Lane, two forms of evidence are pertinent to determining the validity of these assessments: (a) the extent to which the state assessment reflects the state's content standards and (b) the extent to which the curriculum offered to students reflects the content standards. By establishing the alignment of a large-scale assessment to state content standards, test developers provide important evidence of the validity of test results as a measure of students' mastery of the core curriculum.

In summary, we find achievement tests useful when they are representative of what students have been taught and when they yield consistent, accurate scores. When these conditions have been met, we are more comfortable or confident making inferences from the resulting test score about students' classroom performances. When academic

standards (like some of those in state content standards) have influenced classroom instruction, then it is logical to also consider a possible relationship between students' test scores and such standards. That is, it is reasonable to use test scores in a subject matter area as evidence of the degree to which students have acquired the knowledge and skills specified in content standards.

Validity

Validity refers to the adequacy and appropriateness of the interpretations made from assessments, with regard to a particular use. Of all the essential characteristics of a good test, none surpasses validity. If a test is not valid for the purpose used, it has little or no value. Validity is specific. That is, a test may be valid for one purpose and not others. For example, a spelling test administered to determine a student's achievement in grammar is very likely to be deemed invalid.

Content Validity

Traditionally, test developers have talked about three major kinds of validity: content validity, criterion-related validity, and construct validity. A test has *content validity* if it adequately samples the knowledge and skills that have been the goal of instruction. Does the test adequately represent the material that was taught? Determining whether a test has content validity is somewhat subjective. It usually is established when subject-matter experts and experienced teachers agree that the content covered is a representative sample of the knowledge and skills in the domain tested.

Criterion-related Validity

A test is said to have *criterion-related validity* if its results parallel some other external criteria. Thus, test results are similar or not similar to another sample of a student's behavior (or some other criterion for comparison). If students do well on a standardized reading test that measures many aspects of reading, they likewise should do well in completing and understanding geography and history assignments. Some people refer to this type of validity as predictive validity because a score from one assessment is being used to make predictions about a performance on another assessment that occurs later.

Construct Validity

A test has *construct validity* when the particular knowledge domain or behavior said to be measured is actually measured. For example, a teacher may claim that his or her test measures application of mathematical concepts and not just mathematical computations. Therefore, a review of the test should reveal that large portions of the items require students to apply results of mathematical computations using mathematical concepts correctly. To further substantiate that the test measures the application of mathematical concepts, one could look for agreement between the test results and other evidence from students' classroom activities and work samples. Construct validity is a complex issue and increasingly is coming to refer to the entire body of information about what a test measures. As you can see in the example of the assessment of mathematical applications, decisions about construct validity require information about the content of the test and the degree to which the test results relate to other measures of the same construct.

It makes no sense to prepare or select a test designed to measure something other than what has been taught if you want the results to affect instruction and provide information about student learning. As an example, we do not measure a student's height using a bathroom scale. Therefore, teachers and others should work hard to ensure that a test measures what it is designed to measure. When it does, we say the test scores have good construct validity.

Numerous factors can make assessment results invalid for their intended use. Some are obvious and avoidable. For example, no teacher would think of measuring knowledge of mathematics with a social studies assessment. Nor would it be logical to measure problem-solving skills in fourth grade mathematics with an assessment designed for eighth graders. In both instances, the assessments would yield invalid results.

Some of the factors that influence validity are subtle. A careful examination of test items or assessment tasks will indicate whether the assessment instrument appears to measure the subject matter content and the cognitive functions that the teacher is interested in measuring. However, several factors may prevent or interfere with the test items or assessment tasks functioning as intended. When this happens, the validity of the interpretations of the assessment results is diminished.

Evidence of Validity

Evidence of the validity of a score on a test or an assessment instrument generally takes two forms: (a) how the test or assessment instrument behaves given the content covered, and (b) the effects of using the test or assessment instrument. Questions commonly asked about a test's behavior concern its relation to other measures of a similar construct, its ability to predict future performances, and its coverage of a content domain. Questions about the use of a test typically focus on the test's abilities to reliably differentiate individuals into groups and to guide teachers' instructional actions with regard to the subject matter covered by the test. Some questions also arise about unintended uses of a test or an assessment instrument. For example: Does use of the instrument result in discriminatory practices against various groups of individuals? Is the test used to evaluate others, such as parents or teachers, whom it does not directly assess? These questions concern a relatively new area of validity referred to as consequential aspects of validity (Green, 1998; Messick, 1993).

Criteria for evaluating the validity of tests and related assessment instruments have been written about extensively. A joint committee of the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education recently revised their comprehensive list of standards for tests that stresses the importance of construct validity and describes a variety of forms of evidence indicative of a valid test. The revised *Standards for Educational Psychological Testing* (American Educational Research Association, 1999) include valuable information for educators involved in testing diverse groups of students, including both students with disabilities and students with limited English proficiency.

Key Aspects of Validity

Many test users and consumers of test-based information struggle with the relatively abstract concept of validity and its importance to the meaningful use of tests or

assessments. Be assured, however, it is the single most important characteristic of good assessment information and must be understood by all test users. Keep in mind the following key aspects of validity:

- Validity is concerned with the general question, "To what extent will this assessment information or test score help me make appropriate decisions?"
- Validity refers to the decisions that are made from assessment information, not the assessment approach or test itself. It is not appropriate to say, "This assessment information is valid" unless you also say for what decisions or groups it is valid. Keep in mind that assessment information validity for one decision or group of students is not necessarily valid for others.
- Validity is a matter of degree; it does not exist on an all-or-nothing basis. Think of assessment validity in terms of categories: highly valid, moderately valid, and invalid.
- Validity involves an overall evaluative judgment. It requires an evaluation of the degree to which interpretations and uses of assessment results are justified by supporting evidence. Educators also must consider assessment results in terms of the consequences of those interpretations and uses.

Although validity may be the most important characteristic of a good assessment, it is by no means the only characteristic you should understand. Consumers of test results also want the results to be reliable, therefore, an examination of what reliability means with respect to test scores follows.

Reliability

A test is reliable to the extent that a student's scores are nearly the same on repeated measurements with the test. In other words, a test is characterized as reliable if it yields consistent scores. Suppose, for example, that a teacher has just given an achievement test to her students. How similar will the students' scores be if she assessed them tomorrow, or next week, or in a couple of months? How would the students' scores have differed if she had selected a different sample of tasks to test? How much would the scores have differed if another person scored the test? These are the types of questions with which reliability is concerned.

Assessment results merely provide a limited measure of performance obtained at one point in time. Some error always exists in any test or assessment as fluctuations in human behavior are not totally controllable, and the test itself may contain possibilities for error. As errors in measurement increase, the reliability of a test decreases. Unless an assessment can be shown to be reasonably consistent over different occasions, different raters, or with different samples of tasks from the same subject matter, we can have little confidence in the results.

Carefully note the relationship and distinction between reliability (consistency) and validity (meaningfulness). A valid test must be reliable but a reliable test may not be valid. In other words, *reliability is a necessary but not sufficient condition for validity.*

For example, giving an algebra test to first or second graders will produce consistent results, but the results are not meaningful for six-year-olds. Thus, the test would be reliable, but not valid.

Reliability can be described numerically and is primarily statistical. It is important that you understand reliability if you are going to be involved in using test results, and essential if you are ever going to design and conduct an alternate assessment for a student with a severe disability. The logical analysis of an assessment will provide little evidence concerning the reliability of the resulting scores. To evaluate the consistency of scores assigned by different raters, two or more raters must score the same set of student performances. Similarly, an evaluation of the consistency of scores obtained in response to different forms of a test or different collections of performance-based assessment tasks require the administration of both test forms or collections of tasks with the same group of students. Whether the focus is on inter-rater consistency or the consistency across forms or collections of tasks, consistency may be expressed in terms of shifts in the relative standing of students in the group or in terms of the amount of variation to be expected in a student's score. We report consistency in the case of inter-rater judgments or across forms of a test by means of a correlation coefficient. However, in the case of an expected amount of variation in a given student's test score, we report consistency by means of a statistic called the standard error of measurement. Both of these methods of expressing reliability are widely used and educators responsible for communicating the results of assessments should understand them.

Standard Error of Measurement

The *standard error of measurement* (SEM) is an estimate of the variation expected in a student's score if the student is repeatedly given the same test. The amount of variation in the scores is directly related to the reliability of the assessment procedures. Low reliability is indicated by large variations in the resulting scores, and high reliability by little variation in the scores.

It is impractical to repeatedly administer the same test to a student. Fortunately, however, it is possible to estimate the amount of variation in the resulting scores. This estimate of the variation in scores is the SEM. The calculation of the SEM is straightforward once you have an estimate of reliability such as a coefficient alpha.

Factors Influencing Reliability

Although teachers seldom find it possible or useful to calculate reliability coefficients or (SEHA), they should be cognizant of factors that can influence assessment results. Two such factors are the number of items or tasks on a test and the objectivity of the scoring of the items or tasks. In general, the larger the number of tasks on an assessment, the higher the reliability will be, because a longer assessment will provide a better sample of the knowledge and skills being measured. In addition, the scores are less likely to be distorted by chance factors.

Objectivity of an assessment refers to the degree to which equally competent scorers obtain the same results for the same students. Most of the published tests educators use are high in objectivity, and are often scored by machines or highly trained scorers. Concerns about the reliability of scores, frequently voiced as issues of bias or fairness,

often have been used to argue against the use of complex constructed-response type tasks on achievement tests. However, it is possible to get highly reliable scores with training and the use of behavior rating scales.

Key Aspects of Reliability

This examination of reliability will be concluded by reiterating that unless a test is reasonably consistent on different occasions or with different samples of the same behavior, test users should have very little confidence in its results. A variety of factors, some concerning the student taking the test and others inherent in the test's design and content, can affect the reliability of a test. Student characteristics affecting a test's reliability include guessing, test anxiety, and practice in answering items like those on the test. Characteristics that can influence reliability include a test's length (longer tests are generally more reliable), homogeneity or similarity of items (homogeneous tests are usually more reliable), and time allotted (speed tests are typically more reliable than untimed tests).

In conclusion, when considering the reliability of any test or assessment process, keep the following three points in mind:

- Reliability refers to the stability or consistency of assessment information, not the appropriateness of the assessment information collected.
- Reliability is a matter of degree; it does not exist on an all-or-none basis. It is expressed in terms of degree: high, moderate, or low reliability.
- Reliability is a necessary, but not sufficient, condition for validity. An assessment that provides inconsistent results cannot be relied upon to provide useful information. If important educational decisions are to be made from a test, the resulting score(s) must be highly reliable.

Usability

So far we have asserted that good assessments should measure what they say they measure and that the measurements must be consistent—that is, good assessments are valid and reliable. Good assessments also must be useful. This point may seem obvious, but educators should not overlook it when designing or selecting an assessment, particularly when the assessment involves a large number of children. For example, in many statewide assessment systems, more than 200,000 students are eligible to take a test each year. Thus, issues concerning ease of administration, interpretation and application, time required to conduct the assessment, and cost should be weighed against alternative ways of getting the same information and the resulting consequences.

Unlike the concepts of validity and reliability, there is no general set of guidelines or statistical indices used to determine the usability of a test or an assessment program. A wide array of variables influences decisions about usability. One of the issues most hotly debated in assessment for educational accountability is how useful test results are for teaching and learning. When students as a whole do poorly on a test, there are two possibilities for their poor scores: either the test is a poor measure of student learning, or the test accurately reflects the fact that students did not learn. Whether a test is a poor measure (and therefore not usable for making instructional decisions) is primarily

determined by the concept of alignment—that is, whether the test is a good (i.e., reliable and valid) measure of the curriculum or standards students are to master. If the test is aligned with the curriculum (what students are to master), then teachers can use assessment results to evaluate student learning—and their instruction. Good assessment results suggest students learned and, by implication, that the teacher taught the subject matter effectively. Poor assessment results suggest students did not learn and, by implication, that the teacher did not teach the subject matter effectively.

Another key usability issue concerns how the results of an assessment are communicated. When results are stated in terms that are understood by most consumers, but especially teachers, it increases the likelihood that the results will facilitate teachers' instructional efforts and advance an understanding of student performance by parents and students themselves. Related to *how* results are communicated is the issue of *when* results are communicated. For feedback of any kind to be useful, it must occur close in time to the performance of interest. Far too often, test results—particularly those from large-scale assessments—come months after the testing event occurred and with little time to focus on remediation efforts. Moreover, they may provide only large-group, general results for the fundamental subject matter areas.

Part 3:
Validation Plan

Part 3: Validation Plan

Normally, a project such as the STAARS would have a pilot test and then a field test. Due to the abbreviated timeline to develop the instruments, this first administration from November 1, 2004 through December 15, 2004 became the field test of record. All things considered, Harcourt's validation plan was quite stringent.

Validation Plan: Answering Basic Questions and Applying the Design Imperatives

As emphasized in the review of characteristics of good assessments, good assessments are valid, reliable, and usable. Many educators have translated this "holy trinity" of measurement to mean that a test must measure what it says it measures and do so in a way that is practical and that produces consistent scores. This is an acceptable translation, but perhaps a bit of an oversimplification of the judgments required of persons involved in using an alternate assessment. Recall that validity is not an all-or-none characteristic of an assessment, but rather a matter of degree. Also remember that reliability is a necessary but not sufficient condition of validity. Ultimately, a statement about the validity of an assessment involves an evaluative judgment of the degree to which interpretations and uses of the assessment results (scores or proficiency statements) are justified. To make decisions about the degree to which an assessment yields valid results, it is useful to ask five questions:

The Content Question

How well does the sample or collection of assessment tasks represent the domain of tasks to be measured? For most teachers this question is answered by reviewing copies of tests and comparing the items to what they teach. The greater the similarity or alignment, the more confidence they have that the test measures what they value. This question was and will be central to the development of the STAARS instrument and will influence the Alternate Assessment Workgroup in its efforts to translate state achievement standards to items on the STAARS rating scale for 2004–2005.

The Consistency Question

How consistent are the results of an assessment scored by two people? For most teachers, this is a question that arises when different students compare their test scores and find differences in scores for what they perceive to be very similar or identical answers. The teacher and two others completed the Rating Scale. Data of student work was scored by the teacher and two Harcourt scorers. The issue of consistency in scoring is at the heart of the reliability of the scores. With a rating scale like the one used for the STAARS, it is possible to have two or more educators rate one student's evidence for a particular item. When the different raters agree, we say their ratings are highly reliable. Thus the consistency question can be answered by examining the inter-rater reliability of ratings.

The Test-Criterion Relationship Question

How well do students' performances on the assessment predict future performances or estimate current performances on some valued measure of the knowledge and skills other than the test itself? For most teachers, this question is answered by comparing the

assessment results with another measure of performance, such as classroom tests or summary observations by the teacher. The greater the similarity between the test and teachers' other criterion of performance, the more confidence teachers have in the test scores. This question will be addressed by designing a study where students' ratings on the STAARS were correlated with ratings on established scales of academic and adaptive behavior competence. It is expected that the STAARS results will correlate significantly more highly with those on the academic competence measure than the social competence measure, although both measures are expected to have positive correlations with the STAARS.

The Construct Question

How well can teachers interpret performance on the assessment as a meaningful measure of the knowledge and skills the assessment purports to measure? For most teachers, answers to this question will be out of reach, because it requires establishing the meaning of the assessment by experimentally determining what factors influence students' performances. Many educators will use data on the content and test-criterion relationships as evidence that the test measures a specific construct. Construct validation takes place primarily during the development of a test and is based on an accumulation of evidence from many sources. If you are using a published test or assessment program to measure a particular construct such as mathematical reasoning or reading comprehension, then you should find the necessary evidence on the construct validity of the instrument included in a technical manual that accompanies the test. In the case of a new testing program such as the STAARS, information about the construct being measured can be gained from a review of the evidence used to make proficiency judgments and by examining items to total score correlations for the various content area rating scales. Results of factor analyses also provided information on the underlying construct that was measured and collected.

The Consequences Question

How well does the use of the assessment results accomplish the intended purposes of the assessment and avoid unintended effects? If an assessment is intended to contribute to improved student learning, the consequences question becomes deceivingly simple: "Does it?" In trying to answer this question, teachers typically pose many more questions. For example, "What impact does the assessment have on teaching? What are the possible negative, unintended consequences of the use of the assessment results?" As you can see, there is no short or easy answer to the consequences question. Nevertheless it is worthwhile to address. In fact, it is often the first question many educators ask when confronted with a new large-scale assessment program.

In conclusion, issues pertaining to decisions about validity of test results start before a test is given, continue after a test is completed, and are always relative to the stated purpose of the test. As you can see, the typical and seemingly straightforward question, "Is the test valid?" is actually inappropriately worded and requires some technical knowledge to answer. Better questions (the ones our validation plan will help us answer) are: "Is the test a good test?" and "Does the test yield valid scores?" In the next section of this document, Harcourt provides a plan to study the validity of the STAARS scores.

Validity Studies

A two-part investigation using a multi-method, multi-source approach to evaluating the STAARS was conducted. Evaluation data will come from Year 1 results of the rating scale and several other assessment instruments. In addition to this direct student data, teachers of the students in the Year 1 study will be surveyed about the usability of the STAARS.

The purpose of the STAARS Field Trial is to determine whether the STAARS can serve as a reliable and valid measure of the skills and concepts that comprise the curriculum and instruction of students with significant disabilities. The variable in this phase of the investigation included the STAARS workgroup's item importance ratings, frequency of usage ratings for each STAARS item, and frequency of items aligned with students' IEP goals. A correlational design will be used to examine the strength of the relationship between the STAARS workgroup's item importance ratings and actual item usage and IEP alignment. Then descriptive analysis will be used to examine the relationship between the raw score ratings and the students' overall performance level scores. In addition, descriptive statistics will be calculated and narrative data will be analyzed to examine teachers' and parents' perceptions of the instructional utility and content validity of the STAARS. Finally, reliability estimates (i.e., coefficient alphas, SEHA, inter-rater agreement indices) will be calculated for each of the content areas assessed.

Table 3 summarizes much of the validity evidence that the Year 1 study yielded and also identifies additional data to be collected during Year 1.

Table 3. Validity Study for the STAARS During Phase 1

Type of Validity Evidence	Description of Validity Evidence
Content	1. Importance of ratings of original pool of items 2. Alignment with content standards, classroom instruction, and content of the STAARS a. IEP alignment data from field-test cases b. Importance and instructional relevance ratings by work-group members after field-test cases c. Alignment of items with content standards by separate panel of educators
Concurrent, Convergent, & Discriminant	3. Correlations among teachers' ratings of students on the STAARS and ABAS II
Construct	4. Use a modified Q-sort technique and have teachers categorize the STAARS items into content area categories (phase 2) 5. Conduct a confirmatory factor analysis of a random sub sample of the STAARS cases (N = 120) (phase 2) A.H..,4th ed.
Consequential	6. Survey teachers and parents about the acceptability, utility, and meaningfulness of the STAARS (phase 2).
Reliability Estimates	7. Coefficient alphas on completed the STAARS 8. Standard Error of Measures for each STAARS scale 9. Inter-rater agreement data from completed the STAARS

Harcourt will produce measures of five criteria based on the Alignment Study Report (Buros, April 2005). The underlying assumption of this approach is to compare the relationship between assessment instruments and standards by analyzing how these documents compare using the same criteria. The five criteria are listed in Table 4. The results produced by the STAARS alignment study will pertain only to how the Extended Standards and the STAARS instrument are in agreement and should not be considered external verification of the general quality of the State's standards or assessments. The results of the STAARS will represent the judgments of individuals familiar with curriculum and assessment of special education students.

Table 4. Criteria Used to Evaluate Alignment between the STAARS and the South Dakota Extended Content Standards

Criterion	Definition
Categorical Concurrence	Indicates if the same or consistent categories of content appear in both standards and assessment.
Depth-of-Knowledge Consistency	Indicates if what is elicited from students on an assessment is as demanding cognitively as what students are expected to know and do as stated in the standards.
Range-of-Knowledge Correspondence	Indicates whether a comparable span of knowledge expected of students by a standard is the same as or corresponds to the span of knowledge that students need in order to correctly answer the assessment item or activity.
Balance-of-Representation	Indicates the degree to which one curriculum objective is given more emphasis on the assessment than another.
Source-of-Challenge	Used to identify items on which the major cognitive demand is inadvertently placed and is other than the targeted curriculum skill, concept, or application. Item characteristics may cause some students to get an item partially or totally incorrect, even though they have the understanding and skills being assessed.

(Adapted from Webb, 2002)

Effective schooling is based on the coordination of three components of the educational environment: curriculum, instruction, and assessment (Elliott, Braden, and White, 2001; Webb, 1997; Webb, Horton, & O'Neal, 2002). The process of coordinating these elements is called *alignment* and is the foundation of standards-based education reform. Alignment is the extent "to which expectations and assessments are in agreement and serve in conjunction with one another to guide the system toward students learning what they are expected to know and do" (Webb, Horton, and O'Neal, 2002, p. 1). The development and implementation of large-scale assessment programs represent one approach to aligning classroom instruction with state curriculum standards.

The Council of Chief State School Officers (CCSSO) has identified four preferred models as frameworks for states planning and conducting alignment studies: (a) the Webb model, (b) the Surveys of Enacted Curriculum (SEC) model, (c) the Achieve model, and (d) the Council for Basic Education (CBE) model (CCSSO, 2002). The STAARS alignment study will use the Webb model, which provides a series of statistics

that indicates the match between the content in the state's academic standards and the content covered by the state's assessment. By focusing on the alignment of the STAARS with the state's academic standards, the ratings of the panel of special educators that participated in the alignment study will contribute evidence for the content and curricular validity of the STAARS. Specifically, the results of the alignment will provide support for the STAARS as a measure of the curricular expectations outlined in the South Dakota Extended Standards, helping to demonstrate the state's attainment of the requirements for alternate assessments outlined in IDEA and NCLB.

Validity evidence will continue to be collected during Phases 2 and 3 of the project with a larger sample. Specifically, we will conduct replication studies of inter-rater reliability and gather additional consequential validity evidence via consumer surveys, IEP reviews, and AYP data contributions of students who are rated on the STAARS. We will also closely examine the impact of the proficiency cut-scores across each content area and the various grade-level participants.

Part 4: Adaptive Behavior Assessment System, Second Edition (ABAS-II)

Part 4: ABAS II

This section contains the complete text of the manual for the *Adaptive Behavior Assessment System, Second Edition* (ABAS II), published 2003 by the Psychological Corporation (PsychCorp).

For the ABAS II manual's table of contents, please see the following pages

Adaptive Behavior Assessment System
Second Edition

Manual

Patti L. Harrison
Thomas Oakland

THE PSYCHOLOGICAL CORPORATION®
A Harcourt Assessment Company

THE PSYCHOLOGICAL CORPORATION®

A Harcourt Assessment Company

Copyright © 2003, 2000 by The Psychological Corporation, a Harcourt Assessment Company

Normative data copyright © 2003, 2000 by The Psychological Corporation, a Harcourt Assessment Company

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the publisher.

The Psychological Corporation, the *PSI* logo, *ABAS*, *Adaptive Behavior Assessment System*, *WISC–III*, *WAIS*, and *WIAT* are trademarks of The Psychological Corporation, a Harcourt Assessment Company, registered in the United States of America and/or other jurisdictions.

WASI is a trademark of The Psychological Corporation, a Harcourt Assessment Company.

Portions of this work were previously published.

ISBN 0158004515

1 2 3 4 5 6 7 8 9 10 11 12 A B C D E

Printed in the United States of America

Visit our website at www.PsychCorp.com

Published by The Psychological Corporation, 19500 Bulverde Road,
San Antonio, TX 78259, USA, 1-800-872-1726.

Acknowledgements

The publication of the *Adaptive Behavior Assessment System–Second Edition* (ABAS–II) is a result of the hard work and commitment of a number of people. Throughout all phases of development Dr. Jianjun Zhu, senior research director, was the force behind the project with his tireless efforts and dedication. Dr. Zhu contributed his guidance and expertise to all aspects of the development process, and his influence is evident in all components of the published product. In addition to his contributions to the quality of development, Dr. Zhu was responsible for a majority of the substantial amount of statistical analysis required for the ABAS–II. Enough cannot be said about the tremendous energy and personal commitment of Dr. Zhu. The authors are honored to have experienced his extensive knowledge and experience, as well as his enthusiasm and support. The authors value Dr. Zhu's numerous contributions to the project and thank him for the many years of work that he has devoted to the ABAS–II.

Mary Sichi, research analyst, was invaluable to the project during standardization and the final stages of development. Her research into current developments in the field of mental retardation contributed to the expansion of the test framework. She collaborated with the authors to ensure that their vision of the ABAS–II was carried throughout the entire process of publication. Her supervision of case review and scoring assured the quality of the data. During the final phase of development, she drafted many sections of the manual and dedicated her efforts to increasing the overall quality and clarity of the entire manual and the rating forms. The authors feel very fortunate that she was assigned to the project and express their gratitude for her organization, patience and encouragement, in addition to her professional expertise.

Yvonne Elias, senior research analyst, was responsible for many aspects of the tryout phase of development. Tara Malec, senior research analyst, assisted with necessary scoring processes during tryout. Stephanie Tong, research analyst, offered crucial 11th hour support during the final phase of development by assisting with table formatting and quality assurance. She also provided a sharp-eyed review of the materials. Imelda G. Martinez, research analyst, lent her expertise to table and figures, allowing important project deadlines to be met. A special thanks is in order for Dr. Diane Coalson, research director, for contributing her writing talents to an important section of the manual.

Dr. Judith Treloar's leadership in supporting the development of the ABAS and the ABAS–II has been instrumental. She envisioned the need for such a scale and worked actively to help ensure its success. The work of Dr. David M. Schwartz, National Measurement Consultant, has also been critical.

Dr. Aurelio Prifitera, President of the The Psychological Corporation, and Dr. Lawrence G. Weiss, Director, Psychological Measurement Group, provided critical advice and support during key phases of the project. In particular, Dr. Weiss' support of the expansion of the test framework and other innovations was essential. Phillip Ray, project manager, lent his energy and enthusiasm during the standardization phase of the project. Pamela Parmer, project manger, jumped in with both feet during the final phase, and her commitment and determination propelled the project through to publication.

Dr. Charles Wilkins, senior psychometrician, was key to the analysis and preparation of the normative data. Dr. Anli Lin, statistical analyst, also contributed psychometric support, including the factor analysis and hand-smoothing of norms. Cleopatra DeLeon, senior data analyst, assisted with the preparation of data for statistical analysis.

Members of the editorial team deserve much credit for their part in shaping the complexities of ABAS–II content into a smooth finished product. Weslea Miller, editor, was instrumental in coordinating all aspects of editorial and production work. She dedicated many hours to editing the rating forms and all components of the manual. She also took on the difficult but important task of working with translators to assure the quality of the Spanish rating forms. Elizabeth Manclark, freelance editor, lent her expertise to a large portion of the manual. Margaret Young Cooley also provided editorial support during the final

phases. Spanish translator Jennifer Meehan, along with members of Tri-Lin Integrated Services translated, back translated, and reviewed Spanish versions of rating forms. Special thanks are due to Dulce Mendoza and María Muñoz, research analysts, for conducting final reviews of all Spanish rating forms. Cynthia Sweet, Marian Zahora, Javier Flores, Robin Espiritu, and other members of the production team contributed their talents to the appearance, design, and production of all ABAS–II materials.

Victoria Locke, manager, clinical sampling, and her team worked very hard to collect an often elusive sample of young children from a variety of backgrounds. Joyce Townsend, supervisor, Examiner Relations/Recruiting, and her team, including Wesley King, Kristin Vega, Elsa Estorga, Becky Matanic, and Mari Martinez deserve mention for their efforts. Stephanie Torres, study manager, deserves special recognition for keeping all aspects of sampling on track to the end. Ruth Mendez, clinical sampling operations supervisor, Cynthia Jackson, and other members of the case review team had the difficult task of coordinating the collection and initial review of the data. Rene Martinez, senior associate, did an excellent job of tracking and reviewing all clinical cases. David Quintero, scoring supervisor, coordinated all aspects of data entry and protocol filing. Matt Morris, manager, System Software Development group and Glen Larson, programmer, performed the computer programming necessary for scoring and data entry. Jean Shimko, quality assurance supervisor, and her team of reviewers including Mary Mata and Evangelina Souza were responsible for the enormous task of checking the accuracy of the normative data and the tables in the manual.

Dr. Nancy Roser, Language and Literacy Studies, Flawn Professor of Early Childhood Education, The University of Texas at Austin conducted an impressively thorough readability study of items on the infant-preschool rating forms. Appreciation is also due to the many examiners, coordinators, reviewers, and consultants who provided data and feedback to make this project possible. Their names are listed in Appendix D of this manual. Equally important are the respondents who gave their time completing ABAS–II rating forms so that we could collect the necessary data. The publication and high level of quality of the ABAS–II are only possible due to the combined effort, talent, and professional dedication of everyone involved.

Patti L. Harrison
Thomas Oakland
July 2003

Contents

Chapter 1. Introduction 1

Key Features 1

Nature of Adaptive Skills 3

Focus and Content of the Rating Forms 7

Parent/Primary Caregiver Form (Ages 0–5) 7

Parent Form (Ages 5–21) 7

Teacher/Daycare Provider Form (Ages 2–5) 7

Teacher Form (Ages 5–21) 7

Adult Form (Ages 16–89) 8

Age Range Overlap Between Forms 8

Adaptive Skills and Mental Retardation 8

Use of the ABAS–II With Individuals Other Than Those With Mental Retardation 9

Applications of the ABAS–II 11

Diagnosis and Classification 11

Identification of Strengths and Weaknesses in Adaptive Skills 11

Identifying Service Needs and Planning and Monitoring Programs 11

Research and Evaluation 12

Qualifications of Users, Confidentiality, and Test Security 12

Chapter 2. Administration and Scoring 15

General Considerations 15

Selecting Respondents 15

Rapport and Communication With Respondents 16

Multiple Respondents 19

When a Respondent Completes Rating Forms for More Than One Individual 19

General Issues in Rating Scale Assessment 19

Administration Guidelines 20

Materials and Setting 20

Completing the Demographics Section of the Rating Form 20

Responding to and Recording Ratings for Items 22

Checking the Completed Rating Form 22

Administration by Reading the Items to Respondents . . . 23
Scoring . . . 23

Chapter 3. Interpretations and Interventions . . . 31
Description of Scores . . . 31
Distribution of the Skill Area Scaled Scores . . . 32
Distributions of the Adaptive Domain and GAC Standard Scores . . . 32
Percentile Ranks . . . 33
Test-Age Equivalents . . . 33
Standard Errors of Measurement and Confidence Intervals . . . 34
Descriptive Classifications . . . 34
Interpretation of Scores . . . 35
Verify the Administration and Scoring of Rating Forms . . . 35
Interpreting the GAC . . . 36
Examining Scatter . . . 37
Interpreting Strengths and Weaknesses . . . 38
Developing Hypotheses About Strengths and Weaknesses . . . 41
Summary of Guidelines for Interpreting Scores . . . 42
Use of ABAS–II Scores Within a Comprehensive Assessment . . . 44
Review Other Assessments, Background Information, and Personal Qualities . . . 44
Understanding the Nature and Needs of an Individual's Environment . . . 44
Avoid Relying Solely on ABAS–II Profiles to Diagnose . . . 44
Utilize ABAS–II Information for Planning Interventions . . . 45
ABAS–II Items in Program Planning . . . 45
Skill Areas in Program Planning . . . 45
Adaptive Domains in Program Planning . . . 45
Guidelines for Program Planning and Monitoring . . . 46
Case Studies . . . 48

Chapter 4. Development and Standardization . . . 59
Development of the ABAS–II . . . 59
Pilot and Tryout Studies . . . 59
Standardization . . . 59
Norms Development . . . 72

Chapter 5. Reliability and Validity 75
Evidence of Reliability 75
Internal Consistency 76
Standard Errors of Measurement 91
Test-Retest Reliability 95
Inter-Rater Reliability 104
Cross-Form Consistency 109
Evidence of Validity 113
Test Content 113
Response Process 114
Internal Structure 115
Internal Consistency 115
Age Group Differences 115
Intercorrelations Among the Skill Areas 115
Factor Structure 120
Correlations With Other Variables 122
Correlations With Measures of Adaptive Behavior and Other Types of Behavior Rating Scales 122
Correlations With Measures of Intelligence and Achievement 127
Summary of Comparison Studies 137
Clinical Validity Studies 137
Summary of Clinical Validity Studies 171
Consequences of Using the ABAS–II 171

Appendix A. Norms Tables 173

Appendix B. Supplementary Tables 271

Appendix C. Intercorrelation Tables 303

Appendix D. Examiners, Research Coordinators, Reviewers, and Consultants 335

References 339

Figures

Figure 2.1 Sample of the Demographic Section of the Parent Form (Ages 5–21) 21

Figure 2.2 Sample of a Completed Skill Area of the Parent Form (Ages 5–21) 22

Figure 2.3 Sample of a Completed Summary Page of the Parent Form (Ages 5–21) 25

Figure 2.4 Sample of a Completed Strength/Weakness Analysis Using the GAC Mean 27

Figure 2.5 Sample of a Completed Strength/Weakness Analysis Using Domain Means and a Completed Discrepancy Comparison 29

Figure 3.1 Guidelines for Interpreting Scores 43

Figure 4.1 Standardization Sampling Sites for Infant-Preschool Forms 61

Figure 4.2 Standardization Sampling Sites for School-Age and Adult Forms 61

Tables

Table 1.1 Description and Sample Items of the Skill Areas for Teacher/Daycare Provider and Parent/Primary Caregiver Forms 4

Table 1.2 Description and Sample Items of the Skill Areas for Teacher, Parent, and Adult Forms. 5

Table 1.3 Skill Areas Included in the GAC and Adaptive Domains 6

Table 2.1 Frequently Asked Questions and Answers 18

Table 3.1 GAC Scores, Domain Composite Scores, Skill Area Scaled Scores, Percentiles, and Score Classifications 35

Table 3.2 Scaled Scores for Joe and Mary on the Parent Form. 39

Table 3.3 Adaptive Domain Composite and GAC Scores for Joe and Mary on the Parent Form 40

Table 3.4 Chris' ABAS–II Scores 50

Table 3.5 Lewis' ABAS–II Scores 51

Table 3.6 Nona's ABAS–II Scores. 53

Table 3.7 Rodney's ABAS–II Scores Before and After the Accident 55

Table 3.8 Mary's ABAS–II Scores. 56

Table 4.1 Standardization Sample by Age Group. 60

Table 4.2 Standardization Sample by Age, Race/Ethnicity, and Education: Parent/Primary Caregiver and Teacher/Daycare Provider Forms 62

Table 4.3 Standardization Sample by Age, Race/Ethnicity, and Education: Parent and Teacher Forms 63

Table 4.4 Standardization Sample by Age, Race/Ethnicity, and Education: Adult Form, Self Report and Rated by Others 64

Table 4.5 Standardization Sample by Age, Sex, and Education: Parent/Primary Caregiver and Teacher/Daycare Provider Forms. 65

Table 4.6 Standardization Sample by Age, Sex, and Education: Parent and Teacher Forms 66

Table 4.7 Standardization Sample by Age, Sex, and Education: Adult Form, Self Report and Rated by Others 67

Table 4.8 Standardization Sample by Age, Sex, and Race/Ethnicity: Parent/Primary Caregiver and Teacher/Daycare Provider Forms 68

Table 4.9 Standardization Sample by Age, Sex, and Race/Ethnicity: Parent and Teacher Forms 69

Table 4.10 Standardization Sample by Age, Sex, and Race/Ethnicity: Adult Form, Self Report and Rated by Others 70

Table 4.11 Percentage of Clinical Cases Included in the Standardization Samples 71

Table 4.12 Information Regarding the Respondents of the Standardization Samples 72

Table 5.1 Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Teacher/Daycare Provider and Teacher Forms 77

Table 5.2 Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Parent/Primary Caregiver and Parent Forms. 82

Table 5.3 Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Adult Form, Self Report. 86

Table 5.4 Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Adult Form, Rated by Others 88

Table 5.5 Standard Errors of Measurement of Skill Areas, Adaptive Domains, and the GAC by Age: Teacher/Daycare Provider and Teacher Forms. 92

Table 5.6 Standard Errors of Measurement of Skill Areas, Adaptive Domains, and the GAC by Age: Parent/Primary Caregiver and Parent Forms 93

Table 5.7 Standard Errors of Measurement of Skill Areas, Adaptive Domains, and the GAC by Age: Adult Form, Self Report 94

Table 5.8 Standard Errors of Measurement of Skill Areas, Adaptive Domains, and the GAC by Age: Adult Form, Rated by Others. 94

Table 5.9 Test-Retest Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Teacher/Daycare Provider and Teacher Forms 96

Table 5.10 Test-Retest Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Parent/Primary Caregiver and Parent Forms 99

Table 5.11 Test-Retest Reliability Coefficients of Skill Areas, Adaptive Domains, and GAC: Adult Form, Self Report. 103

Table 5.12 Test-Retest Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Adult Form, Rated by Others 103

Table 5.13 Inter-Rater Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Teacher/Daycare Provider and Teacher Forms 104

Table 5.14 Inter-Rater Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Parent/Primary Caregiver and Parent Forms 106

Table 5.15 Inter-Rater Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Adult Form, Rated by Others 108

Table 5.16 Consistency Between the Ratings of Teachers and Parents 109
Table 5.17 Consistency Between the Adult Form, Self Report and the Adult Form, Rated by Others 110
Table 5.18 Correlation Between the Teacher/Daycare Provider and Teacher Forms: Age 5 112
Table 5.19 Correlation Between the Parent/Primary Caregiver and Parent Forms: Age 5 113
Table 5.20 Intercorrelations of Skill Area Scaled Scores and Sums of Scaled Scores for Adaptive Domains and the GAC: Teacher/Daycare Provider and Teacher Forms (All Ages) 116
Table 5.21 Intercorrelations of Skill Area Scaled Scores and Sums of Scaled Scores for Adaptive Domains and the GAC: Parent/Primary Caregiver and Parent Forms (All Ages) 117
Table 5.22 Intercorrelations of Skill Area Scaled Scores and Sums of Scaled Scores for Adaptive Domains and the GAC: Adult Form, Self Report (All Ages) 118
Table 5.23 Intercorrelations of Skill Area Scaled Scores and Sums of Scaled Scores for Adaptive Domains and the GAC: Adult Form, Rated by Others (All Ages) 119
Table 5.24 Goodness-of-Fit Statistics for Confirmatory Factor Analysis 122
Table 5.25 Correlation Between the ABAS–II and the VABS–CE 123
Table 5.26 Correlation Between the ABAS–II and the VABS–IE 125
Table 5.27 Correlation Between the ABAS–II and the SIB–R 126
Table 5.28 Correlation Between the ABAS–II and the BASC 128
Table 5.29 Correlation Between the ABAS–II and the WPPSI–III 129
Table 5.30 Correlation Between the ABAS–II and the WISC–III 131
Table 5.31 Correlation Between the ABAS–II and the WISC–IV 133
Table 5.32 Correlation Between the ABAS–II and the WAIS–III 134
Table 5.33 Correlation Between the ABAS–II and the WASI 135
Table 5.34 Correlation Between the ABAS–II and the SB–IV 136
Table 5.35 Correlation Between the ABAS–II and the WIAT 136
Table 5.36 Demographic Data of the Clinical Samples: Teacher/Daycare Provider and Parent/Primary Caregiver Forms 138
Table 5.37 Demographic Data of the Clinical Samples: Teacher Form 139
Table 5.38 Demographic Data of the Clinical Samples: Parent and Adult Forms 140
Table 5.39 Mean Performance of Individuals With Mental Retardation and Matched Control Groups 142
Table 5.40 Mean Performance of Children With Developmental Delay and Matched Control Groups 148
Table 5.41 Mean Performance of Children With Biological Risk Factors and Matched Control Groups 150

Table 5.42 Mean Performance of Children With Motor Impairments and Matched Control Groups 152

Table 5.43 Mean Performance of Children With Physical Impairments and a Matched Control Group 154

Table 5.44 Mean Performance of Children With Receptive and/or Expressive Language Disorder and Matched Control Groups 155

Table 5.45 Mean Performance of Children With Pervasive Developmental Disorder Not Otherwise Specified and Matched Control Groups 156

Table 5.46 Mean Performance of Children With Autistic Disorder and Matched Control Groups. 158

Table 5.47 Mean Performance of Children With ADHD and Matched Control Groups. 161

Table 5.48 Mean Performance of Children With Behavior Disorders and a Matched Control Group 163

Table 5.49 Mean Performance of Children With Emotional Disturbance and a Matched Control Group 163

Table 5.50 Mean Performance of Children who are Deaf or Hard of Hearing and a Matched Control Group. 165

Table 5.51 Mean Performance of Children With Learning Disabilities and Matched Control Groups 166

Table 5.52 Mean Performance of Adults With Alzheimer's Disease and a Matched Control Group 169

Table 5.53 Mean Performance of Adults With Neuropsychological Disorders and Matched Control Groups 170

Appendix A. Norms Tables

Teacher/Daycare Provider and Teacher Forms

Table A.1 Scaled Score Equivalents of Skill Area Raw Scores: Teacher/Daycare Provider and Teacher Forms 174

Table A.2 GAC and Adaptive Domain Composite Equivalents of Sums of Scaled Scores: Teacher/Daycare Provider and Teacher Forms 186

Table A.3 Average Number of Items Guessed by the Standardization Sample: Teacher/Daycare Provider and Teacher Forms 204

Table A.4 Test-Age Equivalents of Skill Area Raw Scores: Teacher/Daycare Provider and Teacher Forms 205

Parent/Primary Caregiver and Parent Forms

Table A.5 Scaled Score Equivalents of Skill Area Raw Scores: Parent/Primary Caregiver and Parent Forms. 206

Table A.6 GAC and Adaptive Domain Composite Equivalents of Sums of Scaled Scores: Parent/Primary Caregiver and Parent Forms. 223

Table A.7 Average Number of Items Guessed by the Standardization Sample: Parent/Primary Caregiver and Parent Forms. 247

Table A.8 Test-Age Equivalents of Skill Area Raw Scores: Parent/Primary Caregiver and Parent Forms 248

Adult Form, Self Report

Table A.9 Scaled Score Equivalents of Skill Area Raw Scores: Adult Form, Self Report 250

Table A.10 GAC and Adaptive Domain Composite Equivalents of Sums of Scaled Scores: Adult Form, Self Report 252

Table A.11 Average Number of Items Guessed by the Standardization Sample: Adult Form, Self Report 259

Adult Form, Rated by Others

Table A.12 Scaled Score Equivalents of Skill Area Raw Scores: Adult Form, Rated by Others 260

Table A.13 GAC and Adaptive Domain Composite Equivalents of Sums of Scaled Scores: Adult Form, Rated by Others 262

Table A.14 Average Number of Items Guessed by the Standardization Sample: Adult Form, Rated by Others 269

Appendix B. Supplementary Tables

Teacher/Daycare Provider and Teacher Forms

Table B.1 Differences Between Single Skill Area Scaled Scores and Average Scaled Scores Required for Statistical Significance (Critical Values) and Differences Obtained by Various Percentages of the Standardization Sample (Base Rates): Teacher/Daycare Provider and Teacher Forms 272

Table B.2 Pairwise Comparison: Values Required for Statistical Significance (Critical Values) at the 15 and 5% Levels When Comparing Each Scaled Score With Every Other Scaled Score, Teacher/Daycare Provider and Teacher Forms 274

Table B.3 Cumulative Percentages of Inter-Skill Area Scatter Within 9 Skill Areas and 3 Adaptive Domains: Teacher/Daycare Provider and Teacher Forms 275

Table B.4 Percentage of Standardization Sample Obtaining Various Skill Area Scaled Scores 2 or More Standard Deviations Below the Mean: Teacher/Daycare Provider and Teacher Forms 276

Table B.5 Differences Between Adaptive Domain Composite Scores Required for Statistical Significance (Critical Values) at the 15 and 5% Levels, by Age Group and Overall Standardization Sample: Teacher/Daycare Provider and Teacher Forms 277

Table B.6 Differences Between Adaptive Domain Composite Scores Obtained by Various Percentages of the Standardization Sample (Base Rates): Teacher/Daycare Provider and Teacher Forms 278

Table B.7 Percentage of Standardization Sample Obtaining One or More Adaptive Domain Composites or the GAC 2 or More Standard Deviations Below the Mean: Teacher/Daycare Provider and Teacher Forms 280

Parent/Primary Caregiver and Parent Forms

Table B.8 Differences Between Single Skill Area Scaled Scores and Average Scaled Scores Required for Statistical Significance (Critical Values) and Differences Obtained by Various Percentages of the Standardization Sample (Base Rates): Parent/Primary Caregiver and Parent Forms 281

Table B.9 Pairwise Comparison: Values Required for Statistical Significance (Critical Values) at the 15 and 5% Levels When Comparing Each Scaled Score With Every Other Scaled Score, Parent/Primary Caregiver and Parent Forms 283

Table B.10 Cumulative Percentages of Inter-Skill Area Scatter Within 7, 9, or 10 Skill Areas and 3 Adaptive Domains: Parent/Primary Caregiver and Parent Forms 284

Table B.11 Percentage of Standardization Sample Obtaining Various Skill Area Scaled Scores 2 or More Standard Deviations Below the Mean: Parent/Primary Caregiver and Parent Forms. 286

Table B.12 Differences Between Adaptive Domain Composite Scores Required for Statistical Significance (Critical Values) at the 15 and 5% Levels, by Age Group and Overall Standardization Sample: Parent/Primary Caregiver and Parent Forms 287

Table B.13 Differences Between Adaptive Domain Composite Scores Obtained by Various Percentages of the Standardization Sample (Base Rates): Parent/Primary Caregiver and Parent Forms. 289

Table B.14 Percentage of Standardization Sample Obtaining One or More Adaptive Domain Composites or the GAC 2 or More Standard Deviations Below the Mean: Parent/Primary Caregiver and Parent Forms 291

Adult Form, Self Report

Table B.15 Differences Between Single Skill Area Scaled Scores and Average Scaled Scores Required for Statistical Significance (Critical Values) and Differences Obtained by Various Percentages of the Standardization Sample (Base Rates): Adult Form, Self Report 292

Table B.16 Pairwise Comparison: Values Required for Statistical Significance (Critical Values) at the 15 and 5% Levels When Comparing Each Scaled Score With Every Other Scaled Score, Adult Form, Self Report 293

Table B.17 Cumulative Percentages of Inter-Skill Area Scatter Within 9 or 10 Skill Areas and 3 Adaptive Domains: Adult Form, Self Report 294

Table B.18 Percentage of Standardization Sample Obtaining Various Skill Area Scaled Scores 2 or More Standard Deviations Below the Mean: Adult Form, Self Report. 294

Table B.19 Differences Between Adaptive Domain Composite Scores Required for Statistical Significance (Critical Values) at the 15 and 5% Levels, by Age Group and Overall Standardization Sample: Adult Form, Self Report. 295

Table B.20 Differences Between Adaptive Domain Composite Scores Obtained by Various Percentages of the Standardization Sample (Base Rates): Adult Form, Self Report. 296

Table B.21 Percentage of Standardization Sample Obtaining One or More Adaptive Domain Composites or the GAC 2 or More Standard Deviations Below the Mean: Adult Form, Self Report 297

Adult Form, Rated by Others

Table B.22 Differences Between Single Skill Area Scaled Scores and Average Scaled Scores Required for Statistical Significance (Critical Values) and Differences Obtained by Various Percentages of the Standardization Sample (Base Rates): Adult Form, Rated by Others 298

Table B.23 Pairwise Comparison: Values Required for Statistical Significance (Critical Values) at the 15 and 5% Levels When Comparing Each Scaled Score With Every Other Scaled Score, Adult Form, Rated by Others 299

Table B.24 Cumulative Percentages of Inter-Skill Area Scatter Within 9 or 10 Skill Areas and 3 Adaptive Domains: Adult Form, Rated by Others 299

Table B.25 Percentage of Standardization Sample Obtaining Various Skill Area Scaled Scores 2 or More Standard Deviations Below the Mean: Adult Form, Rated by Others 300

Table B.26 Differences Between Adaptive Domain Composite Scores Required for Statistical Significance (Critical Values) at the 15 and 5% Levels, by Age Group and Overall Standardization Sample: Adult Form, Rated by Others 300

Table B.27 Differences Between Adaptive Domain Composite Scores Obtained by Various Percentages of the Standardization Sample (Base Rates): Adult Form, Rated by Others 301

Table B.28 Percentage of Standardization Sample Obtaining One or More Adaptive Domain Composites or the GAC 2 or More Standard Deviations Below the Mean: Adult Form, Rated by Others 302

Appendix C. Intercorrelation Tables

Teacher/Daycare Provider and Teacher Forms

Table C.1 Intercorrelations of Skill Area Scaled Scores and Sums of Scaled Scores for Adaptive Domains and the GAC: Teacher/Daycare Provider and Teacher Forms 304

Parent/Primary Caregiver and Parent Forms

Table C.2 Intercorrelations of Skill Area Scaled Scores and Sums of Scaled Scores for Adaptive Domains and the GAC: Parent/Primary Caregiver and Parent Forms 314

Adult Form, Self Report

Table C.3 Intercorrelations of Skill Area Scaled Scores and Sums of Scaled Scores for Adaptive Domains and the GAC: Adult Form, Self Report 327

Adult Form, Rated by Others

Table C.4 Intercorrelations of Skill Area Scaled Scores and Sums of Scaled Scores for Adaptive Domains and the GAC: Adult Form, Rated by Others 331

Preface

Over a decade ago, Matarazzo (1992) predicted that in the new century "better developed successors to today's scales for assessing personal competency and adaptive behavior…will be in wide use in clinical settings." The *Adaptive Behavior Assessment System–Second Edition* (ABAS–II) fills this role by building on the strong psychometric and clinical foundation of ABAS while incorporating current theoretical and research perspectives in the field of adaptive behavior assessment.

ABAS–II retains all features of the original ABAS. These include an assessment of overall adaptive functioning (the General Adaptive Composite) as well as an assessment of the ten adaptive skill areas specified by the *Diagnostic and Statistical Manual of Mental Disorders–Fourth Edition–Text Revision* (*DSM–IV–TR*; American Psychiatric Association, 2000). ABAS–II retains the Parent and Teacher Forms for ages 5–21 years, and the Adult Form for ages 16–89 years. New features include the infant-preschool Parent/Primary Caregiver and Teacher/Daycare Provider rating forms and normative data for children ages birth–5 years. Additionally, the structure of the original ABAS has been expanded to incorporate current American Association on Mental Retardation (AAMR) guidelines for the diagnosis of mental retardation and includes an assessment of the Conceptual, Social, and Practical domains of adaptive behavior.

Also new to this edition are validity studies with measures of adaptive behavior for children age 5 and younger. The validity section now includes correlational studies looking at relationships with the *Wechsler Preschool and Primary Scale of Intelligence–Third Edition* and the *Wechsler Intelligence Scale for Children–Fourth Edition*. Clinical validity for children age 5 and younger is established through studies of children diagnosed with a variety of disorders including mental retardation, developmental delay, biological risk factors, and Autistic Disorder.

The expanded structure, downward extension of norms, and additional validity studies included in ABAS–II combine to create a valuable, versatile, and comprehensive assessment of adaptive behavior appropriate across a wide range of age groups and clinical settings.

Chapter 1

Introduction

The *Adaptive Behavior Assessment System®–Second Edition* (ABAS®–II) provides a comprehensive, norm-referenced assessment of adaptive skills for individuals ages birth to 89 years. The ABAS–II may be used to assess an individual's adaptive skills for diagnosis and classification of disabilities and disorders, identification of strengths and limitations, and to document and monitor an individual's progress over time. The comprehensive range of specific adaptive skills and broad adaptive domains measured by the ABAS–II correspond to the specifications identified by the American Association on Mental Retardation (AAMR; 1992, 2002b) and the *Diagnostic and Statistical Manual of Mental Disorders–Fourth Edition–Text Revision* (*DSM–IV–TR*; American Psychiatric Association [APA], 2000). The ABAS–II provides for assessment by multiple respondents, evaluates functioning across multiple settings, and contributes to a complete assessment of the daily, functional skills of an individual. The instrument's multidimensional quality is derived from five rating forms that are designed to evaluate individuals across various age ranges and environmental settings.

Components of the ABAS–II include this manual and five rating forms. Relevant respondents who can rate the daily adaptive skills of the individual being evaluated may complete these forms. Respondents may be parents, family members, teachers, daycare staff, supervisors, counselors, care providers, or others who are familiar with the daily activities of the individual. Another individual may rate an adult, or he or she may rate himself or herself. The rating forms may be completed independently by a respondent or may be read aloud to a respondent who has limited reading skills. Each rating form is easy to complete and score requiring approximately 20 minutes to complete, and 5–10 minutes to hand-score. Computer scoring software is also available.

Key Features

The ABAS–II is a multifunctional tool and can be used for several purposes. The information obtained by using this assessment can contribute to the comprehensive, diagnostic assessment of individuals who may be experiencing difficulties with the daily adaptive skills that are necessary for functioning effectively within their environments, given the typical demands placed on individuals of the same age. Results from the ABAS–II can be used in combination with other evaluation information to make diagnostic decisions and to plan interventions and services. Adaptive behavior assessment is required to meet international, national, and state requirements for identification, diagnosis, and classification of disabilities and disorders, such as those based on the Individuals with Disabilities Education Act Amendments of 1997 (IDEA; 1999), *DSM–IV–TR*, Social Security, and Medicaid. By providing comprehensive, diagnostic assessment information, the ABAS–II can be useful for individuals with a variety of disabilities, disorders, and health conditions, including mental retardation, developmental disabilities, developmental delays, learning and emotional disorders, and dementias. This type of information is essential when adaptive skill limitations are a concern and the goal of the intervention or treatment is to improve the daily adaptive functioning of an individual.

The five rating forms were developed during 8 years of research. Data collected during pilot and national tryout phases were analyzed to select items for the national standardization editions. The standardization samples for the Parent/Primary Caregiver and Teacher/Daycare Provider Forms for children ages birth to 5 years together comprised 2,100 individuals; the standardization samples for the Parent, Teacher, and Adult Forms together comprised 5,270 individuals. The composition of the standardization

samples was representative of the U.S. population according to the following variables: gender, race/ethnicity, and parent education level (U.S. Bureau of the Census, 1999, 2000). These samples represented a continuum of development, including individuals with typically developing skills and individuals identified with disability in proportions representative of the general U.S. population (U.S. Bureau of the Census, 1999, 2000).

The normative data presented in this manual enable the professional user to obtain a normative comparison between an individual's adaptive skills and the adaptive skills of typically developing individuals of the same age in a representative national standardization sample. The ABAS–II also features validity data for special samples of individuals with disabilities, including mental retardation, developmental delay, and others.

Norm-referenced scores are provided for specific skill areas as specified by AAMR (1992) and *DSM–IV–TR* guidelines. Tables 1.1 and 1.2 provide a summary of the skill areas assessed by the ABAS–II. Norm-referenced scores are provided for three broad domains of adaptive behavior. These adaptive domains, as defined by the AAMR (2002b), were developed by combining skill areas and are described in Table 1.3. Norm-referenced scores are also provided for a total score, called the General Adaptive Composite (GAC). Norm-referenced scores for the skill areas include scaled scores ($M = 10$, $SD = 3$), average guessing rates, and age equivalents. Norm-referenced scores for the adaptive domains and for the GAC include standard scores ($M = 100$, $SD = 15$), critical values to calculate 90% and 95% confidence intervals, and percentile ranks. Descriptive classifications of *Extremely Low*, *Borderline*, *Below Average*, *Average*, *Above Average*, *Superior*, and *Very Superior* may be used for the skill areas, adaptive domains, and the GAC (see Table 3.1).

The skill areas, adaptive domains, and GAC have high internal consistency and test-retest reliability. Cross-form consistency studies enable comparisons for situations in which a parent and teacher rate the same child, and when self-ratings and other-respondent ratings are obtained for an adult. Tables 5.16 and 5.17 provide correlation data and compare means of skill area scaled scores, adaptive domain composite scores, and GAC scores obtained when different respondents rate the same individuals.

Due to the overlap of age ranges between the infant-preschool and school-age rating forms, a special cross-form consistency study compared the scores of children age 5 on the Teacher/Daycare Provider or Parent/Primary Caregiver Form with their scores on the corresponding school-age form (i.e. Teacher or Parent Form). Tables 5.18 and 5.19 provide correlation data and compare means of skill area scaled scores, adaptive domain composite scores, and GAC scores obtained from this study.

Extensive validity data were collected during development. Validity studies were conducted with samples of individuals with the following disabilities or disorders: mental retardation, learning disabilities, Attention-Deficit/Hyperactivity Disorder (ADHD), developmental delays, biological risk factors, language disorders, motor impairments, autistic disorders, emotional disturbances, behavior disorders, hearing impairment, physical impairments, Alzheimer's disease, and neuropsychological disorders. The validity studies with clinical samples provide useful data about the performance of individuals with various disabilities and disorders and include percentages of individuals in each sample that fell below designated cut-off scores.

Additional validity studies were conducted to investigate relationships between the ABAS–II and the *Vineland Adaptive Behavior Scales–Interview Edition* (VABS–IE; Sparrow, Balla, & Cicchetti, 1984); the *Vineland Adaptive Behavior Scales–Classroom Edition* (VABS–CE; Sparrow, Balla, & Cicchetti, 1985); the *Behavior Assessment System for Children–Teacher Rating Scales* (BASC; Reynolds & Kamphaus, 1998); the *Scales of Independent Behavior–Revised* (SIB–R; Bruininks, Woodcock, Weatherman, & Hill, 1996); the *Wechsler Preschool and Primary Scale of Intelligence–Third Edition* (WPPSI–III; Wechsler, 2002); the *Wechsler Intelligence Scale for Children–Third Edition* (WISC–III; Wechsler, 1991); the *Wechsler Intelligence Scale for Children–Fourth Edition* (WISC–IV; Wechsler, 2003); the *Wechsler Adult Intelligence Scale–Third Edition* (WAIS–III; Wechsler, 1997); the *Wechsler Abbreviated Scales of Intelligence* (WASI; The Psychological Corporation, 1999); *The Stanford Binet Intelligence Scale–Fourth Edition* (SB–IV; Thorndike, Hagen, & Sattler, 1986); and the *Wechsler Individual Achievement Test* (WIAT; The Psychological Corporation, 1992).

Nature of Adaptive Skills

The ABAS–II is based on three types of information: (a) a concept of adaptive behavior promoted for many years by the AAMR (1992, 2002b; Grossman, 1983; Heber, 1959); (b) legal and professional standards applicable to a number of special education and disability classification systems, such as federal and state special education and disability regulations, IDEA (1999), and the *DSM–IV–TR*; and (c) research investigating diagnosis, classification, and intervention for people with various disabilities. The three types of information are uniform in their conclusion that every individual requires a repertoire of skills in order to meet the daily demands and expectations of his or her environment. Examples of adaptive skills that individuals use on a daily basis include those related to eating, dressing, expressing needs, taking care of personal possessions, making purchases, interacting with peers, controlling one's behavior in a structured setting, following a schedule, communicating with other people, practicing safety, managing money, and holding a job.

The ABAS–II is designed to evaluate whether an individual displays various functional skills necessary for daily living without the assistance of others. Thus, this instrument focuses on independent behaviors and measures what an individual actually does, in addition to measuring what he or she may be able to do. In addition, the ABAS–II focuses on behaviors an individual displays on his or her own, without assistance from others.

Historically, two general aspects of adaptive skills have been described in the literature and measured with adaptive skill scales: personal independence and social responsibility (AAMR, 1992, 2002b; Grossman, 1983; Harrison, 1990; Horn & Fuchs, 1987). Grossman described these two aspects as "what people do to take care of themselves and relate to others" (p. 42). More recently, the AAMR (2002b) concluded that research investigating adaptive skills identifies three clusters and thus describes adaptive behavior as "the collection of conceptual, social, and practical skills that have been learned by people in order to function in their everyday lives" (p. 41).

The AAMR (2002b) identifies several important characteristics of adaptive behavior that relate to individuals with mental retardation; these aspects have significant implications for assessment, diagnosis, classification, and intervention for individuals who have other disabilities and disorders as well. The characteristics include:

- Adaptive skill limitations often coexist with strengths in other adaptive skill areas (p. 41).
- (A) person's strengths and limitations in adaptive skills should be documented within the context of community and cultural environments typical of the person's age peers and tied to the person's individualized need for supports (p. 41).

Thus, adaptive skills as measured by the ABAS–II are defined as those practical, everyday skills required to function and meet environmental demands, including effectively and independently taking care of oneself and interacting with other people. Specific skill areas included in the definitions of adaptive skills used by the AAMR (1992) and the *DSM–IV–TR*, and measured by the ABAS–II are: Communication, Community Use, Functional Academics, Home/School Living, Health and Safety, Leisure, Self-Care, Self-Direction, Social, and Work. This set of skills areas can be conceptually grouped into three broad categories of related skills. These categories, as defined by the AAMR (2002b), are represented by the following adaptive domains: Conceptual (communication and academic skills), Social (interpersonal and social competence skills), and Practical (independent living and daily living skills).

Table 1.1 Description and Sample Items of the Skill Areas for Teacher/Daycare Provider and Parent/Primary Caregiver Forms

Skill Area	Number of Items: Teacher/ Daycare Provider Form	Number of Items: Parent/ Primary Caregiver Form	Description	Sample Items
Communication	25	25	Speech, language, and listening skills needed for communication with other people, including vocabulary, responding to questions, conversation skills, nonverbal communication skills, etc.	Raises voice to get attention. Sings all or part of the words to songs. Speaks in sentences of six or more words.
Community Use	–	22	Skills needed for functioning and appropriate behavior in the community, including getting around in the community, expression of interest in activities outside the home, recognition of different facilities, etc.	Recognizes own home in his/her immediate neighborhood. Asks to go to a park or other favorite community place. Finds the restrooms in public places.
Functional Pre-Academics	24	23	Basic pre-academic skills that form the foundations for reading, writing, mathematics, and other skills needed for daily, independent functioning, including letter recognition, counting, drawing simple shapes, etc.	Holds crayon or pencil with point down when using paper. Sings the alphabet song. Reads his/her own written name.
School/Home Living[a]	23	25	Skills needed for basic care of a home or living setting or a school or classroom setting, including cleaning, straightening, helping adults with household tasks, taking care of personal possessions, etc.	Turns television on and off. Picks up and throws away trash. Wipes up spills at school or daycare.
Health and Safety	21	24	Skills needed for protection of health and to respond to illness and injury, including following safety rules, using medicines, showing caution, keeping out of physical danger, etc.	Acts startled or surprised when he/she hears a very loud sound. Refrains from putting dirt or sand in mouth. Carries scissors safely.
Leisure	23	22	Skills needed for engaging in and planning leisure and recreational activities, including playing with others, playing with toys, engaging in recreation at home, following rules in games, etc.	Shows interest in mobiles or other moving objects. Plays simple games like "peek-a-boo" or rolls a ball to others. Asks to be read to from a favorite book.
Self-Care	24	24	Skills needed for personal care including eating, dressing, bathing, toileting, grooming, hygiene, etc.	Nurses, drinks, or eats willingly, with little encouragement. Holds and drinks from a sipping cup. Washes hands with soap. Dresses himself/herself.
Self-Direction	24	25	Skills needed for independence, responsibility, and self-control, including making choices about food and clothing, starting and completing tasks, following a daily routine, following directions, etc.	Sits quietly for at least one minute without demanding an adult's attention. Resists pushing or hitting another child when angry or upset. Keeps working on hard tasks without becoming discouraged or quitting.
Social	25	24	Skills needed to interact socially and get along with other people, including expressing affection, having friends, showing and recognizing emotions, assisting others, using manners, etc.	Smiles when he/she sees parent. Shows sympathy for others when they are sad or upset. Apologizes if he/she hurts the feelings of others.
Motor	27	27	Basic fine and gross motor skills needed for locomotion, manipulation of the environment and the development of more complex activities such as sports, including sitting, pulling up to a standing position, walking, fine motor control, kicking, etc.	Shakes rattle or other toys. Stands up from a sitting position. Uses scissors to cut along a straight line.
Total Items	216	241		

[a]On the Teacher/Daycare Provider Form, the skill area is titled School Living; on the Parent/Primary Caregiver Form, the skill area is titled Home Living.

Table 1.2 Description and Sample Items of the Skill Areas for Teacher, Parent, and Adult Forms

Skill Area	Number of Items			Description	Sample Items
	Teacher Form	Parent Form	Adult Form		
Communication	22	24	25	Speech, language, and listening skills needed for communication with other people, including vocabulary, responding to questions, conversation skills, etc.	Names 20 or more familiar objects. Ends conversations appropriately. Uses up-to-date information to discuss current events.
Community Use	15	23	24	Skills needed for functioning in the community, including use of community resources, shopping skills, getting around in the community, etc.	Mails letters at the postal box or local post office. Finds and uses a pay phone. Orders his/her own meals when eating out.
Functional Academics	22	23	27	Basic reading, writing, mathematics, and other academic skills needed for daily, independent functioning, including telling time, measurement, writing notes and letters, etc.	Reads his/her own written name. Finds somebody's telephone number in the phone book. Makes reminder notes or lists.
School/Home Living[a]	20	25	23	Skills needed for basic care of a home or living setting (or, for the Teacher Form, school and classroom setting), including cleaning, straightening, property maintenance and repairs, food preparation, performing chores, etc.	Wipes up spills at home. Takes out trash when can is full. Keeps toys, games, or other belongings neat and clean.
Health and Safety	16	22	20	Skills needed for protection of health and to respond to illness and injury, including following safety rules, using medicines, showing caution, etc.	Carries scissors safely. Follows general safety regulations at school. Tests hot foods before eating them.
Leisure	17	22	23	Skills needed for engaging in and planning leisure and recreational activities, including playing with others, engaging in recreation at home, following rules in games, etc.	Plays alone with toys, games, or other fun activities. Waits for his/her turn in games and other fun activities. Tries a new activity to learn about something new.
Self-Care	19	24	25	Skills needed for personal care including eating, dressing, bathing, toileting, grooming, hygiene, etc.	Buttons his/her own clothing. Uses public restroom alone. Keeps hair neat during the day by brushing or combing.
Self-Direction	21	25	25	Skills needed for independence, responsibility, and self-control, including starting and completing tasks, keeping a schedule, following time limits, following directions, making choices, etc.	Stops a fun activity, without complaints, when told that time is up. Controls temper when disagreeing with friends. Completes large home or school projects on time.
Social	20	23	23	Skills needed to interact socially and get along with other people, including having friends, showing and recognizing emotions, assisting others, and using manners.	Says "Thank you" when given a gift. Laughs in response to funny comments or jokes. Listens to friends or family members who need to talk about problems.
Work[b]	21	21	24	Skills needed for successful functioning and holding a part- or full-time job in a work setting, including completing work tasks, working with supervisors, and following a work schedule.	Shows positive attitude towards job. Starts back to work willingly after taking a break or lunch. Cares properly for work supplies and equipment.
Total Items	193	232	239		

[a]On the Teacher Form, the skill area is titled School Living; on the Parent and Adult Forms, the skill area is titled Home Living.
[b]The Work Skill Area is completed only when individuals have a part- or full-time job.

Table 1.3 Skill Areas Included in the GAC and Adaptive Domains

Parent/Primary Caregiver Form				Teacher/Daycare Provider Form[b]		Parent Form		Teacher Form		Adult Form	
Ages 0–11 months[a]		Ages 1–5 years		Ages 2–5		Ages 5–21		Ages 5–21		Ages 16–89	
GAC	Skill Areas	GAC	Skill Areas	GAC	Skill Areas	GAC	Skill Areas	GAC	Skill Areas	GAC	Skill Areas
	Communication Health and Safety Leisure Self-Care Self-Direction Social Motor[c]		Communication Community Use Functional Pre-Academics Home Living Health and Safety Leisure Self-Care Self-Direction Social Motor[c]		Communication Functional Pre-Academics School Living Health and Safety Leisure Self-Care Self-Direction Social Motor[c]		Communication Community Use Functional Academics Home Living Health and Safety Leisure Self-Care Self-Direction Social Work[d]		Communication Community Use Functional Academics Home Living Health and Safety Leisure Self-Care Self-Direction Social Work[d]		Communication Community Use Functional Academics Home Living Health and Safety Leisure Self-Care Self-Direction Social Work[e]
Adaptive Domain	**Skill Areas**	**Adaptive Domain**	**Skill Areas**	**Adaptive Domain**	**Skill Areas**	**Adaptive Domain**	**Skill Areas**	**Adaptive Domain**	**Skill Areas**	**Adaptive Domain**	**Skill Areas**
Conceptual	Communication Self-Direction	Conceptual	Communication Functional Pre-Academics[f] Self-Direction	Conceptual	Communication Functional Pre-Academics[f] Self-Direction	Conceptual	Communication Functional Academics Self-Direction	Conceptual	Communication Functional Academics Self-Direction	Conceptual	Communication Functional Academics Self-Direction
Social	Leisure Social	Social	Leisure Social	Social	Leisure Social	Social	Leisure Social	Social	Leisure Social	Social	Leisure Social
Practical	Self-Care Health and Safety[g]	Practical	Self-Care Home Living[h] Community Use Health and Safety	Practical	Self-Care School Living[h] Community Use Health and Safety	Practical	Self-Care Home Living Community Use Health and Safety	Practical	Self-Care School Living Community Use Health and Safety	Practical	Self-Care Home Living Community Use Health and Safety Work[e]

Note. Shaded areas indicate the skill areas that are completed and scored for each form.

Note. The grouping of skill areas into adaptive domains is based on AAMR (2002b) guidelines.

[a]Functional Pre-Academics, Home living, and Community Use are not administered to children under 1 year of age.

[b]Community Use is not included on the Teacher/Daycare Provider Form.

[c]Motor is only included on the Parent/Primary Caregiver and Teacher/Daycare Provider Forms. The Motor Skill Area scaled score is included in the GAC but is not included in the adaptive domains.

[d]Work is optional on the Parent and Teacher Forms and is administered only if the individual is 17 years or older and has a part- or full-time job. It is not included in the GAC or any adaptive domains.

[e]Work is optional on the Adult Form and is administered only if the individual has a part- or full-time job. The Practical Domain composite score and the GAC can be derived either with or without the Work Skill Area scaled score.

[f]On the Parent/Primary Caregiver and Teacher/Daycare Provider Forms, Functional Academics is titled Functional Pre-Academics.

[g]Health and Safety was placed in both the Conceptual and Practical Domains by the AAMR (2002b). Based on the ABAS–II item content, Health and Safety is included in the Practical Domain.

[h]Home Living is on the Parent/Primary Caregiver, Parent, and Adult Forms; School Living is on the Teacher/Daycare Provider and Teacher Forms.

Focus and Content of the Rating Forms

The five rating forms provide for the measurement of adaptive skills of individuals through 89 years of age and across multiple environmental settings including home, preschool, school, daycare, community, and work. Some adaptive skills are only observable in certain settings and by some respondents. Therefore, separate rating forms are necessary to assess the adaptive skills most relevant for the specific setting and respondent. Each rating form is completed independently by the respondent, or may be read to the respondent if he or she does not have the reading skills to complete the rating form independently. A respondent completes the form by reading the instructions and responding to each item. The rating scale for the items allows respondents to indicate if the individual is able to independently perform an activity and, if so, how frequently (*always*, *sometimes*, or *never*) he or she performs the activity when it is needed. Because a respondent cannot observe all possible daily activities of the individual, respondents can identify which items he or she had less opportunity to observe and needed to guess or estimate about the rating. The guessing scores enable the professional user to compare the respondent's guessing rate to the average guessing rate in the standardization sample, and to use the guessing rate information when interpreting the results and making decisions about the individual.

Although it is possible to assess the adaptive skills of an individual with a single rating form, the use of multiple rating forms is recommended to provide a comprehensive assessment across a variety of settings. For example, professional users may solicit multiple ratings by requesting that a parent complete the Parent Form and the teacher complete the Teacher Form for an 8-year-old child. For a 30-year-old individual, for example, the Adult Form may be completed by three respondents: the individual himself or herself, a family member, and a work supervisor.

Parent/Primary Caregiver Form (Ages 0–5)

The Parent/Primary Caregiver Form is a comprehensive, diagnostic measure of the adaptive skills that have primary relevance for the functioning of infants, toddlers, and preschoolers in the home and other settings, and can be completed by parents or other primary care providers. The Parent/Primary Caregiver Form is used for children ages birth–5 years, and includes 241 items, with 22 to 27 items per skill area. This form is available in Spanish[1].

Parent Form (Ages 5–21)

The Parent Form is a comprehensive, diagnostic measure of the adaptive skills that have primary relevance for children's functioning in the home and community, and can be completed by parents or other primary care providers. The Parent Form is used for children in grades Kindergarten (K) through 12 or ages 5–21 years. The form extends through age 21 to include special education students and other students who continue to be served through a secondary school setting. This form includes 232 items, with 21 to 25 items per skill area. This form is available in Spanish[1].

Teacher/Daycare Provider Form (Ages 2–5)

The Teacher/Daycare Provider Form is a comprehensive, diagnostic measure of the adaptive skills that have primary relevance for toddler's and preschooler's functioning in a daycare center, home daycare, preschool, or school setting. Teachers, teacher's aides, daycare instructors, or other daycare or childcare providers can complete this form. The Teacher/Daycare Provider Form is used for children ages 2–5 years, and includes 216 items, with 21 to 27 items per skill area. This form is available in Spanish[1].

Teacher Form (Ages 5–21)

The Teacher Form is a comprehensive, diagnostic measure of the adaptive skills that have primary relevance for children's functioning in a school setting, and can be completed by teachers or teacher's aides. The Teacher Form is used for children in grades K through 12 or ages 5–21 years. The form extends through age 21 to include special education students and other students who continue to be served through a secondary school setting. This form includes 193 items, with 15 to 22 items per skill area.

Adult Form (Ages 16–89)

The Adult Form is a comprehensive, diagnostic measure of the adaptive skills that have primary relevance for an adult's functioning in home and community settings. The Adult Form may be completed by the individual being evaluated for a self-rating if his or her functional skills are judged to be adequate for providing valid responses to the items. Family members, supervisors, or other respondents who are familiar with the individual in his or her various environments can also complete this form. Two separate norms tables are provided for the Adult Form: Adult Form, Self Report and Adult Form, Rated by Others. The Adult Form is used for individuals ages 16–89 years, and includes 239 items, with 20 to 27 items per skill area.

[1]Spanish versions were translated from the English forms, back-translated, and then reviewed by a third party. Validity and reliability data do not currently exist for the ABAS–II Spanish rating forms. Therefore, results obtained from the Spanish forms should be interpreted with caution, and should always be used in conjunction with other standardized instruments as part of a comprehensive assessment.

Age Range Overlap Between Forms

The overlap of age ranges between the rating forms enables the user to select the most appropriate forms for use with individuals age 5 or ages 16–21. For children who are 5 years of age, users may choose either an infant-preschool or a school-age form. The infant-preschool forms (Teacher/Daycare Provider and Parent/Primary Caregiver Forms) generally should be used with 5-year-old children who may be lower functioning or have more serious disorders or disabilities. These forms can also be used with children whose initial referral for evaluation of a possible disability or eligibility for special education occurs at age 5, or with 5-year-old children for whom there is no prior knowledge regarding the level of functioning. Users also may choose the infant-preschool forms for 5-year-old children who were previously assessed with these forms to directly compare adaptive skill ratings between the two evaluations. The school-age forms (Teacher and Parent Forms) generally should be used with 5-year-old children who are thought to have higher functioning or less severe problems.

Note. Use only the infant-preschool forms with children younger than 5 (≤ 4:11) and only the school-age forms with children older than 5 (≥ 6:0).

For young adults who are ages 16–21 years, users may choose the school-age Parent and Teacher Forms or the Adult Form. The school-age forms are typically used with young adults who are still participating in some type of secondary educational program, such as high school or special education programs. The Adult Form generally is used with young adults who are no longer participating in secondary school settings, but may be participating in community or work settings, job training programs, or post-secondary institutions. The Adult Form is the only form that may be used to obtain a self rating.

Adaptive Skills and Mental Retardation

Adaptive skill measurement has traditionally been associated with the study, evaluation, and treatment of mental retardation. Assessment of adaptive behavior, along with assessment of intelligence, has been required for classification and diagnosis of mental retardation for many years. The official definition of mental retardation by the AAMR (Heber, 1959) indicated that adaptive behavior deficits, in addition to subaverage intelligence, were necessary for a classification of mental retardation. Deficits in adaptive behavior were included as part of subsequent definitions of mental retardation by the AAMR (Grossman, 1983) and other groups (*Diagnostic and Statistical Manual of Mental Disorders–3rd Edition Revised* [*DSM–IIIR*]; APA, 1987; *Diagnostic and Statistical Manual of Mental Disorders–4th Edition* [*DSM–IV*], APA, 1994).

Special education legislation, including the Education for All Handicapped Children Act of 1975, IDEA of 1991, and its amendments of 1997, required both subaverage intelligence and deficits in adaptive behavior for a classification of mental retardation. According to the IDEA, "Mental retardation means significantly subaverage general intellectual functioning, existing concurrently with deficits in adaptive

behavior and manifested during the developmental period, that adversely affects a child's educational performance" (IDEA, Final Regulations, 1999, Sec. 300.7). Adaptive skill limitations are included in a number of other diagnostic or classification systems for mental retardation, including the *International Classification of Diseases* (World Health Organization, 1993); *International Classification of Functioning, Disability, and Health* (World Health Organization, 2001); and, as described by Reschley, Myers, and Hartel (2002), regulations and procedures for developmental disabilities, Social Security Disability Determination Services, and Medicaid include adaptive behavior criteria.

The 1992 definition of mental retardation from the AAMR placed considerably greater emphasis on adaptive skills than previous AAMR definitions:

> Mental retardation refers to substantial limitations in present functioning. It is characterized by significantly subaverage intellectual functioning, existing concurrently with related limitations in two or more of the following applicable skill areas: communication, self-care, home living, social skills, community use, self-direction, health and safety, functional academics, leisure, and work. Mental retardation manifests before age 18 (p. 5).

A comparable definition of mental retardation is used in the *DSM–IV–TR:*

> …Significantly subaverage general intellectual functioning (Criterion A) that is accompanied by significant limitations in adaptive functioning in at least two of the following skill areas: communication, self-care, home living, social/interpersonal skills, use of community resources, self-direction, functional academics, work, leisure, health and safety (Criterion B). The onset must occur before age 18 years (Criterion C) (p. 41).

The most recent definition of mental retardation by the AAMR (2002b) emphasizes broad domains of adaptive behavior:

> Mental retardation is a disability characterized by significant limitations both in intellectual functioning and in adaptive behavior as expressed in conceptual, social, and practical adaptive skills. This disability originates before age 18 (p. 1).

The AAMR manual (2002b) also provides an operational definition for limitations in adaptive behavior:

> For the diagnosis of mental retardation, significant limitations in adaptive behavior should be established through the use of standardized measures normed on the general population, including people with disabilities and people without disabilities. On these standardized measures, significant limitations in adaptive behavior are operationally defined as performance that is at least two standard deviations below the mean of either (a) one of the following three types of adaptive behavior: conceptual, social, or practical, or (b) an overall score on a standardized measure of conceptual, social, and practical skills (p. 76).

Other professional associations (e.g., APA) as well as federal and state governments have not revised their policies to reflect current AAMR guidelines, though they may do so in the future. Professional users are advised to consult legal and professional standards when using adaptive behavior data for diagnosis, classification, or support planning.

Use of the ABAS–II With Individuals Other Than Those With Mental Retardation

Although the assessment of adaptive skills has traditionally been associated with the diagnosis and classification of mental retardation, the concept of adaptive skills is important for all individuals, including those with limitations and disabilities other than mental retardation. Adaptive skills should be assessed routinely for children or adults who have difficulties, disabilities, or disorders that interfere with daily functioning (Harrison, 1990; Harrison & Boney, 2002; Reschly, 1990). Adaptive skill assessment may provide important information for the diagnosis and planning of treatment or intervention for individuals with developmental delays, biological risk factors, traumatic brain injuries, Autistic

Disorder, ADHD, learning and behavior disorders, sensory impairments, physical disabilities or injuries, health impairments, motor impairments, emotional disorders, brain injuries, stroke, dementias, Alzheimer's disease, substance-related disorders, psychotic disorders, and multiple disabilities. Specific examples include the following:

- A pediatric neuropsychologist in a public health clinic evaluates a 1-year-old girl with Cerebral Palsy.
- A 2-year-old boy is referred to a pediatrician at a university hospital because of a possible Pervasive Developmental Disorder.
- The parents of a 3-year-old child request assessment by school psychologists at a state child development center because the child has not met major developmental milestones and may have significant delays in communication, social, and motor skill development.
- A school district requests adaptive behavior assessment data from parents and teachers of children eligible for special education programs to assist in planning and coordinating home-school programs.
- Parents of a child who is blind request consultation with his or her Individual Education Plan (IEP) committee on ways to best promote adaptive skill development.
- A third grade male student with a learning disability in reading displays a possible behavioral disorder and is referred to the school psychologist.
- A fourth grade female student diagnosed with an emotional disturbance disorder displays various problems at home for which the parents have requested help from a psychologist in private practice.
- A fifth grade male student diagnosed with Attention-Deficit/Hyperactivity Disorder is referred to a mental health center for comprehensive assessment of adaptive skills and behavior problems, based on reports of diminished self-direction, self-care, and school/home living skills and increased acting-out behaviors.
- The school district uses ABAS–II data to assist students with disabilities in their transition from school to work settings.
- A rehabilitation specialist is responsible for coordinating the rehabilitation of an adult with traumatic brain injury.
- A neuropsychologist routinely acquires ABAS–II data to better understand an individual's development in home, school and/or work settings.
- An assisted living facility for older adults uses ABAS–II data to assist the clinician when making decisions regarding program planning and monitoring.
- A woman concerned about her father's advanced stages of Alzheimer's disease requests an evaluation of his adaptive skills from a team of physicians and social workers to better understand the severity of his disorder and to implement a program designed to promote important functional behaviors.
- A clinical psychologist uses the ABAS–II with individuals with depression and anxiety to assess the impact of the mental disorders on daily functioning and to provide individuals and their families with intervention goals.
- A psychiatrist uses the ABAS–II to initially assess an individual's adaptive skills and to monitor behavioral and skill level changes in response to medication.

Applications of the ABAS–II

Uses of the ABAS–II include diagnostic assessment, identification of adaptive skill strengths and limitations, identification of service needs, program planning and monitoring, and research and evaluation. The ABAS–II may be used in many settings and agencies including settings that provide services for children, such as public or private schools, daycare programs, community agencies, and medical or residential settings. The ABAS–II may be used as part of the comprehensive assessment of children and adults who are being evaluated for possible diagnosis of disabilities or problems, in addition to those who have previously been diagnosed with disabilities or problems. Similarly, the ABAS–II may be used in a variety of programs and settings for adults including public and private service provider agencies, medical and health facilities, residential facilities or group homes, community programs and agencies, vocational and occupational training programs, and prisons.

Diagnosis and Classification

Disability and special education regulations as set forth by community, state, federal, and international classification systems routinely require a comprehensive adaptive behavior assessment as part of the multifactor, multimethod assessment conducted for individuals with mental retardation. The ABAS–II fulfills many of these requirements. It also assists in determining diagnoses and classifications other than mental retardation and in determining eligibility for special programs. Special education and other disability services often require the comprehensive assessment of adaptive skills and other qualities when determining diagnoses and eligibility for services for individuals with a wide variety of disabilities in special education or disability categories (e.g., serious emotional disturbances, traumatic brain injuries, pervasive developmental disorders, or other health impairments) and specific categories of mental disorders, such as those denoted in the *DSM–IV–TR*. For infants, toddlers, preschoolers, and school-age children through age 9, IDEA includes developmental delay as a disability and defines a child with developmental delay as one "who is experiencing developmental delays, as defined by the State and measured by appropriate diagnostic instruments and procedures, in one or more of the following areas: physical development, social or emotional development, cognitive development, social or emotional development, or adaptive development" (IDEA, Final Regulations, 1999, Sec. 300.7).

Identification of Strengths and Weaknesses in Adaptive Skills

The information obtained with the ABAS–II can be used by the clinician as part of a comprehensive assessment of adaptive skills and enables him or her to evaluate the extent to which an individual displays the skills necessary to meet environmental demands. The ABAS–II enables professional and other users to assess the extent to which individuals take care of themselves and relate to others during daily living in critical skill areas and in broad domains of adaptive behavior. Determination of adaptive skill strengths and limitations is important for individuals with mental retardation, developmental delays, and other disabilities or disorders. Although individuals with mental retardation are a primary target population for adaptive skill assessment, other individuals may also experience difficulties with adaptive skills. The ABAS–II should be considered for use when identifying strengths and weaknesses in adaptive skills for individuals who display characteristics of disabilities or disorders other than mental retardation.

Identifying Service Needs and Planning and Monitoring Programs

When the goal of treatment or intervention is to improve independent daily functioning and quality of life for an individual whose adaptive skill limitations are of concern, a comprehensive diagnostic assessment is essential. The ABAS–II provides an analysis of strengths and limitations in adaptive functioning that the professional user needs to develop appropriate intervention plans and support services for the individual. For example, an infant or toddler may need assistance with eating, drinking, and communicating skills. A school-age child may need interventions for dressing and grooming skills, and a teenager

may need training related to the use of community resources and work skills. An adult may only need an intermittent level of support in managing money but an extensive level of support for transportation. After services and programs have been implemented, the ABAS–II is a useful tool for monitoring an individual's gains in adaptive skills and in evaluating his or her responses to different environments and support services.

The AAMR's manuals (1992, 2002b) on mental retardation place considerable emphasis on the need to consider the specific settings in which an individual lives, works, and receives services; the extent to which the characteristics of these environments facilitate or impede the individual's development and well-being; and the optimum environment that may facilitate an individual's independence/interdependence, productivity, community integration, social belonging, and well-being. As noted by the AAMR, there is a need for "an ecological approach to understanding behavior that depends on evaluating the discrepancy between a person's capabilities and skills and the adaptive skills and competencies required to function in an environment" (p. 147).

The detailed information obtained by the rating forms concerning important adaptive skills, combined with data related to the demands and expectations of the settings in which an individual must participate, facilitate the planning of services and interventions. For example, Seltzer (1997) described the importance of obtaining information about both the individual's skills and corresponding environments when identifying functional limitations of adults with disabilities. Dunn (1997) emphasized that, when planning transition programs for adolescents who are leaving a school program to move to a work or occupation program, it is important to analyze the adolescent's skills and integrate the assessment data with information about the new environmental demands.

Research and Evaluation

The ABAS–II measures a variety of adaptive skills and encompasses a wide age range, therefore it is useful for research and evaluation that describes or investigates the development and display of skills of many groups of people, including individuals with disabilities, individuals in special programs, and individuals receiving special services. The ABAS–II may be used to investigate the short- and long-term effects of intervention programs or other services, and facilitates institutional research and evaluation efforts. Features that make it especially useful for institutional research and evaluation include:

- Consistency between the ABAS–II and the AAMR (1992, 2002b) and the *DSM–IV–TR* definitions and conceptions of mental retardation;
- Up-to-date norms, including norms for various subgroups;
- Ease in use, administration, and scoring;
- Availability of separate forms and norms for the parents and teachers of individuals ages birth to 21 years; and
- Availability of separate norms for self-ratings and ratings by other respondents for individuals ages 16 to 89.

Qualifications of Users, Confidentiality, and Test Security

The professional user of the ABAS–II is responsible for selecting respondents, coordinating the completion of the rating forms, and scoring and interpreting the results. The user typically is involved, either individually or as a team member, in decision-making using the ABAS–II results in conjunction with other assessment results. Decisions may involve determining a diagnosis or classification and eligibility for special programs, planning interventions or treatment, and monitoring the effectiveness of a program. Individuals trained in the basic principles of psychological and educational assessment and test interpretation, the strengths and limitations of tests, and the use of assessment in data-based decision making are qualified to be professional users of the ABAS–II. The professional user should follow the practices described in the *Standards for Educational and Psychological Testing* (American Educational

Research Association, American Psychological Association, & National Council on Measurement in Education, 1999) and adhere to the ethical principles of associations of professionals that use educational and psychological tests.

The professional user may also supervise other service providers (e.g., paraprofessionals, aides) in the administration and scoring of the ABAS–II. Professional users are responsible for ensuring that other service providers have adequate training and supervision in administration and scoring, are able to provide appropriate answers to questions from the respondents, know when to refer questions to the professional users, and follow ethical and legal principles (e.g. confidentiality, test security). Professional users should provide structured and comprehensive training sessions prior to any administration and scoring activities by other service providers. The training sessions should provide many opportunities to discuss general assessment principles as well as ethical and legal standards, the purposes and uses of the ABAS–II, and specific techniques in administration and scoring. Administration and scoring activities should be carefully supervised at all times, and the work of other service providers should be checked to ensure that accurate results are obtained.

Although the respondent usually completes the rating forms independently, the professional user or another service provider may need to answer questions about the items. Rating forms facilitate communication between the professional user and the respondent by providing a place for the respondent to indicate that further comment is necessary on a particular item. Space is provided for respondents to record these comments or any other general comments they may have. This further communication between a respondent and assessment professional may afford an excellent opportunity to gain more clinical knowledge about the person being rated.

The application of professional ethical standards and principles for assessment practices is important for users of any psychological or educational assessment instrument, or any other technique for measuring human skills, behaviors, and traits. Protection of the individual's rights, use of valid and reliable assessment methods, and appropriate use of assessment results in decision-making are important principles for use of any assessment instrument, including the ABAS–II. Assessment results should be shared only with the individual being evaluated, his or her guardian(s), and/or others who have a legal right to know the information. Maintaining the security of the rating forms is important for maintaining the privacy of the individual being evaluated and for controlling the distribution of assessment items. Similarly, unused rating forms should be controlled by the professional user and should not be distributed without authorization.

Chapter 2

Administration and Scoring

The ABAS–II is easy to administer and score. The respondent may complete the rating forms independently or, if he or she does not have the skills necessary to read and rate the items independently, a trained service provider may administer the ABAS–II by reading the items aloud. After scoring a rating form, the professional user may obtain norm-referenced scores for the skill areas, adaptive domains, and the GAC (i.e., total score). This chapter provides information concerning the correct techniques to administer and score this assessment.

General Considerations

The professional user should initially consider several factors related to administration and interpretation, including selection of respondents, establishment of rapport and communication with respondents, use of other service providers for administering and scoring, and general issues in using behavior rating scales.

Selecting Respondents

The ABAS–II was designed to be completed by various respondents who have knowledge about the daily adaptive skills of an individual, and who have had extended and frequent opportunities to observe the individual's skills and responses to environmental demands. Careful selection of respondents is critical for obtaining valid ratings. Professional users should follow these guidelines when evaluating the qualifications of the respondent and his or her knowledge of the individual.

All Forms: Respondents generally should have the following qualifications: (a) frequent contact with the individual (e.g., almost everyday); (b) contacts of long duration (e.g., several hours for each contact); (c) recent contact (e.g., during the past 1 to 2 months); and (d) opportunities to observe the variety of skills measured by the ABAS–II.

Parent/Primary Caregiver Form (Ages 0–5): Respondents may include parents or other primary-care providers who are living with the child and are familiar with his or her daily activities. This could include grandparents, aunts or uncles, adult siblings, foster parents, and care providers from home living units in residential facilities.

Parent Form (Ages 5–21): Respondents may include parents or other primary-care providers who are living with the child and are familiar with his or her daily activities. This could include grandparents, aunts or uncles, adult siblings, foster parents, and care providers from home living units in residential facilities.

Teacher/Daycare Provider Form (Ages 2–5): Respondents may include teachers, daycare providers, nurses, or other personnel of daycares, schools, hospitals, or community programs for toddlers and young children. The respondent for the Teacher/Daycare Provider Form should be familiar with the child's adaptive skills in a structured school, daycare, or other service delivery setting.

Teacher Form (Ages 5–21): Respondents may include teachers, teacher's aides, or other school professionals or paraprofessionals. The respondent for the Teacher Form should be familiar with the child's adaptive skills in a structured classroom and school setting.

Adult Form (Ages 16–89): Respondents may include family members, counselors, professional caregivers in residential or non-residential facilities, work supervisors, aides, or other individuals in home or community settings who are familiar with the adult's daily activities. Individuals who display a high level of functioning may complete the form themselves.

Rapport and Communication With Respondents

Establishing and maintaining a rapport and communication with respondents is essential for obtaining valid results. The circumstances for administering the ABAS–II typically involve an individual who has been referred for assessment to determine if he or she has a disability or disorder and a need for intervention, such as special education, rehabilitation, treatment, or placement. Many respondents may not have previously participated in this type of assessment and may experience anxiety or have questions. The professional user should attempt to decrease a respondent's anxiety and provide information about the purpose of the assessment, the confidentiality of the respondent's ratings, how the results might be used to make diagnostic decisions about the individual, and who will have access to the results. Topics for discussion include:

Purpose of the overall assessment: Individuals who are rated with the ABAS–II are participating in a comprehensive assessment process to identify or diagnose a problem or disability, and to plan special services or programs. Explain the purpose of the overall assessment process to the respondent and answer his or her questions. For example, explain to a parent or family member by saying, "As you know, Jake has been experiencing difficulty in school. We are conducting a comprehensive assessment of Jake's skills in order to better understand his strengths and difficulties." Then provide details about the nature of the evaluation.

Reason for administering: Explain to the respondent the reason for administering the ABAS–II as part of the overall assessment. For example, say to a parent or family member, "An important part of Tonya's evaluation is to obtain information about the daily skills she has and needs to get along at home and other places, and you are an important person to give this type of information. We are asking you to complete the ABAS–II rating form so you can give us information about Tonya's daily skills."

Expectations for respondents: Determine if the respondent has sufficient knowledge of the individual's adaptive skills, is able to read and understand the directions and items, and will provide ratings that are honest and objective. Ask the respondent questions designed to determine if he or she understands the directions and has the knowledge and skills to rate the items appropriately. If the respondent does not have the necessary familiarity with the individual, the user should select one or more other respondents. If the respondent does not have the skills needed to read and respond to the items, administer the ABAS–II by reading the items aloud to the respondent. If a self rating on the Adult Form is being considered, it may be necessary to obtain background information or question the individual to determine if he or she is able to provide a valid rating of his or her own skills.

Explaining the instructions: provide a brief description of the items and instructions for completing the rating form, including the following points:

- The rating form describes many different types of skills, such as communication, eating, dressing, household, and safety skills. All of these skills are important for a person to take care of himself or herself and function well.
- Please read the directions on the form and mark your rating for each of the skills.
- Your ratings will tell us if (*individual's name*) is able to display these important daily skills independently and, if so, how often he or she does so when appropriate or needed.

- Circle **0** (*Is Not Able*), if (*individual's name*) cannot perform the activity or behavior described. Circle **0** if he/she cannot do it because he/she is not capable or does not have the ability.
- If (*individual's name*) is able to do it, then circle **1** (*Never or Almost Never When Needed)* to indicate that he/she never or almost never does it; or circle **2** (*Sometimes When Needed*) to indicate that he/she sometimes does it; or circle **3** (*Always or Almost Always When Needed*) to indicate that he/she always or almost always does it now, or that he/she accomplished it fully when younger.
- After you have circled **0**, **1**, **2**, or **3** for the item, evaluate whether you have observed (*individual's name*) perform the behavior or activity or if you are estimating or guessing about the frequency of the behavior. If your answer is based on an estimate or guess, place a check in the column under the heading **Check If You Guessed**.
- Please rate every item, even if some items do not seem to apply to (*individual's name*)'s age group or are difficult to rate.
- Please let me know if you have any questions or need my help while you are completing the form. If you have a question about an item, you may also put a check in the last column under the heading **Comments**, and talk to me about it when you are done. Also, feel free to put any comments you have in the **Notes** box on page 10 of the rating form.
- For some respondents, especially parents or primary care-providers for children, it may be important to add, "Please know that the items on this scale cover a wide age range. (*individual's name*) is not expected to have all the skills described in the items. It is important that you give factual information about the skills that he/she does and does not have."

Wait for the respondent to read the Directions on the second and third pages of the rating form and provide additional instruction and assistance if necessary.

Identify for the respondent those skill areas that should be completed, depending on which form is being used and the age of the individual being rated. Refer to the following guidelines:

- Explain to a respondent who is completing the Parent/Primary Caregiver Form for a child who is younger than 12 months old that he or she should complete only those skill areas specified for this age range. He or she should not provide ratings for the Community Use, Functional Pre-Academics, or Home Living skill areas.
- Remind a respondent who is completing the Teacher/Daycare Provider Form that he or she should provide ratings for all items in all skill areas.
- Remind respondents who are completing the Parent and Teacher Forms (Ages 5–21) and the Adult Form that he or she should provide ratings for all items with the exception of the Work Skill Area. The Work Skill Area is completed only if the individual is 17–21 years old (Parent and Teacher Forms) or 16–74 years old (Adult Form) and has a part- or full-time job.

Answering respondent's questions: Users may answer a respondent's questions before, during, and after completion of the rating form. Some questions may relate to the instructions for completing the rating forms; other questions may relate to the individual's problems or to services available for the individual and his or her family. Answer questions with as much detail as possible, and provide instruction that will allow the respondent to provide the most reliable and valid information about the individual's performance of the activities and behaviors as described in the assessment items. Refer to Table 2.1 for a list of frequently asked questions and appropriate answers.

Table 2.1 Frequently Asked Questions and Answers

Questions	Answers
If I am not sure how to rate an item, may I leave it blank?	No, please respond to *all* items. Evaluate if you have observed the behavior or whether you are estimating, or guessing, about the frequency of behavior. If your answer is based on an estimate, place a check in the column under the heading **Check If You Guessed**.
What if (*individual's name*) is too young to perform this activity?	Circle **0** (Is Not Able) if (*individual's name*) is too young to perform the activity.
What if (*individual's name*) has a disability or condition that prevents performance of this activity?	Circle **0** (Is Not Able) if (*individual's name*) has a disability or condition that prevents performance of the activity.
What if (*individual's name*) is able to perform this activity, but needs reminders or prompting to perform it?	Because he/she is able to perform the activity do not circle **0**. Circle **1** if he/she never or almost never performs it on his/her own without reminders or prompting. Circle **2** if he/she only sometimes performs it on his/her own without reminders or prompting. You should only circle **3** if he/she performs the activity most of the time on his/her own without reminders or prompting. (Professional users may elect to ask respondents to note if the individual needs reminding or prompting).
What if (*individual's name*) is not able to perform this activity by himself or herself, but needs help or assistance from another person?	Unless specifically noted otherwise in an item, the focus is on independent behavior, that is, when the individual is able to perform the activity or behavior without assistance or help. Thus, circle **0** if the individual is not able to perform this activity by himself or herself, but needs help or assistance from another person. (Professional users may elect to ask respondents to note if the client needs assistance or help).
What if (*individual's name*) performed this activity by himself or herself at a younger age, but now has outgrown it?	Circle **3** if he/she accomplished the activity fully when younger, but is now too old for the activity. However, if the activity is still appropriate for his/her age, rate the item according to what he/she does now.
What if (*individual's name*) has never had an opportunity to perform this activity?	There may be several reasons that a person does not have an opportunity to perform an activity, for example, the environment in which he/she is in does not have this type of activity or a parent does not allow the activity. In this case, the respondent should be instructed to estimate, or guess, about the individual's performance of the activity and to rate the item according to whether or not (*individual's name*) would be able to perform the activity or behavior described if given the opportunity, and if so, how often would he or she perform it when needed.
Some respondents may ask questions about an item itself, for example, if he or she does not understand the item.	Provide information that will enable a respondent to understand the meaning of an item, but be cautious not to provide information that may influence the respondent's ratings.

Completion of the rating form off-site: Although it is preferable for the rating form to be completed in a controlled setting such as a clinic, school, or agency office, some circumstances may require that the respondent complete the rating form off-site. Teachers, daycare providers, or other staff in classrooms, school libraries, or offices often complete the Teacher/Daycare Provider or Teacher Forms during free time. Respondents for the Parent/Primary Caregiver and Parent Forms and the Adult Form may need to complete the rating forms at home or another location.

Before forms are taken off-site, it is important to provide information, instructions, and safeguards to ensure that the off-site completion is valid and appropriate. Discuss all necessary instructions and provide contact information in case questions arise. Supply the respondent with information about when and where the rating form should be returned.

Remind respondents to indicate questions about an item by checking the **Comments** column, and by recording their comments in the **Notes** box on page 10 of the rating form. When the form is returned, review (in person or by telephone) any items the respondent has checked for comments, as well as any comments they have written.

If a rating form is to be mailed to a respondent, either write or verbally discuss the necessary information about the overall assessment and instructions for completing and returning the rating form.

Multiple Respondents

Whenever possible, professional users should obtain ratings from multiple respondents. Using multiple sources of information about an individual improves the validity of the assessment and can provide information about the individual's skills in a variety of settings and in response to various environmental demands. Use of multiple respondents can provide information about the degree of consistency of an individual's adaptive skills across settings, in response to different environmental demands, and from the unique perspectives of different respondents.

Information gathered from multiple respondents indicates the consistency or inconsistency of an individual's adaptive skills. This information improves decision-making about diagnosis of disabilities or disorders and assists in the planning of programs and services. The following examples demonstrate various assessments using multiple respondents.

- To assess a child using either the infant-preschool or school-age forms, obtain ratings from a parent or primary care provider and a teacher or daycare provider.
- To assess a child using the infant-preschool or school-age forms, obtain ratings from two or more teachers (e.g., general education teacher and special education teacher) and/or daycare providers.
- To assess an adult living at home, obtain a self-rating and ratings from a family member or other person living with or supervising the adult.
- To assess an adult living in a residential facility, obtain ratings from two or more care providers or supervisors (e.g., the care providers for the day and night shifts, or the work supervisor and the residential care provider).

When a Respondent Completes Rating Forms for More Than One Individual

It is possible that one respondent may be requested to rate multiple individuals. For example, a teacher may be asked to complete rating forms for several children in his or her classroom who have mental retardation or other disabilities. A care provider for adults in a residential-care facility or group home may be requested to complete rating forms for several adults in his or her care. If a respondent is asked to evaluate several individuals, instruct the respondent to complete the ratings for each individual independently and to focus carefully on only that individual's adaptive skills. It is recommended that a respondent take a break after the completion of each rating form to increase the independence of his or her rating for each individual.

General Issues in Rating Scale Assessment

The ABAS–II is designed to assess an individual's typical daily adaptive skills. The rating scale approach has many advantages for assessing adaptive skills: it provides for a comprehensive assessment of numerous adaptive skills, it involves relevant respondents in the assessment process, it obtains information from multiple perspectives and sources of information, and it focuses on adaptive skills occurring in naturalistic settings.

Another assessment technique, direct testing of an individual's abilities, is used for the evaluation of traits such as intelligence and academic ability. However, direct testing of adaptive skills would result in a measure of the individual's abilities in a structured-test environment only and, unlike a rating scale,

would not provide information about the individual's actual behaviors in a home, school, community, or work setting. Structured observations of an individual's behavior by a trained observer provide another type of behavior assessment that can be used to evaluate some daily adaptive skills. However, numerous observations in multiple settings over a long period of time would be required to assess the comprehensive variety of adaptive skills used on a daily basis. Thus, a rating scale approach is considered to be the most valid, practical, and efficient technique for assessing adaptive skills. Users of such rating scales should be familiar with the important issues in rating scale assessment; should promote valid responses to the rating scale by respondents, and should take these issues into account when interpreting and using the results.

Gresham and Elliott (1990) provide an excellent summary of important issues regarding the administration, scoring, and interpretation of rating scales. A respondent's ratings for individual items on a rating scale reflect a summary of the relative frequency, rather than exact frequency, of the individual's skills. For example, if a respondent rates the item, "Controls temper when disagreeing with friends" as *Always When Needed*, the rating indicates the respondent's overall summary of this type of skill. A respondent's ratings reflect his or her own expectations and standards for skills, and these may differ from respondent to respondent and setting to setting. As a result, the use of multiple respondents will provide information from different perspectives. The ratings of a respondent may be influenced more by certain characteristics of the individual (e.g., appearance, ability, background) than by the trait being assessed. Above all, a respondent's ratings reflect his or her perceptions and willingness to be completely honest in communicating these perceptions. Careful administration combined with careful selection of respondents and properly established rapport and communication with the individual being evaluated will provide the most valid information.

Administration Guidelines

Materials and Setting

Administration requires the Parent/Primary Caregiver, Teacher/Daycare Provider, Parent, Teacher, or Adult Form and a pencil with an eraser. Provide the respondent with a chair and a table (or a clipboard or other writing surface). The respondent should complete the rating form in an environment as free from distractions as possible.

Completing the Demographics Section of the Rating Form

The demographics section located on the first page of the rating form provides important information about the individual being evaluated and about the respondent (see Figure 2.1). This section can be completed by the respondent or by the professional user. The professional user should verify the accuracy of the individual's date of birth and the current date.

ABAS® II
Adaptive Behavior Assessment System®
SECOND EDITION

Patti L. Harrison
Thomas Oakland

Parent Form

Ages 5–21

CHILD INFORMATION

Child's Name: Emily (First) R. (Middle) Sample (Last) Age: 9 Grade: 4

School: Larkspur Elementary City: San Antonio State: TX

Sex: ☒ Female ☐ Male

	Month	Day	Year
Today's Date	10	15	2002
Date of Birth	5	4	1993

Does the child have any disabling conditions? ☐ Yes ☒ No

If yes, please describe: _____

Race/Ethnicity: ☐ African American ☐ Asian ☐ Native American ☐ Hispanic ☒ White ☐ Other: _____

The child has: ☒ No job ☐ Part-time job ☐ Full-time job

PARENT INFORMATION

Parent's Name: Lauren (First) Sample (Last) Occupation: Accountant

Number of siblings the child has at home:

☒ None ☐ 1 ☐ 2 ☐ 3 or more

Your relationship to the child you are rating:

☒ Parent ☐ Guardian ☐ Other: _____

THE PSYCHOLOGICAL CORPORATION®
A Harcourt Assessment Company
To order, call 1-800-872-1726

Copyright © 2003, 2000 by The Psychological Corporation, a Harcourt Assessment Company. All rights reserved. Printed in the United States of America.
1 2 3 4 5 6 7 8 9 10 11 12 A B C D E

ISBN 015400461-8
9 780154 004611

Figure 2.1 Sample of the Demographic Section of the Parent Form (Ages 5–21)

Responding to and Recording Ratings for Items

Respondents should read and respond to all items and rate the extent to which the individual performs the adaptive skills when needed. The respondent should select and circle one of four ratings for each item: **0** (*Is Not Able*), **1** (*Never or Almost Never When Needed*), **2** (*Sometimes When Needed*), or **3** (*Always or Almost Always When Needed*). After the respondent provides a numeric rating for an item, he or she should place a check in the **Check if you Guessed** box if it was necessary to guess about the individual's performance for that item. A sample of a completed skill area of the Parent Form is shown in Figure 2.2.

Community Use

1. Looks both ways before crossing a street or parking lot.	0	1	2	(3)	☐	○
2. Orders his/her own meals when eating out.	0	1	2	(3)	☐	○
3. Finds the restrooms in public places.	0	1	2	(3)	☐	○
4. Packs his/her own clothing and supplies for overnight trips.	0	1	(2)	3	☐	○
5. Uses the school or local library to check out books, use reference materials, or for other purposes.	0	1	2	(3)	☐	○
6. Follows another's directions to nearby places.	0	1	2	(3)	☐	○
7. Carries enough money to make small purchases, for example, a soft drink.	0	1	(2)	3	☐	○
8. Walks alone to friends' houses in the neighborhood.	0	1	2	(3)	☐	○
9. Mails letters at the postal box or local post office.	0	1	2	(3)	☐	○
10. Finds a specific department in a store or business, for example, customer service department in a bank or laundry supplies in a store.	0	1	2	(3)	☐	○
11. Walks or rides bike alone to locations within a one-mile or five-block radius of home or school.	0	1	2	(3)	☑	○
12. Carries personal identification when traveling to nearby places in the community.	0	(1)	2	3	☐	○
13. States general address of a travel destination, for example, "On Washington Avenue, near Lake Street."	0	1	(2)	3	☐	○
14. Asks other people's advice on where to shop.	0	1	(2)	3	☐	○
15. Finds and uses a pay phone.	0	1	(2)	3	☐	○
16. Asks store clerk for product information before buying an item.	0	1	(2)	3	☐	○
17. Relies on himself/herself for travel in the community, for example, walks or uses public transportation, a bicycle, or a car.	(0)	1	2	3	☐	○
18. Takes other people on trips to nearby places, for example, takes a younger child to a park.	(0)	1	2	3	☐	○
19. Tells others about a store's hours of operation, for example, "10 a.m. to 9 p.m."	0	1	(2)	3	☐	○
20. Shops for friends and family who may be unable to shop.	0	1	(2)	3	☐	○
21. Calls to find out if a repair or order is ready.	0	1	(2)	3	☐	○
22. Calls a repairperson if, for example, the air conditioner or heater is not working.	0	1	(2)	3	☐	○
23. Calls a doctor or hospital when ill or hurt.	0	1	(2)	3	☑	○
		Total	50	/ 69	Total Guessed	2

(4)

Figure 2.2 Sample of a Completed Skill Area of the Parent Form (Ages 5–21)

Checking the Completed Rating Form

Following completion of the rating form by the respondent, the professional user should immediately check the form to determine that a rating was recorded for each item. If a respondent failed to record a rating for an item, the user should ask the respondent to provide a rating. All items in each appropriate skill area must be completed to compute the raw scores for the skill areas and to obtain normative scores. If a respondent indicates that he or she is uncertain about how to rate an item, tell the respondent to estimate or guess, and to place a check to indicate that he or she guessed on the item. Reassure

respondents that guessing is appropriate and that many respondents guess about the ratings of a few items. If a respondent refuses to provide a rating even after encouragement, leave the rating blank and score the item **0** when raw scores are computed for the skill areas. Although not preferred, one or two items with no ratings per skill area may be allowed.

Administration by Reading the Items to Respondents

Items on all rating forms require at least a fifth grade reading level. This is appropriate for the majority of the respondents. However, if a respondent does not have the skill to read and rate the items independently, read each item to the respondent and ask him or her to respond verbally. Many professional users may elect to read the items to respondents regardless of their reading level, especially if the respondents express anxiety about the individual being evaluated or nervousness about the assessment. Users may also wish to read items to a respondent as part of an overall interview about several aspects of the individual's adaptive skills. To administer the ABAS–II by reading the items to a respondent, refer to the following steps.

► **Step 1:** Ask the respondent the necessary questions to complete the demographic section of the rating form.

► **Step 2:** Read and explain the directions to the respondent. Answer the respondent's questions using the Explaining the Instructions section of this manual. Substitute phrases about the respondent reading and circling ratings for the items with phrases to indicate that the user will read and circle the ratings for each of the items. For example, the following are substitutions in the instructions used for the Parent Form.

> Instead of *Please read and answer all items,* say: **I will read the items to you.**
>
> Instead of *For each item, record your responses by circling one of the following,* say: **For each item, rate the child's skills by selecting one of the following ratings and telling me your rating. I will circle your rating in the rating form.**
>
> Instead of *If your answer is based on a guess, put a check in the column under the heading, Check if you Guessed,* say: **If your answer is based on a guess, tell me you guessed.**

► **Step 3:** Place an extra rating form, opened to the directions, in front of the respondent. As you read each rating, point to the ratings on the rating form. To ensure that the respondent understands the item ratings and other directions, it may be necessary to review the directions more than once.

► **Step 4:** Read each item verbatim and ask the respondent for his or her rating. For the first few items, point to the ratings on the respondent's rating form and say:

> **Would you say that** (*individual's name*) **is not able to do this, is able to but never does this, sometimes does this, or always does this? Please tell me if you needed to guess about this rating.**

When the respondent clearly understands how to rate the items and evaluate if he or she guessed, read each item and say: **Tell me (or point to) your rating.**

Scoring

Use the following procedures to obtain and record the scores for all five rating forms. (See Chapter 3 for information about interpretation and use of the scores.)

► **Step 1: Check the guessing factor**

Count the total number of guessed responses (as indicated by a check in the **Check if you Guessed** box next to the item rating) for each skill area and record the total in the box labeled Total Guessed. Most respondents in the national standardization sample guessed on 3 or fewer items for each skill area (refer to Tables A.3, A.7, A.11, and A.14). If the respondent guesses on four or more items in a skill area, interview the respondent to determine the reason for the large number of guessed responses and evaluate whether or not to continue scoring. If you decide to continue scoring and interpretation with the current

respondent, report the higher than average number of guesses in all reports, multidisciplinary team discussions, and other venues in which the scores may be used to make decisions about the individual. If, after careful evaluation and interviewing of the respondent, you determine that the he or she does not have sufficient knowledge about the individual's skills, identify a new respondent who has more knowledge about the individual.

► Step 2: Add the item scores for each skill area to obtain the raw score

For *each* of the skill areas, sum the behavior frequencies (**1**, **2,** or **3**) to obtain the raw score and record in the box labeled Total (see Figure 2.2). The total raw score should never be more than the maximum score indicated in this box. The number of skill areas to sum will vary depending on the type of rating form. Refer to Table 1.3 to determine the appropriate skill areas to sum.

► Step 3: Transfer the skill area raw scores to the Summary Page

Transfer the raw score for each skill area to the Raw Scores column of the Raw Score to Scaled Score Conversions table on the Summary Page of the rating form (**A** in Figure 2.3). Skill areas are listed in order of administration.

► Step 4: Obtain scaled scores for the skill areas

Using the individual's chronological age and the type of rating form, identify the appropriate norms table in Appendix A that contains the relevant scaled scores for the skill areas (Tables A.1, A.5, A.9, and A.12). For example, use Table A.1 to obtain the scaled scores for a child age 2 years 2 months whose respondent completed the Teacher/Daycare Provider Form. Use Table A.5 to obtain the scaled scores for a child age 10 years 3 months whose respondent completed the school-age Parent Form. Obtain the scaled scores for an adult age 30 years 8 months who completed a self report on the Adult Form by using Table A.9.

After identifying the appropriate table, locate the raw score for each skill area. Then, reading across from this raw score to the scaled score column, find the equivalent scaled score. Record the scaled score for each skill area on the Summary Page in the column to the right of the raw scores and in the remaining unshaded box in its row (**B** in Figure 2.3).

► Step 5: Obtain the standard scores for the GAC and adaptive domains

Sum the scaled scores of the skill areas used for the GAC and for each adaptive domain, and record in the Sums of Scaled Scores box (**C** in Figure 2.3). Transfer the sums of scaled scores to the Sum of Scaled Scores to Composite Score Conversions table on the Summary Page (**D** in Figure 2.3).

Note. The Parent/Primary Caregiver Form excludes the Community Use, Functional Pre-Academics, and Home Living Skill Areas for children ages birth–11 months. For this age range, adaptive domain composites and the GAC are calculated without these skill areas.

Note. The Work Skill Area is completed and scored only if the individual has a part- or full-time job. Scaled scores for Work are available for ages 17–21 years on the Parent and Teacher Forms as optional scores, but they are not included in the GAC. On these rating forms, the GAC is based on the remaining nine skill areas. The Work Skill Area scaled scores are available for ages 16–74 years on the Adult Form, and can be included in the GAC. On the Adult Form, the GAC may be based on ten skill areas (if the Work Skill Area was completed) or nine skill areas (if the Work Skill Area was not completed).

Note. The Work Skill Area scaled score is not included in the Practical Domain on the Parent or Teacher Forms. On the Adult Form, the Practical Domain may be based on five skill areas (if the Work Skill Area was completed) or four skill areas (if the Work Skill Area was not completed).

ABAS–II PARENT (Ages 5–21)

ABAS II Adaptive Behavior Assessment System® SECOND EDITION

Summary Page

Patti L. Harrison • Thomas Oakland

Child's Name: Emily (First) R. (Middle) Sample (Last)

Grade: 4 ID: 000-01-0002

Rater's Name: Lauren Sample

Assessment Professional: Stephanie Thomas

	Year	Month	Day
Today's Date	2002	10	15
Date of Birth	1993	5	4
Age	9	5	11

Raw Score to Scaled Score Conversions
(See Table A.5.)

Skill Areas		A Raw Scores	Scaled Scores			B
Communication	(Com)	61	9	9		
Community Use	(CU)	50	12			12
Functional Academics	(FA)	63	13	13		
Home Living	(HL)	47	8			8
Health and Safety	(HS)	57	11			11
Leisure	(LS)	60	13		13	
Self-Care	(SC)	64	8			8
Self-Direction	(SD)	56	10	10		
Social	(Soc)	63	11		11	
(Work)	(WK)	—	(—)			
Sums of Scaled Scores			95	32	24	39
Composite			GAC	CON	SO	PR

C

Sum of Scaled Scores to Composite Score Conversions
(See Table A.6.)

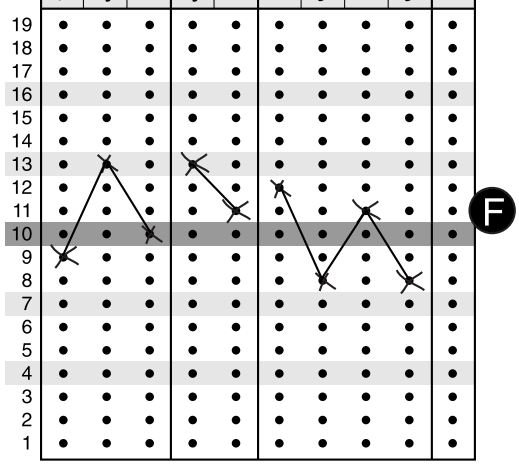
Composite	Sum of Scaled Scores	Composite Score	Percentile Rank	90 % Confidence Interval
GAC	95	105	63	102–108
Conceptual	32	104	61	98 – 110
Social	24	110	75	104–116
Practical	39	101	53	96 –106

D E

12

Skill Area Scaled Score Profile

	Conceptual			Social		Practical				
	Com	FA	SD	LS	Soc	CU	HL	HS	SC	WK
	9	13	10	13	11	12	8	11	8	—



Composite Score Profile

GAC	CON	SO	PR
105	104	110	101

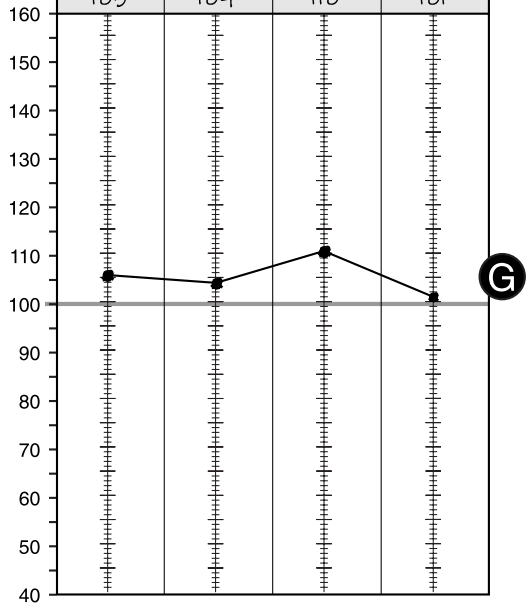


Figure 2.3 Sample of a Completed Summary Page of the Parent Form (Ages 5–21)

Using the individual's chronological age and the type of rating form completed, identify the correct GAC and Adaptive Domain Composite Equivalents of Sums of Scaled Scores Table in Appendix A (Tables A.2, A.6, A.10, and A.13). For example, obtain the GAC and adaptive domain composite scores for a child age 4 years 5 months, who was rated by a parent on the infant-preschool form by using Table A.6. Obtain the GAC and adaptive domain composite scores for a child age 14 years 5 months, who was rated by a teacher on the school-age form by using Table A.2. Obtain the GAC and adaptive domain composite scores for an adult, age 52 years, who was rated by a family member or other respondent by using Table A.13.

Convert the sums of scaled scores into composite scores by locating the sum of scaled scores for the GAC and for each adaptive domain and reading to the left across the row to the corresponding composite score and percentile rank. Be sure to identify the sums of scaled scores separately for the GAC and each adaptive domain to obtain the correct score.

Determine a confidence interval for the GAC and each adaptive domain by locating the critical values listed below the heading of the appropriate column containing the sums of scaled scores. Subtract and then add the critical value for either a 90% or 95% confidence level to the composite score to find the lower and upper limits of the confidence interval. For example, the 95% confidence interval of a GAC score of 93 for a 5 year old rated on the Parent Form is 93± the critical value of 4 (89–97; see Table A.6). Record the composite score, percentile rank, and confidence interval for the GAC and each adaptive domain in the Sum of Scaled Scores to Composite Score Conversions table (**E** in Figure 2.3).

► Step 6: Plot profiles of scores (optional)

To facilitate interpretation, the scaled scores of the skill areas can be plotted on the Skill Area Scaled Score Profile. Additionally, the GAC and adaptive domain composite scores can be plotted on the Composite Score Profile. Both profiles are found on the Summary Page of the rating form. To plot a score, mark the point on the graph that corresponds to the value of the skill area scaled score or composite score (**F** and **G** in Figure 2.3). If desired, you may place horizontal lines at the upper and lower ranges to reflect the confidence intervals for composite scores.

Note. To further assist in interpretation, skill areas in the Skill Area Scaled Score Profile are grouped by adaptive domain instead of administration order.

► Step 7: Identify skill area strengths and weaknesses (optional)

Space is provided on the Supplemental Analyses page of the rating form for conducting an analysis of the individual's strengths and weaknesses across skill areas. This analysis can be performed either by comparing each skill area scaled score to the mean of all skill area scaled scores, or by comparing each skill area scaled score to the mean of all scaled scores within its adaptive domain. Indicate the chosen basis for comparison in the Comparison Group box by marking the box next to GAC Mean or Domain Means (**A** in Figure 2.4).

Compare skill area scaled scores using the GAC Mean.

Compare skill area scaled scores to the mean of all skill area scaled scores by first transferring the sum of scaled scores for the GAC from the Summary Page to the GAC column of the Calculate the Skill Area Mean Scaled Scores table on the Supplemental Analyses page (**B** in Figure 2.4).

Note. For the Parent/Primary Caregiver Form, the sum of scaled scores for the GAC will include either seven or ten scaled scores, depending on the age of the child. When using the Adult Form, the sum of scaled scores for the GAC will include either nine or ten scaled scores, depending on whether or not Work was included. These rating forms provide alternate columns in which to transfer the sum of scaled scores for the GAC. Transfer the sum to the appropriate column depending on the number of skill areas included in the GAC.

Divide the sum of scaled scores by the total number of skill areas summed, indicated below the sum of scaled scores. Record the mean scaled score (*MSS*) in the last row of the Calculate the Skill Area Mean Scaled Scores table. Record the *MSS* to two decimal places.

Transfer the skill area scaled scores from the Summary Page to the Determining Strengths and Weaknesses table on the Supplemental Analyses page. Then transfer the *MSS* to the right of each skill area scaled score. For each skill area, compute the difference score by subtracting the *MSS* from the scaled score. Enter the difference score for each skill area in the Difference from Mean column (**C** in Figure 2.4).

Use Table B.1, B.8, B.15, or B.22 in Appendix B to evaluate the statistical and clinical significance of the difference score. These tables provide the critical values required for the difference score to be statistically significant at the .15 and .05 levels. Indicate the chosen level in the Statistical Significance Level box on the Supplemental Analyses page, and record the critical value for each skill area. If the absolute value of the difference score is equal to or greater than this critical value, it is considered statistically significant. Tables B.1, B.8, B.15, or B.22 also provide the frequencies of difference scores obtained by the standardization sample (base rates) by indicating the difference scores obtained by 1%, 2%, 5%, 10%, and 25% of the sample. When a difference score is both significant and infrequent, note whether the skill area reflects a relative strength (S) or weakness (W) (**D** in Figure 2.4). If the score is a positive value, it reflects a strength; if the score is a negative value, it reflects a weakness. Refer to Chapter 3 for a detailed description of this analysis.

ABAS–II PARENT (Ages 5–21)

ABAS II Adaptive Behavior Assessment System® SECOND EDITION

Supplemental Analyses

Calculate the Skill Area Mean Scaled Scores

	9 Skill Areas (GAC)	Conceptual Domain	Practical Domain
Sum of Scaled Scores	95 (B)		
Number of Skill Areas	÷ 9	÷ 3	÷ 4
Mean Scaled Score	10.56		

Determine Strengths and Weaknesses (C)

Domain	Skill Areas	Skill Area Scaled Score	Mean Scaled Score	Difference from Mean	Critical Value	Strength or Weakness (S) or (W)	Base Rate in Standardization Sample
CON	Communication	9	10.56	-1.56	1.96		
	Functional Academics	13	10.56	2.44	1.86	S (D)	10–25%
	Self-Direction	10	10.56	-.56	1.84		
SO	Leisure	13	10.56	2.44	1.98	S	10–25%
	Social	11	10.56	.44	1.90		
PR	Community Use	12	10.56	1.44	2.00		
	Home Living	8	10.56	-2.56	1.90	W	10–25%
	Health and Safety	11	10.56	.44	2.45		
	Self-Care	8	10.56	-2.56	2.45	W	10–25%

To determine strengths and weaknesses see Table B.8 (GAC Mean), or Tables B.8, B.9, and B.10 (Domain Means).

Comparison Group (A)

- [x] GAC Mean
- [ ] Domain Means

Statistical Significance Level

- [x] .15
- [ ] .05

Figure 2.4 Sample of a Completed Strength/Weakness Analysis Using the GAC Mean

Compare skill area scaled scores using the domain means.

Compare each skill area scaled score to the mean of skill area scaled scores within its adaptive domain by first transferring the sum of scaled scores for the Conceptual (CON) and Practical (PR) Domains from the Summary Page to the appropriate columns of the Calculate the Skill Area Mean Scaled Scores table on the Supplemental Analyses page (**A** in Figure 2.5).

Note. When using the Adult Form, the sum of scaled scores for the Practical Domain will include either four or five scaled scores, depending on whether or not the Work Skill Area was included. Transfer the sum to the correct column, depending on the number of skill areas included in the Practical Domain.

Divide the sum of scaled scores by the total number of skill areas summed, indicated below each sum of scaled scores. Record the *MSS* in the last row of the Calculate the Skill Area Mean Scaled Scores table.

Transfer the skill area scaled scores from the Summary Page to the Determining Strengths and Weaknesses table. Then transfer the *MSS* for the Social and Practical domains to the right of the skill areas included in each domain. Each domain may have a different *MSS*. For *each* skill area, excluding Leisure and Social, compute the difference score by subtracting the *MSS* from the scaled score. Enter the difference score in the Difference from Mean column (**B** in Figure 2.5).

Use Table B.1, B.8, B.15, or B.22 in Appendix B to evaluate the statistical and clinical significance of the difference score. These tables provide the critical values required for the difference score to be statistically significant at the .15 and .05 levels. Indicate the chosen level in the Statistical Significance Level box on the Supplemental Analyses page, and record the critical value for each skill area. If the absolute value of the difference score is equal to or greater than this critical value, it is considered statistically significant. Tables B.1, B.8, B.15, and B.22 also provide the frequencies of difference scores obtained by the standardization sample (base rates) by indicating the difference scores obtained by 1%, 2%, 5%, 10%, and 25% of the sample. When a difference score is significant and infrequent, note whether the skill area reflects a relative strength (S) or weakness (W) (**C** in Figure 2.5). If the score is a positive value, it reflects a strength; if the score is a negative value, it reflects a weakness. Refer to Chapter 3 for a detailed description of this analysis.

On all forms, skill area scaled scores from the Social Domain (SO) cannot be compared to the mean of skill area scaled scores within their domain because there are only two skill areas in the Social Domain. Therefore, to conduct a domain-specific strength/weakness analysis for the Social and Leisure Skill Areas, compare the two subtests to each other. For example, to compare Leisure to Social, record the Social Skill Area scaled score in the *MSS* column of the Determining Strengths and Weaknesses table (**D** in Figure 2.5). Subtract the Social Skill Area scaled score from the Leisure Skill Area scaled score. Enter the difference score in the Difference from Mean column. Then record the critical value from Table B.2, B.9, B.16, or B.23. If the absolute value of the difference score is equal to or greater than this critical value, it is considered statistically significant. Tables B.3, B.10, B.17, and B.24 provide the cumulative percentages (base rates) of inter-skill area scatter within domains obtained by the standardization sample. When a difference score is significant and infrequent, note whether the skill area reflects a relative strength (S) or weakness (W). If the score is a positive value, it reflects a strength; if the score is a negative value, it reflects a weakness.

Note. When using the Parent/Primary Caregiver and Teacher/Daycare Provider Forms, a strength/weakness analysis using adaptive domain means cannot be conducted for the Motor Skill Area because it is not included in any adaptive domain. Therefore, a strength/weakness analysis for Motor can only be conducted using the GAC *MSS* as a basis for comparison.

►Step 8: Compare adaptive domain composite scores (optional)

Space is provided on the Supplemental Analyses page of the rating form for conducting an analysis of discrepancies in the individual's functioning in different adaptive domains.

Transfer the composite scores of the two domains being compared into the Score 1 and Score 2 columns of the Discrepancy Comparisons table (**E** in Figure 2.5). Subtract score 2 from score 1 and record the result in the Difference column.

ABAS–II PARENT (Ages 5–21)

ABAS II Adaptive Behavior Assessment System® SECOND EDITION

Supplemental Analyses

Calculate the Skill Area Mean Scaled Scores	9 Skill Areas (GAC)	Conceptual Domain (A)	Practical Domain
Sum of Scaled Scores		32	39
Number of Skill Areas	÷ 9	÷ 3	÷ 4
Mean Scaled Score		10.67	9.75

Determine Strengths and Weaknesses (B)							
Domain	Skill Areas	Skill Area Scaled Score	Mean Scaled Score	Difference from Mean	Critical Value	Strength or Weakness (S) or (W)	Base Rate in Standardization Sample
CON	Communication	9	10.67	-1.67	1.36	W	25%
	Functional Academics	13	10.67	2.33	1.32	S	10%
	Self-Direction	10	10.67	-.67	1.31	(C)	
SO	Leisure	13	11 (D)	2	1.75		47.2%
	Social	11	13	-2	1.75		47.2%
PR	Community Use	12	9.75	2.25	1.66	S	10–25%
	Home Living	8	9.75	-1.75	1.61		>25%
	Health and Safety	11	9.75	1.25	1.94		
	Self-Care	8	9.75	-1.75	1.94		

To determine strengths and weaknesses see Table B.8 (GAC Mean), or Tables B.8, B.9, and B.10 (Domain Means).

Comparison Group

- ☐ GAC Mean
- ☒ Domain Means

Statistical Significance Level

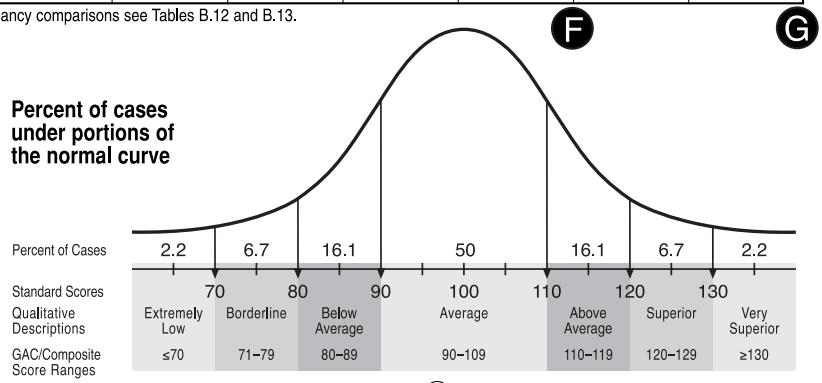
- ☒ .15
- ☐ .05

Discrepancy Comparisons							
Domain Composite	Score 1 (E)	Score 2	Difference	Critical Value	Significant Difference (Y) or (N)	Base Rate in Standardization Sample
Conceptual–Social	CON 104	SO 110	-6	6.48	N	
Conceptual–Practical	CON 104	PR 101	3	6.83	N	
Social–Practical	SO 110	PR 101	9	7.16	Y	22.5%

For discrepancy comparisons see Tables B.12 and B.13.

Statistical Significance Level

- ☒ .15
- ☐ .05



(11)

Figure 2.5 Sample of a Completed Strength/Weakness Analysis Using Domain Means and a Completed Discrepancy Comparison

Evaluate the statistical and clinical significance of the difference. If the absolute value of the composite pair difference score is equal to or greater than the critical value in Table B.5, B.12, B.19, or B.26, it is considered statistically significant. Record the critical value, and indicate with a (Y) or (N) whether the discrepancy is statistically significant (**F** in Figure 2.5).

Tables B.6, B.13, B.20, and B.27 provide cumulative percentages (base rates) of the sample that obtained each difference score. Base rates are provided separately for each direction of the discrepancy (i.e., CON>PR and CON<PR). This is because the direction of the difference between scores influences interpretation, and given the same absolute value, the base rates for two directions may be quite different. Record the frequency of each statistically significant composite pair difference in the Base Rate in Standardization Sample column of the Discrepancy Comparisons table (**G** in Figure 2.5). Refer to Chapter 3 for a detailed description of this analysis.

►Step 9: Obtain the test-age equivalents of skill area raw scores (optional)

Use Table A.4 or A.8 to obtain the test-age equivalents of skill area raw scores for the infant-preschool or school-age forms. Locate the appropriate raw score for the skill area and read across from the raw score to the Test Age column of the table to identify the test-age equivalent. Repeat this procedure for each skill area. When using the infant-preschool forms, if an obtained raw score is beyond the limits found on the table, record the test age as "greater than 6 years" for a score greater than the upper limit of the raw score. When using the school-age forms, if an obtained raw score is beyond the limits found on the table, record the test age as "less than 5 years" for a score less than the lower limit of the raw score. In addition, record the test age as "greater than 21 years" for a score greater than the upper limit of the raw score.

To obtain a mean test age, sum the test ages and divide by the number of skill areas. To obtain a median test age, distribute the test ages in rank order and find the central value.

Note. Test ages are highly criticized and should be used with great caution, if at all. Refer to Chapter 3 for more information.

Chapter 3

Interpretations and Interventions

The ABAS–II measures skills that are important to everyday life. The need to communicate, display suitable social and academic skills, function effectively at home and in the community, engage in leisure and work, and care for individual health and safety needs begins early in life and remains important until death. Centuries ago, the Greeks believed that the skills required to care for one's self, engage in important life activities, and assist others represented an individual's level of intelligence and maturity (Clarke, Clarke, & Berg, 1985). These skills remain critical for everyday functioning today.

The range of adaptive skills displayed by individuals within a society is broad. Most individuals have sufficient adaptive skills necessary to function independently. Some individuals have one or more deficits that interfere with daily functions. Deficits in adaptive skills often are apparent in individuals diagnosed with medical problems (e.g., Alzheimer's disease, Autistic Disorder, brain injury, dementia, developmental delays, and heart/pulmonary disorders) and psychological disorders (e.g., attention-deficit disorders, behavior disorders, learning disabilities, psychoses, and substance abuse). Individuals diagnosed with mental retardation constitute a large and important segment of those with disorders who display deficiencies in adaptive behavior (AAMR, 1992, 2002b; *DSM–IV–TR*; IDEA, 1999).

A primary purpose of the ABAS–II is to comprehensively, validly, and reliably describe the degree to which individuals display normal adaptive behavior and skills. Thus, emphasis is placed on describing an individual's general adaptive behavior, behaviors associated with the three adaptive domains (e.g., conceptual, practical, and social), and ten skill areas. This information can be used to identify areas of strengths and weaknesses in addition to specific adaptive skills that need further development in order to advance independence and interdependence, increase productivity and effectiveness, and promote feelings of worth. Information from the ABAS–II also can assist in diagnosis and classification, program planning and monitoring, institutional planning, and research activities. This chapter discusses the types of scores used to describe ABAS–II data, provides descriptive classifications for different levels of development, outlines guidelines for interpreting scores, recommends strategies for using ABAS–II data, and provides case studies.

Description of Scores

Normative scores are provided for skill areas, adaptive domains, and the GAC. Scaled scores are derived from the raw scores of each of the skill areas. These scaled scores are used to derive standard scores for the adaptive domain scores and the GAC. The conversion of raw scores into normative scores enables users to interpret scores within the ABAS–II, and between the ABAS–II and other measures. Scaled scores of the skill areas and composite scores of the three adaptive domains and the GAC are age-corrected standard scores that enable the user to compare each individual's adaptive skill with other individuals in the same age group.

The GAC is derived from the sum of scaled scores from seven, nine, or ten skill areas, depending on the age of the individual and the type of rating form. The Conceptual Domain score is derived from the sum of scaled scores from the Communication, Functional Academics, and Self-Direction Skill Areas. The Social Domain score is derived from the sum of scaled scores from the Social and Leisure Skill Areas. The Practical Domain score is derived from the sum of scaled scores from the Self-Care, Home/School Living, Community Use, Health and Safety, and Work (if administered on the Adult Form) Skill Areas.

For children younger than 1 year, rated using the Parent/Primary Caregiver Form, the Conceptual Domain does not include the Functional Pre-Academics Skill Area and the Practical Domain does not include the Community Use and Home/School Living Skill Areas. The Teacher/Daycare Provider Form does not include the Community Use Skill Area for any age. For young children rated using either infant-preschool form, the Motor Skill Area scaled score contributes to the GAC but does not contribute to any of the adaptive domains. The Work scaled score does not contribute to the GAC or the Practical Domain on the Parent and Teacher Forms and is included in these scores on the Adult Form only when the individual being evaluated has a part- or full-time job (refer to Table 1.3).

Distribution of the Skill Area Scaled Scores

The distribution of scaled scores of each of the skill areas has a mean of 10 and a standard deviation of 3. A scaled score of 10 defines the average (mean) performance of a given age group. Scaled scores of 7 and 13 deviate 1 *SD* from the mean and scaled scores of 4 and 16 deviate 2 *SD*s from the mean. For example, individuals who obtain a scaled score of 7 for a skill area perform 1 *SD* below the mean of individuals in the same age group.

When interpreting scaled scores, professional users must be aware that the distributions of skill area raw scores are skewed due to the natural ceiling that is reached as skills are acquired throughout the lifespan. Although the theoretical floor and ceiling of the scaled scores are 1 and 19, the highest scaled scores obtainable on skill areas often are less than 19 due to the skewed nature of the distribution. Skewness is found in all measures of adaptive behavior (Reschly, Myers, & Hartel, 2002; Schalock, 1999).

Theoretically, if the skill area score distributions had met the properties of the normal curve and had not been skewed, about 68% of individuals assessed with the ABAS–II should have scaled scores within 1 *SD* of the mean and 95% should have scaled scores within 2 *SDs* of the mean (Anastasi & Urbina, 1997). Although necessary and conventional procedures were used to normalize the distribution of the standardization sample, only limited normalization corrections could be completed. Therefore, the percent of the standardization samples that falls within 1 or 2 *SD*s of the mean is not perfectly consistent with that of a normal distribution. Nevertheless, the validity and reliability studies reported in Chapter 5 indicate that the skill area scaled scores can accurately reflect an individual's adaptive skills and can be compared to those of his or her peers in the same age group. Many efforts were made to ensure that the skill area scaled scores are consistent with other measurements of adaptive skills and intelligence, especially at key clinical decision points (e.g., at 2 *SD*s below the mean).

Distributions of the Adaptive Domain and GAC Standard Scores

The distribution of scores of the three adaptive domains and the GAC has a mean of 100 and a standard deviation of 15. A score of 100 defines the average performance of a given age group. Scores of 85 and 115 deviate 1 *SD* from the mean and scores of 70 and 130 deviate 2 *SD*s from the mean. In contrast to the scaled scores of the skill areas, the distribution of scores on the three adaptive domains and the GAC closely approximates the normal distribution. For example, approximately 68% of individuals assessed with the ABAS–II should have a GAC score within 1 *SD* of the mean, and 95% should have GAC scores within 2 *SD*s of the mean.

Although the reliabilities of the adaptive domain and GAC scores generally are very high, the ability to determine differences between individuals with high scores decreases as the scores reach the ceiling of their scale. Because the adaptive skills of infants and younger children are still in the early stages of development, their adaptive domain and GAC scores do not show a ceiling effect, and can be classified as either *Superior* or *Very Superior*. However, adaptive domain and GAC scores of older children and adults cannot differentiate those with *Superior* and *Very Superior* adaptive skills with high accuracy. To prevent misinterpretation, this manual contains normative data only for the ranges of scores that have high accuracy and can be interpreted meaningfully. The highest adaptive domain/GAC score obtainable is 160 for ages 0–5 years on the infant-preschool forms; 130 for ages 5–7 years on the school-age forms; and 120 for ages 8–89 years on the school-age forms or Adult Form. The ABAS–II is not designed to assess adaptive skill levels above these score points.

The ABAS–II typically is used to assess the adaptive skill development of those who display below average to average development. The focus of the ABAS–II is on the assessment of the basic adaptive skills that are necessary for an individual to function effectively in most environments. Its purpose is not to assess talents or specialized skills needed in certain environments or in response to high-level or unusual expectations or demands. The ABAS–II, like other measures of adaptive behavior, is rarely used to identify individuals with superior levels of adaptive development or skills (Reschly, Myers, & Hartel, 2002). Thus, limiting standard scores on the ABAS–II to 120 or 130 does not compromise its typical use for diagnosis of disabilities or disorders.

In general, standard scores provide the most accurate description of test data. However, individuals who are inexperienced in interpreting test data may find standard scores difficult to understand. Thus, other methods (e.g., percentiles and test-age equivalents) often are used in conjunction with standard scores to describe an individual's performance.

Percentile Ranks

Age-based percentile ranks are provided for the adaptive domains and GAC. Percentile ranks indicate an individual's standing relative to other individuals of the same age. Percentile ranks reflect points on a scale below which a given percentage of scores fall, based on the standardization sample. Percentile ranks typically range from 1 to 99, with 50 as the mean and median. For example, individuals with a percentile rank of 15 obtain scores as high or higher than the scores of 15% of other individuals the same age.

Although easy to understand and useful for explaining an individual's performance relative to that of others, percentile ranks have various limitations. Percentile ranks do not have equal intervals. Percentile ranks in a normal distribution, such as the GAC, tend to cluster near the median (the 50th percentile). Therefore, for individuals who score within the average range, a change of one or two raw score points may produce a large change in their percentile ranks. However, for those with more extreme scores, a change of one or two raw score points is not likely to produce a sizable change in their percentile ranks.

Test-Age Equivalents

Test-age equivalents represent the average age in years and months at which a given raw score is typical. For example, on the Teacher Form, a raw score of 49 on the Communication Skill Area corresponds to a test-age equivalent of 5:8–5:11 (i.e. 5 years 8 months through 5 years 11 months). This means that a child who obtains this raw score is functioning at the level of a typical child in the 5:8–5:11 age range in this skill area. A higher raw score of 59 on the Communication Skill Area corresponds to a higher test-age equivalent of 10:8–10:11. Test-age equivalents are provided for the Teacher/Daycare Provider, Teacher, Parent/Primary Caregiver, and Parent Forms in Appendix A (Tables A.4 and A.8).

Although test-age equivalents help professional users compare an individual's adaptive skill development to adaptive skill levels typical of various ages, they have limitations when used as part of any assessment instrument (American Educational Research Association, 1999) Test-age equivalents may not be comparable across skill areas. For example, if an individual has test-age equivalents of 7:8–7:11 on the Community Use and Functional Academics Skill Areas, it does not indicate that the individual is equally proficient in both of these skill areas. In addition, test-age equivalents do not form equally spaced units or intervals throughout a scale. Thus, small raw score changes may result in large changes in test-age equivalents.

Clinical decisions about the equivalency of scores should be made from a review of the individual's scaled scores, not the test-age equivalents. Individuals should not be diagnosed or placed in schools or other environments based on their test-age equivalents. Diagnostic decisions typically consider standard scores and various other qualities of the individual (e.g., age, academic aptitude and achievement, physical or acuity limitations) combined with personal choices and environmental expectations and resources. Although notable differences between test-age equivalents and an individual's chronological age may be obtained, an interpretation of an individual's test-age equivalents such as "her adaptive skills are far below or above average for her age" are unwarranted. Test-age equivalents that are very low or

high compared to an individual's chronological age do not indicate that the individual's adaptive skills resemble those of the much older or younger age group in every way.

Finally and most importantly, test-age equivalents provide little information about an individual's standing relative to other individuals the same age. A 9-year-old child who obtains a test-age equivalent of 7:4–7:7 may or may not be in the average range compared to other 9-year-old children. This test-age equivalent simply indicates that the child's performance was typical of children ages 7:4–7:7. It does not indicate that a score is atypical or unusually low for 9-year-old children. Standard scores or percentile ranks must be used to compare an individual's performance to that of other individuals the same age.

Be advised that test-age equivalents generally should not be used due to their psychometric limitations and the risk of misinterpretation. If it is decided that test-age equivalents should be used in very special circumstances, the assessment professional must understand and explain all limitations and ensure that others do not interpret the data incorrectly or inappropriately.

Standard Errors of Measurement and Confidence Intervals

Scores such as those derived from measures of adaptive skills, are based on observational data. Observed scores reflect an individual's true ability combined with some degree of measurement error. An observed score therefore is an *estimate* of an individual's true score. We can more accurately estimate an individual's true score by establishing a band of scores around the observed score. Scores that are less reliable have a broader band while those that are more reliable have a narrower band.

The standard error of measurement (*SEM*) is used to calculate the confidence interval, or band of scores, around the observed score within which an individual's true score is likely to fall. Confidence intervals provide another means of expressing the precision of test scores. The professional user can use confidence intervals to report an individual's score as an interval that is likely to contain the individual's true score. Confidence intervals also serve as a reminder that measurement error is inherent in all test scores and that the observed test score is only an estimate of the individual's true score. Users are encouraged to establish confidence intervals around adaptive domain and GAC scores and to use this information to ensure greater accuracy during interpretation. For example, if an 8-year-old child's observed GAC score is 97 on the Teacher Form, the user can be 90% confident that the child's true GAC score falls in the range of 95–99 and 95% confident that the child's true GAC score falls in the range of 94–100.

Tables A.2, A.6, A.10, and A.13 provide critical values for calculating confidence intervals of the adaptive domain and GAC scores. The *SEM* formula provided in Chapter 5 also can be used to calculate the confidence interval for the scaled scores of the skill areas.

Descriptive Classifications

The GAC and scores from the adaptive domains can be characterized as falling within a certain level of performance (e.g., *Very Superior, Superior, Above Average, Average, Below Average, Borderline,* and *Extremely Low*). Scaled scores from each of the skill areas can be characterized as falling within the *Superior, Above Average, Average, Below Average, Borderline,* and *Extremely Low* levels of performance. The level of performance refers to the rank (usually expressed as a scaled score or standard score, percentile rank, and descriptive classification) obtained by an individual on a given test compared to the performance of an appropriate normative group. Clinically speaking, level of performance is important for estimating the presence and severity of any impairment or presence of a relative strength. However, patterns of an individual's strengths and weaknesses often are emphasized without necessarily implying any type of impairment. Table 3.1 lists the descriptive classifications and corresponding percentiles for scores on the three adaptive domains and the GAC along with the classifications for the skill area scaled scores. Test results can be described in a manner similar to the following example:

> Relative to individuals of comparable age, the level of this individual's adaptive behavior currently falls in the (*descriptive classification*) range on a standardized measure of adaptive behavior.

Table 3.1 GAC Scores, Domain Composite Scores, Skill Area Scaled Scores, Percentiles, and Score Classifications

GAC/Domain Composite Scores	Percentiles	Classification
130 or more	≥98	Very Superior
120–129	91–97	Superior
110–119	75–90	Above Average
90–109	25–74	Average
80–89	9–24	Below Average
71–79	3–8	Borderline
70 or Less	≤2	Extremely Low

Skill Area Scaled Scores	Percentiles	Classification
15 or More	–	Superior
13–14	–	Above Average
8–12	–	Average
6–7	–	Below Average
4–5	–	Borderline
3 or Less	–	Extremely Low

Note. Because the distributions of the skill areas are skewed, percentiles are not provided for the scaled scores of the skill areas.

Interpretation of Scores

Interpretations of ABAS–II data are based on information about an individual's general adaptive skills, as represented in the GAC, composite scores from the three adaptive domains, and scores from each of the skill areas. This section provides some basic information for interpreting results.

Verify the Administration and Scoring of Rating Forms

Professional users should answer the respondent's questions, consider the effects of guessing, carefully review the accuracy of the data, resolve conflicting data, and consider information from other sources before beginning to interpret scores, describe an individual's overall adaptive behavior, or evaluate strengths and weaknesses.

Answer Respondent's Questions

Respondents who have completed a rating form may have questions about some items or the nature of their responses. Whenever possible, personally ask respondents if they have questions. Determine if the **Comments** column was checked for any items and review any comments written in the **Notes** box on page 10 of the rating form. Answer the respondent's questions and provide additional assistance as necessary to ensure the information provided is accurate and complete.

Consider the Effects of Guessing

As noted in Chapter 1, average rates of guessing were determined for each of the six standardization samples (Tables A.3, A.7, A.11, and A.14). If the guessing rate on a completed rating form exceeds average levels, obtain additional ABAS–II data from other respondents who are more familiar with the individual.

Review the Accuracy of the Data

Review and closely inspect the accuracy of the recording, scoring, and transferring of data. For example, were all the items completed? Were the raw scores, skill area scaled scores, adaptive domain scores, and

the GAC calculated properly? Were the scores recorded correctly? If the GAC, adaptive domain, and skill area scores differ from expected levels for that individual, carefully evaluate the data for possible errors.

Items are presented in order of difficulty (i.e., items that appear in the beginning of a skill area generally are easier and intended to be more suitable for discriminating among younger individuals; items at the end of a skill area are more difficult and generally intended to discriminate among older individuals). Thus, an individual typically receives higher ratings (i.e., **3**s) on the earlier items and lower ratings (i.e., **1**s and **0**s) on later items. Some individuals will not display this profile because their adaptive skills are unevenly developed (i.e., an individual does not display some skills typically performed at younger ages but displays some skills typically performed at more advanced ages). Individuals who display this unusual profile may have GAC, adaptive domain, and skill area scores that do not accurately characterize their adaptive skill levels.

Resolve Conflicting Data

Multiple respondents completing rating forms for one individual may describe the individual in very different ways, resulting in significant score differences. It is necessary to resolve these differences to obtain an accurate description of an individual's adaptive behaviors and to make decisions regarding how best to use this information. Examples of some of these differences follow.

Discussions with respondents may reveal errors, confusion, or other factors that attenuated their responses. Often an individual's adaptive skills are displayed more prominently in one environment than in others. Thus, opportunities to observe adaptive skills may differ. In addition, some respondents are better observers, and may be more capable and prepared to complete a rating form. Respondents may have a personal interest in characterizing the data in one way or another (e.g., when the outcome of an evaluation may have legal or financial implications). Professional users should be vigilant to these possibilities.

The user can have a greater level of confidence in the data when two or more sources of information are available and provide generally similar ratings. The availability of only one rating form minimizes opportunities for a user to determine inter–rater or cross–form reliability. Using information from additional sources can help overcome this limitation.

Consider Information From Additional Sources

Information from alternative sources may help verify ABAS–II data. Obtain a history of the individual, examine existing documents, and interview individuals who are familiar with the individual. This type of information may serve as a substitute for not having multiple respondents. Additional information acquired generally should be consistent with that obtained from the ABAS–II.

Interpreting the GAC

The ABAS–II assesses a strong and unified single factor of adaptive skills. Empirical support exists for a trait of adaptive skills as assessed by the ABAS–II and, unless otherwise indicated, justifies the use of the GAC. The GAC represents a comprehensive and global estimate of an individual's adaptive functioning. The GAC describes the degree to which an individual's adaptive skills generally compare to the adaptive skills of other individuals within the same age group. Test results may be described in the following manner.

> John obtained a score of ____on the General Adaptive Composite. His true score is likely to fall within the range of _____ to _____ at a _____ % level of confidence. Relative to individuals of comparable age, John currently is functioning at the _____ percentile and his overall level of adaptive behavior can be described as being in the _____ (*refer to Table 3.1 for descriptive classifications*) range of functioning.

The GAC is based on information obtained from all relevant skill areas (see Table 1.3). It generally provides the most complete measure of an individual's adaptive behavior and is likely to be the most reliable and accurate estimate of an individual's overall adaptive functioning. However, the GAC may not

accurately reflect an individual's overall adaptive functioning if skill area scaled scores vary considerably (e.g., skill area scaled scores range from high to low). For example, although a GAC of 100 generally indicates that an individual displays average adaptive behavior compared to other individuals of the same age group, this score is not an accurate summary if it is derived from skill area scaled scores that range from 3 and less to 13 or more. Therefore, do not interpret the GAC if considerable scatter exists among the skill area scaled scores. Use the instructions in the following section to examine scatter and determine which level of scores to use as the basis of interpretation.

Examining Scatter

Determine the level of score variability (e.g., scatter) by examining skill area scaled scores. Variability is evident in scores that range from high to low. Profiles that have similar scores indicate considerable consistency of an individual's adaptive skills. If the scores do not differ significantly, the GAC and adaptive domain scores are likely to summarize an individual's adaptive behavior accurately, and a strengths and weaknesses analysis at the skill area level will not be meaningful.

However, if the skill area scaled scores demonstrate significant variability, the GAC may not accurately summarize an individual's adaptive skills and a strengths and weaknesses analysis is more likely to be meaningful. If an individual's scaled scores are variable, interpretations should rely on the significant differences in skill area scaled scores. Additionally, if skill area scaled scores within domains do not show significant variability with one another, interpretations also may rely on any significant differences that exist between adaptive domain composite scores. If an individual's skill area scaled scores appear to be variable, interpretations should rely on the methods described in the following sections.

Examining Overall Skill Area Scaled Score Scatter

Before conducting a skill area strengths and weaknesses analysis, follow these three steps to determine if the level of observed scatter is both significant and rare enough to make such an analysis meaningful.

Step 1. Determine if the skill area scaled scores differ significantly

Calculate the difference between the smallest and the largest skill area scaled score. Compare the absolute value of the difference with the related critical values provided in Tables B.2, B.9, B.16, and B.23 to determine if the difference between two scaled scores is significant at the .15 and .05 levels. A difference is statistically significant if it is *equal to or greater than* the related critical value. For example, on the Teacher Form, differences in scaled scores on the Communication and Community Use Skill Areas are significant at the .15 level if they differ by more than 1.82 points, and at the .05 level if they differ by more than 2.47 points (Table B.2).

Step 2. Determine if a difference between two skill area scaled scores is rare

A difference that is statistically significant may not be meaningful if it occurs frequently in the population. Refer to Tables B.3, B.10, B.17, and B.24 to determine if a statistically significant difference is also clinically significant. These tables provide the cumulative percentages (base rates) of inter-skill-area scatter for each rating form by age group. For example, a 3-point scaled score difference between any two skill areas on any rating form will be statistically significant at the .15 level. However, between 73% and 99% of the standardization sample obtained such a difference. In contrast, less than 3% of the standardization sample have two scores that differ by 11 or more points. Thus, a range of 11 points or more is relatively rare.

Step 3. Determine the level of occurrence to be considered rare

Professional users must decide what level of occurrence can be considered rare: 25%, 10%, 5%, 2% or 1%. This decision depends on institutional policy, the purposes of the assessment, and the degree of risk the user is willing to assume. Users are responsible for exercising sound professional judgment in their selection of the levels. Sattler (2001) suggests that differences between composite scores that occur in less than 10% to 15% of the standardization sample should be considered unusual.

Reliance on the GAC should be minimized when skill area scaled scores show significant and rare levels of scatter. In such a case, a more meaningful interpretation may be obtained by conducting a strengths and weaknesses analysis of the skill area scaled scores (use the Determining Strengths and Weaknesses table on the Supplemental Analyses page of the rating form). Emphasis also may be placed on the adaptive domain composite scores if skill area scaled scores *within* the adaptive domains do not show significant variability.

Examining Skill Area Scaled Score Scatter Within Adaptive Domains

Before conducting an analysis of discrepancies between adaptive domain composite scores, follow these three steps to determine if the skill area scaled scores show significant variability within the adaptive domains. The procedures used to determine scatter within the adaptive domains parallel the procedures used to determine overall scatter.

Step 1. Determine if the skill area scaled scores differ significantly within adaptive domains

Calculate the difference between the smallest and the largest skill area scaled score within an adaptive domain. Compare the absolute value of the difference with the related critical values provided in Tables B.2, B. 9, B. 16, and B.23 to determine if the difference between two scaled scores is significant at the .15 and .05 levels. For example, on the Teacher/Daycare Provider Form (Table B.2), differences in scaled scores on Health and Safety and Self-Care (within the Practical Domain) are significant at the .15 level if they differ by more than 2.48 points and are significant at the .05 level if they differ by more than 3.38 points.

Step 2. Determine if a difference between two skill areas scaled scores within an adaptive domain is rare

As previously noted, a difference that is statistically significant may not be clinically meaningful if it occurs frequently in the population. Refer to Tables B.3, B.10, B.17, and B.24 to determine if a statistically significant difference is also rare. For example, on the Teacher Form, a 2-point difference between any two skill area scaled scores within the Conceptual Domain will be statistically significant at the .15 level. However, 84% of the standardization sample obtained a difference of 2 or more points (Table B.3). In contrast, less than 5% of the standardization sample had a scatter of 8 or more points within the Conceptual Domain. Thus, a scatter of 8 points or more is relatively rare.

Step 3. Determine the level of occurrence to be considered rare

Professional users must decide what level of occurrence can be considered rare: 25%, 10%, 5%, 2% or 1%. This decision depends on institutional policy, the purposes of the assessment, and the degree of risk the user is willing to assume.

If scaled scores within adaptive domains do show significant differences, rely on a strengths and weaknesses analysis at the skill area level, and use caution when interpreting and comparing adaptive domain composite scores. When skill area scaled scores within adaptive domains do not show significant and rare levels of scatter, meaningful interpretations based on the differences between adaptive domain composite scores may be obtained by conducting a discrepancy analysis (use the Discrepancy Comparison table on the Supplemental Analyses page of the rating form).

Interpreting Strengths and Weaknesses

Skill Area Strengths and Weaknesses

Scoring steps (Chapter 2) prepare the professional user to examine scores from each of the relevant skill areas and to identify scores that are significantly higher or lower than others. Attempts to interpret skill area strengths and weaknesses will be of little value if the profile shows little variability. Refer to Table 3.2 for the following example.

Table 3.2 Scaled Scores for Joe and Mary on the Parent Form

	Joe	Mary				
Skill Area	**Scaled Scores**	**Scaled Scores**	**Difference From *MSS***	**Critical Value[a]**	**Percent in Standardization Sample**	**Strength or Weakness**
Communication	1	5	**–3**	2.29	>5	
Community Use	2	8	0	2.33		
Functional Academics	1	2	**–6**	2.17	<1	W
Home Living	1	8	0	2.22		
Health and Safety	3	10	2	2.86		
Leisure	2	12	**4**	2.31	<2	S
Self-Care	1	12	**4**	2.86	>5	
Self-Direction	1	7	–1	2.15		
Social	1	8	0	2.22		

Note. Bold numbers indicate statistical significance. *MSS* = Mean Scaled Score.

[a]Critical values significant at the .05 level when comparing each scaled score to the mean of all nine skill areas.

On the Parent Form, the scaled scores for Joe show little variability. The user should report Joe's scaled scores as presenting a consistent profile, one in which his nine skill area scaled scores show considerable similarity and fall in the extremely low range. In contrast, 8-year-old Mary's scaled scores fall in the extremely low, borderline, and average range. The inter-skill area scatter of 10 points is significant at the .05 level and occurs in 6.7% of the standardization sample (Tables B.9 and B.10). Such variability renders the interpretation of the GAC less meaningful and increases the importance of determining strengths and weaknesses.

As described in Chapter 2, the first step of a strengths and weaknesses analysis is to determine if the differences between each skill area scaled score and the mean of all scaled scores or the mean of all scaled scores within its domain are statistically significant. Using data from the Parent Form, the user should compare the differences between each of Mary's skill area scaled scores and the mean of all nine skill area scores (*MSS* = 8) to the critical values found in Table B.8. Significantly higher skill areas are Leisure and Self-Care. Significantly lower skill areas are Communication and Functional Academics. This information provides the first indication of the differences between Mary's skill area scaled scores and *MSS*.

The user should then examine if these differences occur rarely. For example, Mary's Communication Skill Area scaled score (5) differs significantly from the mean of the nine skill areas (8) by 3 points. A difference of 3 occurs less than 10% of the time but more than 5% of the time. Therefore, depending on the standard selected by the user, the score difference of 3 points may be considered rare (if 10% is selected as a rare level of occurrence) or not very rare (if 5% is selected).

If the user decides on a 5% or less occurrence as rare for Mary, only two skill areas (Functional Academics and Leisure) out of the four that differ significantly from the *MSS* also demonstrate differences that are rare. Although Communication and Self-Care scaled scores differ significantly from the *MSS*, the degree to which they differ does not occur rarely.

Finally, the user should determine how many of an individual's skill area scores are deficits compared to the scores of individuals in the same age group. For this purpose, users may need to use additional methods of identifying deficits to fulfill the criteria required by state or federal agencies, boards, institutions, and other organizations. For example, *DSM–IV–TR* criteria for a diagnosis of mental retardation require significant limitations in at least two adaptive skill areas. A number of states also require documentation of deficits in two or more skill areas for a diagnosis of mental retardation. Although the *DSM–IV–TR* does not operationally define significant limitations in skill areas, one possible criterion is 2 or more standard deviations below the mean.

Tables B.4, B.11, B.18, and B.25 provide the percentage of individuals within the standardization samples who obtained two or more scaled scores equal to or less than 2 *SD*s below the mean (i.e., scaled scores of

4 or less). These tables enable users to evaluate how rarely individuals obtain a number of skill area scaled scores that are equal to or less than 2 *SD*s below the mean. For example, among 5-year-olds rated on the Teacher Form (Table B.4), 16% had two or more scaled scores equal to or less than 2 *SD*s below the mean, 10% have three or more scaled scores equal to or less than 2 *SD*s below the mean, and 1.3% had nine scaled scores equal to or less than 2 *SD*s below the mean.

Similarly, an analysis of the number of skill area deficits (i.e., scaled scores of 4 or less) in comparison with the standardization sample may assist professional users in the diagnosis or treatment planning of individuals with a variety of disabilities and disorders. Determining that an individual has deficits in an unusually large number skill areas in comparison to the national standardization sample will assist the user in documenting the extensiveness of the impact of the disability or disorder on the individual's daily functioning and in planning interventions and treatments for the individual. For example, if a 3-year-old child diagnosed with Autistic Disorder has scaled scores of 4 or less in five skill areas, compared to 3% of the standardization sample, the user will have additional documentation about the impact of Autistic Disorder on the child's functioning and can use this information to plan interventions accordingly. If a 72-year-old adult with symptoms of cognitive impairments and memory loss obtains deficits in six skill areas, compared to 2% of the standardization sample, the user will have important documentation about the impact of the impairment on the adult's functioning that may inform treatment and assistance plans.

Adaptive Domain Discrepancies

The scoring procedures described in Chapter 2 prepare the professional user to examine composite scores from each of the adaptive domains and to identify scores that are significantly higher or lower than others. Attempts to interpret adaptive domain discrepancies will be of little value if the differences between scores are not significant and rare. Refer to Table 3.3 for the following example.

Table 3.3 Adaptive Domain Composite and GAC Scores for Joe and Mary on the Parent Form

	Joe	Mary				
Adaptive Domain/GAC	**Composite Scores**	**Composite Scores**	**Score 1 – Score 2 Difference**	**Critical Value[a]**	**Significant Difference (Y) or (N)**	**Percent in Standardization Sample**
Conceptual	50	75	(CON – SO) = **–25**	8.31	Y	1.7
Social	58	100	(SO – PR) = 2	8.31	N	
Practical	46	98	(CON – PR) = **–23**	7.21	Y	2.9
GAC	44	89				

Note. Bold numbers indicate statistical significance.

[a]Critical values significant at the .05 level when comparing each adaptive domain to every other adaptive domain.

Composite scores for Joe show little variability. The user should not continue with a discrepancy analysis, but should instead report that Joe's functioning across all adaptive domains presents a consistent profile in which all composite scores and the GAC fall in the extremely low range. Mary's composite scores, however, display a more variable profile. While two adaptive domain scores fall in the average range, one falls in the borderline range of functioning, illustrating a large discrepancy and a possible focus of interpretation. Before conducting a discrepancy comparison, however, the user should determine the amount of scatter within the adaptive domains in order to decide whether an interpretation of discrepancies would be valuable. Within the Conceptual Domain, inter-skill area scatter is 5 points, within the Social Domain the scatter is 4 points, and within the Practical Domain the scatter is 4 points (using Mary's skill area scaled scores from Table 3.2). While the scatter within each domain is significant at the .05 level, the levels of scatter within the Conceptual and Social Domains occur 18.4% and 14.6% of the time, respectively, and the level of scatter within the Practical Domain occurs 52.4% of the time (Tables B.9 and B.10). Therefore, depending on the standard selected by the user, the score differences of 4 and 5 points within the Conceptual and Social Domains may be considered rare (if 25% is selected as a rare level of occurrence) or not very rare (if 10% is selected). The scatter within the Practical

Domain is not considered rare. The user may proceed with a discrepancy analysis, but should interpret discrepancy analysis results with caution if the scatter within domains is considered rare. The first step of a discrepancy analysis is to determine whether the differences between domains are statistically significant.

The user should compare the differences between Mary's adaptive domain scores to the critical values found in Table B.12. The discrepancy of 25 points between her Conceptual and Social Domain scores is significant at the .05 level, and the discrepancy of 23 points between her Conceptual and Practical Domain is also significant at the .05 level.

The user should then examine whether these differences occur rarely. Using Table B.13, and keeping in mind the direction of the discrepancies, the difference between her Conceptual and Social Domain scores occurs 1.7 % of the time, and the difference between her Conceptual and Practical Domain scores occurs 2.9% of the time. Therefore, the discrepancies between her Conceptual and Social Domains, and between her Conceptual and Practical Domains may be considered rare.

Finally, the user should determine how many of an individual's composite scores are deficits compared to the scores of others of the same age group. Once again, users may need to use additional methods of identifying deficits to fulfill the criteria required by states or federal agencies, institutions, and other organizations. For example, the AAMR manual (2002b) provides an operational definition for limitations in adaptive behavior: "For the diagnosis of mental retardation, significant limitations in adaptive behavior should be established through the use of standardized measures normed on the general population, including people with disabilities and people without disabilities. On these standardized measures, significant limitations in adaptive behavior are operationally defined as performance that is at least two standard deviations below the mean of either (a) one of the following three types of adaptive behavior: conceptual, social, or practical, or (b) an overall score on a standardized measure of conceptual, social, and practical skills" (p. 76).

Tables B.7, B.14, B.21, and B.28 provide the percentage of individuals within the standardization samples who obtained scores at least 2 *SD*s below the mean in at least one of the three adaptive domains, or a GAC score at least 2 *SD*s below the mean. For example, among 6-year-olds rated on the Parent Form (Table B.14), 5.4% had at least one adaptive domain or the GAC equal to or less than two *SD*s below the mean.

Developing Hypotheses About Strengths and Weaknesses

Skill Area Strengths and Weaknesses

Professional users can offer hypotheses about the nature of an individual's adaptive skills after evaluating the data and reviewing the individual's background. Profile analysis, a process that helps identify an individual's strengths and weaknesses within a set of scores, may provide information that can be used to test a hypothesis. Scores that are significantly higher than others suggest strengths, while scores that are significantly lower than others suggest weaknesses. Support for the hypothesis that some skill areas represent strengths and others weaknesses requires differences between skill area scaled scores to not only be statistically significant, but also rare. Additional support for the belief that some adaptive skills are stronger than others can be found in information from other sources (e.g., interviews, observations, and other test data).

The interpretation of individual adaptive skill deficits should be guided by an understanding that the 10 skill areas are relatively independent areas of behavior (see Chapter 5). Although they can be grouped into broad categories of functioning represented by the three adaptive domains, users may interpret the skill areas independently of one another. The following are examples of situations in which an individual may demonstrate deficits in skill areas.

> The individual's environment may not emphasize or reward the development of one skill area. Limitations in other areas (e.g., having a physical or sensory impairment) may impede its development or the individual may resist developing adaptive skills in a particular area (e.g., Functional Academics or Self-Care).

An individual may have deficits in two or more related skill areas. Children may have deficits in the Functional Academics and Social Skill Areas due to an underlying deficiency in the Communication Skill Area. Adults with deficits in Self-Direction also may have resulting deficits in Home Living and Work.

Deficits in two or more skill areas may occur independently of one another, may contribute to one another, or may be due to a pervasive influence from a third common cause (e.g., a physical or psychological disorder). Professional users working closely with other individuals who are familiar with the individual being assessed should strive to determine if deficits in skill areas are interrelated and have a common origin that needs attention.

Adaptive Domain Strengths and Weaknesses

The AAMR (2002b) emphasizes the importance of assessing conceptual, social, and practical skills in an assessment of adaptive behavior and the use of information in these three areas for diagnostic and intervention purposes. Significant limitations in adaptive behavior are defined as performance at least 2 *SD*s below the mean on (a) the Conceptual, Social, or Practical Domain or (b) an overall score on a standardized measure that assesses these three adaptive domains (e.g., GAC). The ABAS–II provides a standardized norm-referenced assessment of conceptual, social, and practical skills needed to perform daily life activities. It is normed on a representative population that includes people with and without disabilities. The skills it measures have been conceptually linked to these three adaptive domains. Thus, the comprehensive data provided by these three adaptive domains figures importantly in the diagnosis of mental retardation.

Conceptual skills include receptive and expressive language, reading and writing, money concepts, and self-direction. Social skills include interpersonal relationships, responsibility, self-esteem, gullibility, naiveté, following rules, obeying laws, and avoiding victimization. Practical skills include basic maintenance activities of daily living (e.g., eating, mobility, toileting, dressing), instrumental activities of daily living (e.g., meal preparation, housekeeping, transportation, taking medications, money management, telephone use) together with occupation skills and maintenance of safe environments (AAMR, 2002b, p. 42).

Within the context of an individual's particular score profile and environment, it may be helpful to focus on strengths and weaknesses between adaptive domains when working with individuals who display disorders other than mental retardation. For example, an individual may obtain average scores in the Social and Practical Domains but display a significant and rare deficit in the Conceptual Domain. This discrepancy may suggest a direction for further assessment and for program planning. Another individual may obtain adaptive domain scores 2 *SD*s below the mean in the Conceptual and Practical Domains, while obtaining an average score in the Social Domain. In this profile, the area of social adaptive functioning represents a strength and could lend support to a hypothesis that eliminates certain categories of disorders that typically affect social functioning.

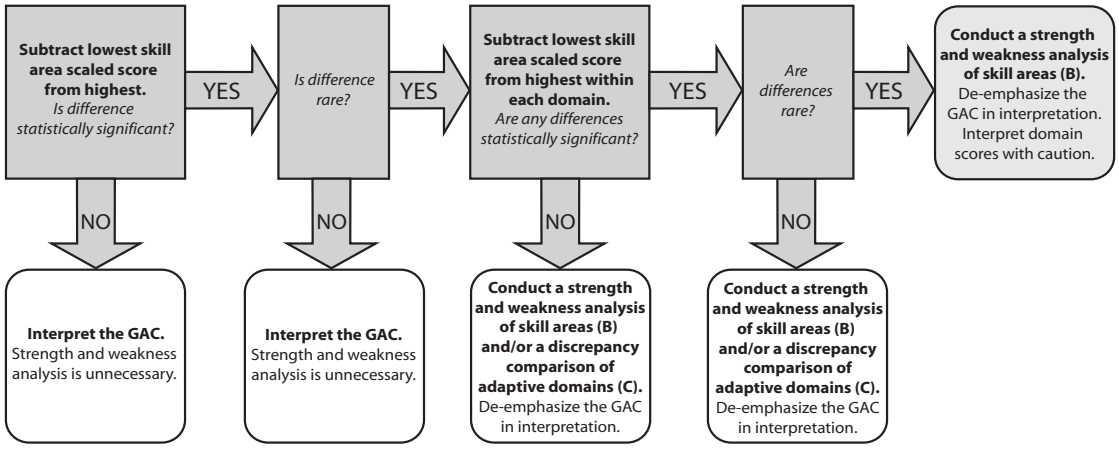
When appropriate, the GAC also can be used to identify global limitations in adaptive behavior (AAMR, 2002b, p. 81). Thus, data from the Conceptual, Social, and Practical Domains and the GAC may be used to facilitate diagnostic, classification, or support planning efforts.

Summary of Guidelines for Interpreting Scores

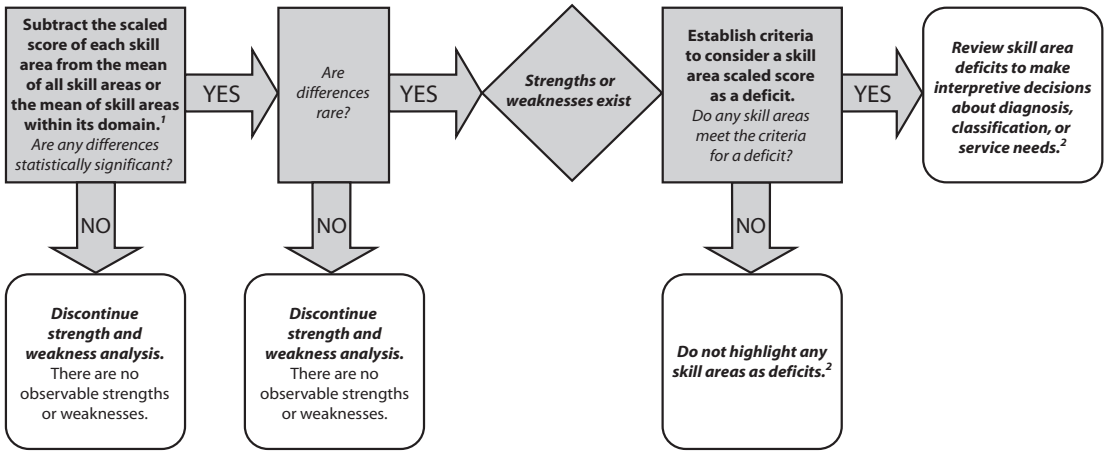
Various methods exist to assist users in analyzing and interpreting test data. For example, in multifactor measures of intelligence, IQ scores may serve as the first level of interpretation followed by a review of index scores, subtest variability within factors, intersubtest variability, and qualitative analyses (Sattler, 2001; The Psychological Corporation, 1994). Many professional users are familiar with this method and use it routinely. Other users have acquired knowledge of different methods or have developed their own that allow them to analyze and interpret test data efficiently and effectively. Figure 3.1 summarizes the methods described in detail in this chapter that may be useful for analyzing and interpreting results. When interpreting ABAS–II scores, always consider important and prevailing environmental requirements.

Guidelines for Interpreting Scores

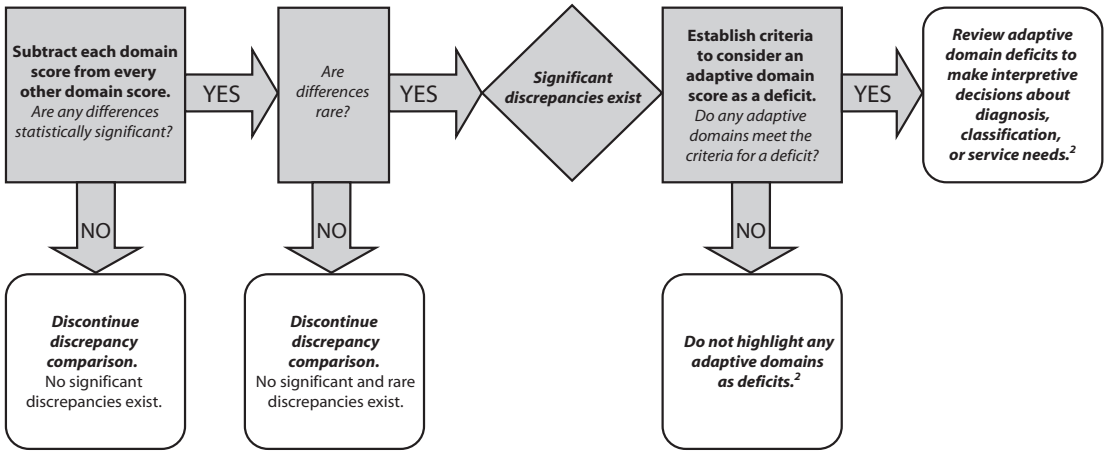
A. Determining Scatter



B. Skill Area Scaled Score Strength and Weakness Analysis



C. Discrepancy Comparison of Adaptive Domains



[1] In general, the mean of all skill areas should be used for the strength and weakness analysis if there are no significant discrepancies between adaptive domain composite scores.

[2] Relative strengths and weaknesses may be interpreted.

Figure 3.1 Guidelines for Interpreting Scores

Use of ABAS–II Scores Within a Comprehensive Assessment

Review Other Assessments, Background Information, and Personal Qualities

Information about additional assessment results, background information, and personal qualities enhance an understanding of an individual's adaptive skills. This additional information can be compared to or integrated with the ABAS–II results. For example, knowledge of an individual's family, schooling, work history, intelligence, achievement, temperament, and personality can help a user develop a broad understanding of the individual's level of functioning.

Understanding the Nature and Needs of an Individual's Environment

Information about the nature of an individual's environment allows users to understand the context within which an individual's adaptive skills were developed. For example, adolescents who have lived for some time in institutions for the severely impaired are likely to display differences in adaptive skills compared to other adolescents the same age who have lived with their families. In addition, individuals who live in families that have many resources and an established regimen for promoting adaptive skills are likely to be more advanced than other individuals living in families that have fewer resources and no regimen for promoting adaptive skills.

Professional users should incorporate information provided by the ABAS–II and other evaluative information with the current and forthcoming needs of the individual. This information prepares users to assist individuals in their development and to meet the needs that characterize their environment. For example, an emphasis on Functional Academic and Work Skill Areas may be necessary if an individual is preparing to enter the job market. An emphasis on Self-Care, Home Living, and Health and Safety Skill Areas may be needed if an individual is living alone. An emphasis on Communication and Social Skill Areas may be essential as an important part of rehabilitation following a stroke.

Avoid Relying Solely on ABAS–II Profiles to Diagnose

Professional users are encouraged to use profile analysis for clinical interpretation and for the generation of hypotheses in conjunction with other data gathered in the comprehensive evaluation. However, users are discouraged from using profile analysis to determine whether a pattern of strengths and weaknesses observed in an individual's ABAS–II scores corresponds to the average or common profiles found in clinical groups (e.g., among individuals with Autistic Disorder). This practice is not encouraged because more reliable and valid methods exist to assist users in making a diagnosis. Profiles of scores of clinical groups reported in Chapter 5 were collected on clinical populations acquired through convenience rather than from well-controlled studies. These and other conditions preclude the exclusive reliance on profile analysis of ABAS–II data to form diagnoses. Furthermore, profiles of adaptive skills do not adequately discriminate between diagnostic groups. Therefore, validity data from the clinical samples do not show that specific types of profiles have diagnostic validity in determining a disability category or disorder.

A *single* assessment instrument never should be used to develop a diagnosis or determine a placement for a child or adult. Instead, a diagnosis or placement decision should be based on a comprehensive evaluation that includes multiple assessment instruments and techniques and relies on many sources of information to evaluate adaptive skills displayed in a variety of settings and over some period of time. Although ABAS–II results may assist in decision-making about diagnoses or disorders, they always should be used in conjunction with other assessment results.

Utilize ABAS–II Information for Planning Interventions

The ABAS–II provides information important to the diagnosis of mental retardation as well as other mental, physical, social, and emotional difficulties. Professional users often employ the ABAS–II to enhance program planning and monitoring. Information from ratings on specific items, and scores from skill areas, adaptive domains, and the GAC may be used to support diagnoses, assist in decision-making, and serve as a benchmark for later evaluations.

ABAS–II Items in Program Planning

Item-level data can provide a basis for developing interventions. Each item identifies an important life skill. For example, individuals unable to state or write their home address, including zip code, should be taught these skills and encouraged to practice them. Individuals who do not complete routine tasks within a reasonable period or who do not clean up their work areas after completing work need assistance in acquiring these essential skills.

Skill Areas in Program Planning

Evaluate information from each of the skill areas for program planning. Identify strengths and weaknesses and the skill areas in which further development is most important. Program planning typically prioritizes the skill areas that are both low and immediately necessary for functioning.

Adaptive Domains in Program Planning

The AAMR (2002b) conceptualizes mental retardation along five dimensions: adaptive behavior; intellectual abilities; participation, interactions, and social roles; health; and context. "Adaptive behavior is a collection of conceptual, social, and practical skills that have been learned by people in order to function in their everyday lives" (AAMR, 2002b, p. 14). Limitations in adaptive behaviors can adversely impact a person's daily life, ability to respond to change, and environmental demands. Limitations should be evaluated in light of the four other dimensions (i.e., intellectual abilities; participation, interactions, and social roles; health; and context). Furthermore, the use of adaptive skill data differs, depending on the extent to which the data is important for diagnosis, classification, or support planning.

Knowledge of the level of development of conceptual, social, and practical skills may assist in program planning. When appropriate, adaptive domains may be used to conceptualize a general area of strength or limitation within an individual's profile and to guide program planning to meet personal needs and environmental expectations. For example, an individual functioning in a school or training setting will have more demands in the area of conceptual adaptive behavior. An individual transitioning to an independent living situation is likely to have environmental demands more associated with practical adaptive behavior. Additionally, the three adaptive domains may provide a framework in which to describe specific skill area strengths and weaknesses.

The AAMR (2002b) promotes the use of conceptual, social, and practical skills in diagnosis, classification, and program planning. However, other professional associations (e.g., APA) and the federal and state governments have not revised their policies to reflect the AAMR's policy recommendations. Users are advised to consult legal and professional standards that should guide their use of adaptive behavior data for diagnosis, classification, or support planning.

Guidelines for Program Planning and Monitoring

Program planning and monitoring involves five steps.

► Step 1: Identify the skill levels needed for an individual's current environment or the environment into which the individual is moving

Behavior is understood by recognizing the qualities displayed by an individual in response to environmental requirements within which his or her behavior occurs. This widely accepted belief within the behavioral sciences also applies to adaptive skills. A close examination of an environment helps define the qualities important to successful functioning within that environment and the degree to which support may be needed to help individuals succeed.

The skill areas constitute qualities important for successful functioning within most environments for most people. An understanding of both the skill areas required by an individual's environment and the level of his or her adaptive skill development is essential to successful planning. For example, adaptive skills commonly found in school environments generally are more important for students, while adaptive skills commonly found in work environments generally are more important for adults. The presence of deficits in critical skill areas typically warrants interventions in these areas.

Knowledge of the availability of support systems provided within families, schools, work, assisted living centers, and through community-supported services to help people function more effectively will contribute to program planning. Assistance commonly is provided to develop adaptive skills and to provide compensatory assistance when an individual's level of development is decreasing, slow to change, or lower than that required for successful functioning. The degree of support needed may range broadly, from intermittent to pervasive levels. The following are definitions of support (AAMR, 1992, 2002b).

Intermittent support is provided as needed. The support is short-term because the individual does not always require assistance. The support may be of high or low intensity. Intermittent support may be necessary during job changes or acute medical problems. The costs for and duration of services are minimal.

Limited support consists of time-limited services and focuses on specific goals (e.g., employment training, transitional support from school to work). Cost and duration generally exceed that of intermittent support but are less than other support levels.

Extensive support consists of long-term and regular involvement (e.g., daily) in one or more settings (e.g., home, school, and work).

Pervasive support involves consistent, highly intense services offered in various settings. The general goal of pervasive support is to help provide life-sustaining services. The cost for and duration of pervasive services exceed those for other levels.

Knowledge of an individual's specific environmental expectations, support services, level of support, skill strengths, and deficits is critical to program planning and monitoring.

► Step 2: Identify current areas of strengths and weaknesses relative to environmental requirements

A profile of the adaptive domains and skill areas may provide evidence about an individual's strengths and weaknesses. The adaptive skills assessed by the ABAS–II do not constitute personal traits that are pervasive and immutable. Instead, the ABAS–II measures adaptive skills that are developed, have been acquired, and thus often are modifiable to the degree homes, schools, work, and other important settings require, nurture, reinforce, and sustain their development. A score profile that describes an individual's strengths and weaknesses in various areas of adaptive functioning combined with information about the skill levels needed in his or her current or future environments will aid program planning and monitoring.

► Step 3: Identify and prioritize intervention objectives based on discrepancies between environmental needs and personal attainment

General intelligence generally shows little substantial improvement following interventions. In contrast, adaptive skills are more amenable to change and thus more likely to show improvement. For example, an individual with deficits in the Communication and Self-Care Skill Areas is likely to display improvements in these skill areas following efforts to develop them and when his or her environment promotes and rewards the newly acquired skills. A review of an individual's profile of scores should be combined with a review of the requirements of his or her current or future environment. For example, an individual may display deficiencies in Communication, Community Use, and School Living Skill Areas. Adaptive skills associated with Communication and School Living may be especially critical to an individual's independent functioning. In contrast, adaptive skills associated with Community Use may be less critical. Thus, the most essential interventions will focus on promoting Communication and School Living.

► Step 4: Implement interventions to achieve specific objectives

The implementation of interventions to achieve desired objectives forms the core of professional service. Interventions are likely to be effective when developmental goals are clearly defined, suitable instructional strategies are implemented and sustained, and when the environment rewards an individual for using newly acquired skills.

Decisions regarding the degree of support each individual needs are based on ABAS–II data combined with additional information regarding personal and environmental characteristics (e.g., environmental demands and potential systems of support). Interventions should encourage individuals to display necessary adaptive skills that depend increasingly less on higher levels of support (e.g., extensive and pervasive levels) by enabling the individual to become more self-sufficient and thus require lower levels of support (e.g., limited and intermittent levels). Individuals whose adaptive skills are extremely deficient and are living in environments that require these skills may need extensive or pervasive support for long periods. The successful provision of support or services to individuals with mental retardation in order to maintain their functioning within a typical range does not eliminate a diagnosis of mental retardation (AAMR, 1992, 2002a).

► Step 5: Monitor the implementation and effectiveness of the interventions

A process that employs formative evaluation methods to monitor adaptive skill development is important to the monitoring of program success. Knowledge of change in skill development, acquired through the continued use of the ABAS–II and other assessment methods, can lead to continued modifications in program, support levels, training, and the further reinforcement of newly acquired skills. Improvements may be reflected in specific ABAS–II items (e.g., when the goals of training are more modest and the time periods brief), in scores on one or more of the skill areas or adaptive domains consistent with program goals, and in changes in the degree of support necessary (e.g., progressing from extensive to limited support).

As previously indicated, adaptive skills are not traits and are more subject to change than traits such as intelligence or personality. As a result, an assessment of adaptive skills may need to occur more frequently because the skills are more susceptible to change. Individuals typically function in two or more environments (e.g., home and work, or home and school), each of which may require different levels of adaptive skills to function effectively and independently. Frequent testing is likely to provide up-to-date information.

Case Studies

The following five case studies demonstrate various methods for using the ABAS–II in clinical practice. Each case study is drawn from clinical practice and names have been changed to ensure confidentiality.

Sample Case Report Using the ABAS–II

Chris: a 29-year-old adult with Mental Retardation

Psychological Report

Name: Chris Jones
Parents: Joe and Karen Jones
DOT: 1999/ 10/ 24
DOB: 1970/ 4/ 17
Age: 29:6

Sources of Information

Adaptive Behavior Assessment System–Second Edition
Guide To The Assessment of Test Session Behaviors
Matrix Analogies Test–Short Form
The Stanford Binet Intelligence Scale–Fourth Edition
Wide Range Achievement Test–3
School Records

Interviews:

Mr. and Mrs. Jones
Chris Jones

Referral

Chris, a 29-year-old male, was referred for testing in order to better understand his current levels of achievement, intellectual, and adaptive development. His parents, together with staff from a regional resource center that provides assistance to adults with mental retardation, requested current assessment data and assistance in developing an intervention program designed to increase Chris' independence.

Rapport was established and maintained with Mr. and Mrs. Jones and Chris during a home visit. They conveyed information in an open and friendly manner. Chris enjoyed showing me around his yard and room. Their home is located in an isolated rural area 20 miles from a city with a population of 18,000. Mr. Jones works irregular hours at an electric generation plant. Mrs. Jones has not worked outside their home since Chris' birth and has devoted most of her time to his care.

The following day, when testing Chris, rapport was again established and easily maintained. Data from the *Guide to the Assessment of Test Session Behaviors* (Glutting & Oakland, 1993) indicated Chris' test-taking behaviors were within the average range. Thus, the cognitive test data reported herein are considered to be a valid indication of his abilities.

Background Information

Mrs. Jones reported no prenatal, perinatal, or postnatal complication associated with her pregnancy with Chris. At about 6 months of age Chris appeared to have "spells" which were diagnosed, in part, through an abnormal EEG as petit mal seizures. At about that same time Chris was diagnosed with hemophilia. He has taken several medications in an attempt to control his seizures. However, his medications have had limited success, and he continues to have seizures one or more times during a 6 month interval. Chris' parents report that they have been over-protective of him since learning of these problems at the age of 6 months. Chris is their only child.

At age 4, Chris was enrolled in a private kindergarten. His parents were led to believe his development was normal at that time. At age 5, Chris entered a public kindergarten, was tested, and placed in a special education program for children with developmental delays. At age 6, Chris started first grade and received most of his classes in special education with some regular education experiences. He repeated first grade.

At age 7, Chris acquired HIV while receiving a transfusion and was put on AZT. Upon learning of his HIV, his parents discontinued his school attendance and restricted his interactions with others out of fear that Chris would be rejected. Chris received his education at home with assistance from the local school district. The parents explained to Chris that his seizures made him very special and, because of them, he would be kept at home.

On a typical day Chris gets up about 10:00 a.m., eats breakfast, and watches "The Price Is Right". He watches the news and weather at noon and may eat again. Mrs. Jones takes Chris to physical therapy on Tuesdays and Thursdays. Following therapy, they frequently shop and eat out. Evenings are typically spent at home playing Nintendo. Chris has his bath at 10:30 p.m. His bedtime varies, depending on the shift his father works. He may go to bed as late as 2:00 a.m. when his father returns after working the late shift. Chris takes medications five times daily.

Chris has no ongoing or regular peer relationships. Children of family friends come to Chris' home on occasion. Also, a 13-year-old boy who lives down the road sees Chris occasionally. Chris has some peer contact as a result of his attending local high school football games in the fall. However, none of these relationships can be considered strong and abiding friendships.

Test Results

Intellectual Abilities: Chris' general intellectual ability, as assessed by the SB–IV (Thorndike, Hagen, & Sattler, 1986), is at the 1st percentile, with a scaled score of 40. His scaled scores are 54 on Abstract Reasoning, 50 on Short Term Memory, 44 on Verbal Reasoning, and 42 on Quantitative Reasoning. No significant differences exist among these scores. His scores generally resemble those of average children 4:6 to 7 years of age. His short-term retention of visually presented information constitutes a strength. His short-term attention of auditory information constitutes a weakness.

Given Chris' apparent strength in processing visual information, the *Matrix Analogies Test–Short Form* (Naglieri, 1985) was also administered. This test assesses intellectual abilities of a visual processing nature. His score on this measure, at the 1st percentile, is consistent with those from the SB–IV (Thorndike, Hagen, & Sattler, 1986).

Achievement: Chris' achievement, as measured by the *Wide Range Achievement Test–Revision 3* (Wilkinson, 1993), is consistent with his intellectual abilities. Chris' standard scores are 54 on Spelling, 52 on Reading Recognition, and less than 46 on Arithmetic. All scores are at the 1st percentile.

Adaptive Behavior and Skills: Chris' adaptive skills were assessed using the ABAS–II Adult Form. Mrs. Jones served as the respondent. (Chris' scores are reported in Table 3.4.)

Chris' GAC and Conceptual, Practical, and Social Domain-related qualities are below the 1st percentile and consistent with his intelligence. The data supports a continued diagnosis of mental retardation. Chris' adaptive skills are in the extremely low range. The profile is flat, with no significant differences between the scores.

Interventions

During the discussion of Chris' profile, Mr. and Mrs. Jones admitted that their desire to shelter and restrict Chris' social interactions and to personally provide for his daily needs has resulted in the restricted development of his adaptive skills. Although Mr. And Mrs. Jones suspected this before the assessment, the ABAS–II data confirmed their belief and motivated a commitment to an intervention plan leading to increased independence.

A meeting with staff from the regional resource center helped identify specific long-term and behavioral goals. The most important long-term goal was to prepare Chris for work and for living in an intermediate care facility after his parents are unable to care for him. The center staff agreed to have Chris attend a daily program that focuses on the use of community resources and the development of communication and social skills, largely in a work context.

Table 3.4 Chris' ABAS–II Scores

Skill Area/Adaptive Domain/GAC	Scaled Scores Adult Form, Rated by Others
Communication	3
Community Use	1
Functional Academics	1
Home Living	1
Health and Safety	2
Leisure	3
Self-Care	3
Self-Direction	1
Social	1
Conceptual Domain	53
90% Confidence Interval	50–56
Social Domain	60
90% Confidence Interval	56–64
Practical Domain	49
90% Confidence Interval	46–52
GAC	47
90% Confidence Interval	45–49

Lewis: Diagnosed with Pervasive Developmental Disorder/Autistic Disorder at age 3 years 10 months

Lewis, a 46-month-old male, was referred by his parents for an evaluation. He lives with his biological mother, stepfather, 14-year-old stepsister, and 65-year-old maternal grandmother. Lewis' mother remains at home to care for him. His stepfather is employed framing houses.

Lewis was born full-term, of average height and weight, and, except for a C-section, the delivery was normal. His mother was 27, in good health, reportedly consumed no alcohol or illegal drugs during her pregnancy, and smoked about 8 cigarettes a day.

Lewis' gross motor development generally was normal. For example, he sat at 7 months and walked at 12 months. He displayed oral/sensory sensitivity. He has restricted his diet to a limited range of foods, preferring peanut butter and jelly sandwiches, grilled cheese, and toast. He currently eats with his hands, and smells his food before eating it.

Lewis displays no fears and shows minimal awareness of danger. His mother describes him as "bouncing off the walls," displaying potentially dangerous behaviors (e.g., looking at the TV screen after climbing on top of the TV), almost always in action, and able to sustain his active behavior over a long period of time. At home, when Lewis is told "no" he runs, throws tantrums, bangs his head, twirls, and kicks and hits. He does not throw tantrums on the bus ride to school or at school. There are no reports of serious injuries, illnesses, allergies, and visual or auditory acuity problems. He takes 100 mg. of Zoloft® twice daily to improve his concentration and attention. Lewis goes to bed at 8:00 p.m. and, after taking Clonodine (.1 mg) at bedtime, sleeps through the night. There are no indications that he experiences nightmares.

He enjoys placing objects (e.g., blocks, magnets, colors) in a line, spinning toys, and watching television programs that present captioned information at the bottom of the screen (e.g., CNN, The Weather Channel). Lewis does not interact with family members, has no neighborhood friends, and displays limited interaction with peers at school.

Lewis attends school daily, from 9:00 a.m.–3:00 p.m., at a school for children diagnosed with autism. His teacher reports considerable improvement in Lewis' behavior and achievement during the last six months following the use of applied behavior management principles. In addition, Lewis is beginning to exhibit parallel play, a condition considered a precursor to the development of advanced social skills.

The ABAS–II was used to describe the development of Lewis' adaptive skills in specific areas and his adaptive behavior in conceptual, practical, and social domains and to assist in program planning for his home and school environments. ABAS–II data was also used to establish a baseline for the continued monitoring of his progress in the program. The ten skill areas were perceived by Lewis' teachers and parents as being central to his further development and important components of his school and home program.

Lewis' mother and grandmother completed the Parent/Primary Caregiver Form together and his teacher completed the Teacher/Daycare Provider Form. Lewis' scores are reported in Table 3.5.

Table 3.5 Lewis' ABAS–II Scores

	Scaled Scores	
Skill Area/Adaptive Domain/GAC	**Parent/Primary Caregiver Form**	**Teacher/Daycare Provider Form**
Communication	1	4
Community Use	1	–
Functional Pre-Academics	7	10
Home/School Living	1	3
Health and Safety	2	4
Leisure	1	4
Self-Care	1	3
Self-Direction	3	3
Social	2	1
Motor	6	7
Conceptual Domain	57	72
90% Confidence Interval	51–63	67–77
Social Domain	50	55
90% Confidence Interval	43–57	48–62
Practical Domain	43	56
90% Confidence Interval	37–49	49–63
GAC	49	61
90% Confidence Interval	46–52	58–64

Lewis' adaptive behavior, as reflected in scores from the GAC and the three adaptive domains, is extremely low and generally consistent at home and school. The adaptive skill profiles reveal considerable consistency in parent and teacher ratings. Both sets of ratings indicate that his Functional Pre-Academics Skill Area is the most advanced followed by the Motor Skill Area. Scores from both forms indicate that the Communication, Home/School Living, and Social Skill Area development should be emphasized at home and school.

Lewis' intelligence was assessed with the *Bayley Scales of Infant Development–Second Edition* (Bayley, 1993). His Mental Development Index was less than 50 and he displayed little meaningful language during the test. Lewis' speech and language development are delayed. He does not converse verbally with other individuals and when he vocalizes, his words are unrelated to questions or comments made by others or the nature of his activities. Lewis' Receptive (standard score of 38), Expressive (standard score of 47) and Total Language (standard score of 43) development is significantly delayed, as measured by the *Clinical Evaluation of Language Fundamentals—Third Edition* (Semel, Wiig, & Secord, 1994). His language age scores lie between 16 and 20 months. His language and intellectual development are consistent.

An evaluation by an occupational therapist indicated that Lewis displays delays in fine motor, self-care, and play skills; and has decreased attention, limited communication, and sensory integration issues. His gross motor skills, including mobility, constituted strengths.

Results from an assessment for Autistic Disorder, completed by the parents, and evaluated in combination with other information, support a diagnosis of a Pervasive Developmental Disorder/ Autistic Disorder.

Lewis' parents and teachers agreed that Lewis' skill development and program implementation must focus on developing more control of his behaviors (e.g., eliminating running, head-banging, twirling, hitting, and kicking). The use of applied behavior management principles at school has resulted in important behavioral improvements. Lewis' mother, father, and grandmother agreed to observe the demonstration of these principles at school and to work with the school psychologist, a behavior specialist, to implement a similar program at home.

Additionally, the school's pre-academic program is producing positive results, supported in part by the ABAS–II data, and will continue to be utilized. Further efforts to promote Communication, School Living, and Social Skill Area development also were added to Lewis' IEP.

Lewis' family agreed to implement a home-based program that also emphasized the Communication and Social Skill Area development and used behavior management principles to promote better eating habits and home living skills (e.g., bathing, tooth brushing). The family agreed to readminister the ABAS–II in 6 months to determine if changes occurred in these skill areas.

Nona: Evaluation for services associated with a diagnosis of Mental Retardation

Nona, a 9-year-old female student in third grade, was born three months prematurely. She displayed developmental disabilities during infancy and early childhood, especially in communication and cognitive skills. Nona began to receive special education preschool services for children with developmental delays at age 3. School reports indicated that she was diagnosed with a speech and language impairment at age 7 and has been receiving special educational services. However, the school district she previously attended did not provide test records. Nona's current school district conducted its own evaluation and believes that Nona displays lower mental abilities than other students.

Nona's WISC–III standard scores were reported as follows: Verbal IQ was 62, Performance IQ was 66, and Full Scale IQ was 61. Her standard scores in math and reading, as measured by the WIAT, were in the low 70s. Teacher reports indicate that Nona's achievement resembles that of a kindergarten or first grade student.

Nona attends school regularly, generally is well behaved but often distracted, and displays problems retaining what she learns. Nona comes from a large and loving family. Her father, mother, and three older sisters are attentive to her needs and have worked consistently to help Nona develop social skills. Table 3.6 details Nona's ABAS–II scores.

Table 3.6 Nona's ABAS–II Scores

Skill Area/Adaptive Domain/GAC	Scaled Scores	
	Teacher Form	Parent Form
Communication	1	2
Community Use	2	5
Functional Academics	1	1
School/Home Living	1	8
Health and Safety	3	2
Leisure	2	4
Self-Care	1	3
Self-Direction	1	2
Social	1	7
Conceptual Domain	50	53
90% Confidence Interval	47–53	47–59
Social Domain	58	75
90% Confidence Interval	54–62	69–81
Practical Domain	49	62
90% Confidence Interval	45–53	57–67
GAC	44	58
90% Confidence Interval	42–47	55–61

The results listed in Table 3.6 provide a profile of a student who displays extremely low to borderline adaptive skills. Nona's overall adaptive skills, as measured by the GAC, are below the 1st percentile as reported by both her teacher and parent. Nona's conceptual, social, and practical composite scores also are low. They fall below the 1st percentile at school. They are somewhat higher at home where her Social Domain composite falls in the 5th percentile, showing an area of relative strength. Scores from the Teacher Form generally are the same, and suggest no notable skill areas that are relative strengths or weaknesses. The profile from the Parent Form is more variable and amenable to identifying strengths and weaknesses. Information from Table B.8 was used to further investigate if the skill area scaled scores differ significantly from Nona's mean scaled score of 3.8 on the Parent Form (using .05 as the standard) and if the differences occur rarely (using 5% as the standard).

Nona's scaled scores on the Parent Form associated with Communication, Functional Academics, and Health and Safety are significantly lower than her average skill area score while those associated with Home Living and Social are significantly advanced compared to her average skill area scaled score. Although these scores differ significantly from her mean, none of the differences occur rarely. The reports from the Teacher and Parent Forms display differences: the GACs differ considerably (i.e., a discrepancy of 14 points), but the percentile ranks of <1 for each form are consistent. In addition, considerable agreement exists in scores from seven of the nine skill areas.

During a meeting arranged to discuss these results, Nona's teacher and mother confirmed that Nona's adaptive skill development in the Communication, Functional Academics, Health and Safety, Leisure, Self-Care, and Self-Direction Skill Areas was low. They also discussed the apparent differences between School and Home Living and Social Skill Areas. Nona's mother indicated that she and Nona's older sisters have a close and loving relationship. Her sisters often serve as surrogate mothers and encourage her in various ways. Furthermore, they accompany and supervise her when she uses community resources.

At home, Nona must follow a set schedule to perform various chores and is closely supervised by her older sisters. Thus, her sisters' supervision seemingly is the catalyst for Nona to perform her home chores. In contrast, at school, Nona rarely displays the initiative to help care for her learning

environments. Nona's teacher realized she should require and encourage her to assume more age-related responsibilities at school (e.g., throwing trash away, bringing needed books and supplies).

At school, Nona rarely seeks friendship with others, says "thank you," offers to assist others, or displays other social skills common for children her age. In contrast, Nona displays suitable social skills at home because her family has insisted and worked with Nona since she was 4 years old to develop social skills that enable her to "blend in." This information indicates that Nona may need additional opportunities at school to be with other students in non-self contained settings that provide opportunities for her to display current social skills and to acquire new social skills.

A meeting of the child study team was held at the conclusion of the school year to consider special education eligibility and programming issues. Members agreed that Nona meets eligibility for services, given a classification of mental retardation based in part on her scores from the ABAS–II, WISC–III, and WIAT. The ABAS–II scores also provided a basis for prioritizing emphasis on further development of her adaptive skills. Of course, considerable discussion focused on advancing Nona's functional academic skills. In addition, Nona's mother agreed to encourage Nona to become more independent in her use of community resources.

Nona's teacher recommended more time next year in integrated settings at school to better use and advance Nona's social skills. She also recommended that her next classroom teacher place higher expectations on using and further developing her School Living Skill Area. The child study team recommended that a more thorough evaluation of Nona's language skills, including pragmatic language, be obtained and, if necessary, services provided to promote her language development.

Information from the ABAS–II was instrumental in helping Nona's family and school officials better understand her adaptive skills at home and school. The results supported a diagnosis of mental retardation and helped identify the specific adaptive skills to which efforts from the home and school should be directed.

Rodney: A diagnosis of Traumatic Brain Injury

Rodney, a 48-year-old male, was hospitalized following a motorcycle accident. His development during infancy, childhood, and adulthood reportedly were normal. He completed high school and later took courses in trade school. He was married for 12 years, divorced 5 years ago, and has 3 children. Prior to his accident, Rodney was employed in the home building industry as a mason. He has been unable to work since his accident and is beginning to participate in rehabilitation services at a local medical center.

Tests conducted in the hospital following his accident led the physicians to conclude that Rodney exhibits traumatic brain injury (TBI), principally in the right hemisphere. The prognosis was guarded, given the severity of his internal head injuries. His WAIS–III Full Scale IQ was 65, Verbal IQ was 74, and Performance IQ was 60. His WAIS–III Block Design subtest was lowest, with a scaled score of 1. The ABAS–II was administered during this same period. Rodney's rehabilitation specialists served as the respondents. The results of the assessment of Rodney's adaptive skills are provided in Table 3.7.

Table 3.7 Rodney's ABAS–II Scores Before and After the Accident

Skill Area/Adaptive Domain/GAC	Scaled Scores: Adult Form, Rated by Others: Before Accident	Scaled Scores: Adult Form, Rated by Others: After Accident
Communication	9	4
Community Use	11	3
Functional Academics	10	4
Home Living	11	2
Health and Safety	10	5
Leisure	12	4
Self-Care	11	2
Self-Direction	10	2
Social	9	1
Work	9	–
Conceptual Domain	94	63
90% Confidence Interval	91–97	60–66
Social Domain	99	62
90% Confidence Interval	95–103	58–66
Practical Domain	97	59[a]
90% Confidence Interval	94–100	56–62
GAC	97	54[b]
90% Confidence Interval	95–99	52–56

[a]Based on 4 skill areas

[b]Based on 9 skill areas

Rodney's adaptive skills are in the extremely low range, with a GAC of 54, which lies below the 1st percentile. His three adaptive domain scores also are at or below the 1st percentile. He displays borderline abilities in four skill areas: Communication, Functional Academics, Health and Safety, and Leisure. His skill areas are extremely low in Community Use, Home Living, Self-Care, Self-Direction, and Social.

Information from Table B.22 was used to further investigate if the scaled scores differ significantly from his mean scaled score of 3 (using .05 as the standard) and if the differences occur rarely (using 5% as the standard). Relative to his average skill level, Rodney's adaptive skills are highest on Health and Safety and lowest on Social. However, none of the differences is rare.

Rodney's initial recovery has been somewhat slow. His rehabilitation initially focused on the development of skills associated with Communication and Functional Academics. Having achieved some success in these two areas, Rodney and his rehabilitation specialists are considering other areas that need to be addressed. His rehabilitation specialists were interested in discovering the level and nature of Rodney's adaptive skills before the accident. This information often helps establish a standard against which recovery is evaluated. Therefore, with Rodney's permission, additional ABAS–II data about his adaptive functioning before the accident were acquired from a male friend with whom he previously lived and worked. These scores are provided in Table 3.7.

Before Rodney's accident, his GAC score falls in the average range, with a corresponding percentile rank of 42. His conceptual, social, and practical domain-related abilities also were in the average range. All scaled scores of the skill areas are in the average range. This information helped assure the therapists that Rodney's adaptive skills were in the average range before the accident. These data help set a goal and standard for therapy.

Before the accident, Rodney lived alone and was employed as a mason. He would like to return home and to work as soon as possible. Based on his ABAS–II profile and other supporting information, Rodney and his therapists decided to focus on the development of the Home Living, Self-Care, Self-Direction, and Social Skill Areas. Adaptive skills in these four areas are required if Rodney is to enjoy greater degrees of independent living and to eventually return to work.

An initial goal of therapy will be to help Rodney return home and receive daily assistance from home-based rehabilitation specialists. Extensive support services are likely to be necessary at first. Progress toward limited, then intermittent, and finally no support services is expected. Everyone agrees that rehabilitation provided in the home is likely to be more beneficial than that provided exclusively in a hospital setting. Rodney also will receive rehabilitation services on an outpatient basis to help promote his physical and language development. Arrangements were made to readminister the ABAS–II in three months to help evaluate the effectiveness of and/or modify Rodney's program.

Information from the ABAS–II was instrumental in helping Rodney and his medical team better understand his adaptive skills, examine the effects of the TBI, identify specific adaptive skills to which efforts would be directed, and create two baselines (i.e., one premorbid and the other postmorbid) against which progress will be measured.

Mary: A diagnosis of later onset of Alzheimer's disease

Mary was a homemaker and assisted in performing various farm-related chores throughout her adult life. She married her childhood sweetheart at age 18 soon after they both graduated from high school. Her husband, a farmer, died 9 years ago. Mary remained in her farm home until one month ago. Mary, age 80, recently moved into an assisted-living center. Her only daughter arranged for Mary to live there after the daughter became concerned that her mother's life was endangered due to her failing health, particularly memory and aphasia-related difficulties. Mary also displays signs of dementia. An evaluation confirmed later onset of Alzheimer's disease. Mary's daughter served as the respondent for the ABAS–II. The assessment of Mary's adaptive skills is provided in Table 3.8.

Table 3.8 Mary's ABAS–II Scores

Skill Area/Adaptive Domain/GAC	Scaled Scores Adult Form, Rated by Others
Communication	3
Community Use	3
Functional Academics	2
Home Living	3
Health and Safety	3
Leisure	5
Self-Care	2
Self-Direction	3
Social	5
Conceptual Domain	61
90% Confidence Interval	59–63
Social Domain	75
90% Confidence Interval	72–78
Practical Domain	61
90% Confidence Interval	59–63
GAC	59
90% Confidence Interval	57–61

Mary's adaptive skills are extremely low, with a GAC of 59, a score that falls below the 1st percentile. Behaviors associated with Mary's Social Domain are at the 5th percentile while those associated with her Conceptual and Practical Domains are below the 1st percentile. In addition, seven skill area scaled scores lie in the extremely low level. The skill areas of Leisure and Social fall in the borderline range. Information from Table B.22 was used to further investigate if Mary's scaled scores differ significantly from her mean scaled score of 3.2 (using .05 as the standard) and if the differences occurred rarely (using 5% as the standard). Her Leisure and Social skill areas fall significantly above her mean of 3.2. However, these differences from the mean should not be considered rare.

Mary's daughter and the staff at the assisted-living center discussed the ABAS–II results and profile. This information helped verify the prior diagnosis of later onset of Alzheimer's disease. More importantly, the ABAS–II data enabled Mary's daughter and the staff to identify program goals that may promote the development and minimize the deterioration of adaptive skills, and allow Mary to remain as safe and independent as possible. Mary's daughter became aware that further deterioration of her mother's adaptive skills might jeopardize her being allowed to remain in the assisted-living center.

Mary's daughter and the staff agreed that Mary would benefit from a daily program that focused on three skill areas considered to be essential to Mary's immediate and long term needs: Health and Safety, Home Living, and Self-Care. These skill areas contribute to the daily activities vital to Mary's basic needs and independence, but her scores in these areas were low. Many of the residents at the center have similar needs; therefore, the center offers a daily regimen involving group and individual programs that focus on these three skills areas. Mary soon became involved in these programs. Her daughter and staff agreed to readminister the ABAS–II in four months to determine if Mary's adaptive skills had improved, remained the same, or declined. Program revisions would be considered at that time.

Information from the ABAS–II was instrumental in helping Mary, her daughter, and the staff understand her adaptive skills, compare them with current personal and center-based needs, identify specific adaptive skills to which efforts will be directed, examine the effects of later onset of Alzheimer's disease on her adaptive skills, and create a baseline to measure progress.

Chapter 4

Development and Standardization

Development of the ABAS–II

ABAS–II items were developed according to a systematic method involving multiple steps as described in Chapter 5 of this manual. Items were written at a fifth grade reading level, on average. All items included on the rating forms were reviewed by an independent consultant and edited as necessary to meet this goal.

Pilot and Tryout Studies

One pilot study and one national tryout study were conducted to evaluate the psychometric properties of the school-age forms and the Adult Form items and scales. Approximately 92 parents, 63 teachers, and 273 adults participated in the pilot study of the Parent, Teacher, and Adult Forms, respectively. During the nationwide tryout study, 1,045 parents, 980 teachers, and 1,406 adults completed the Parent, Teacher, and Adult Forms, respectively. After preliminary focus group reviews of items, a nationwide tryout study of the Parent/Primary Caregiver and Teacher/Daycare Provider Forms was conducted in which 1,520 forms were completed. For all forms, the data from tryout studies were used to evaluate item statistics, differential item functioning, item guessing rate, item bias, skill area reliability and validity, clarity of the instructions, and clinical usefulness. On the basis of tryout data analysis, 272, 242, and 275 items were selected for the standardization editions of the Parent, Teacher, and Adult Forms, respectively, and 344 and 342 items were chosen for the standardization editions of the Parent/Primary Caregiver and Teacher/Daycare Provider Forms, respectively.

Standardization

Description of the Sample

Normative information presented in this manual is based on national standardization samples representative of the English-speaking U.S. population ages 0 through 89 years. Standardization samples of the school-age and Adult Form were stratified by sex, race/ethnicity, and educational level parameters according to census data from 1999, and standardization samples of the infant-preschool forms were stratified by the same variables according to 2000 census data (U.S. Bureau of the Census, 2000). In addition, efforts were made to ensure that the samples were representative by geographical regions. The following sections present the demographic characteristics and composition details of the standardization sample.

> **Age:** The standardization sample of the Parent/Primary Caregiver Form was divided into thirteen age groups spanning birth to age 5 years. The standardization sample of the Teacher/Daycare Provider Form was divided into seven age groups spanning ages 2–5 years. The standardization samples of the school-age Teacher and Parent Forms were divided into eleven age groups spanning ages 5–21 years. The standardization samples of the Adult Form (self report and rated by others) were each divided into seven age groups spanning ages 16–89 years. The size of each age group is presented in Table 4.1 for each of the six standardization samples.

Table 4.1 Standardization Sample by Age Group

Infant-Preschool Forms			School-Age Forms			Adult Form		
Ages	Teacher/ Daycare Provider	Parent/ Primary Caregiver	Ages	Teacher	Parent	Ages	Self Report	Rated by Others
0:0–0:3	–	100	5	150	120	16–21	150	100
0:4–0:7	–	100	6	140	130	22–29	150	140
0:8–0:11	–	100	7	140	120	30–39	180	160
1:0–1:3	–	100	8	150	150	40–49	180	180
1:4–1:7	–	100	9	150	150	50–64	110	150
1:8–1:11	–	100	10	150	150	65–74	120	100
2:0–2:5	100	100	11	150	150	75–89	100	90
2:6–2:11	100	100	12	150	150			
3:0–3:5	100	100	13–14	250	150			
3:6–3:11	100	100	15–16	140	200			
4:0–4:5	100	100	17–21	120	200			
4:6–4:11	100	100						
5:0–5:11	150	150						
Total	750	1350	**Total**	1690	1670	**Total**	990	920

Sex: The standardization samples consisted of equal numbers of male and female participants in each age group from 0 to 64 years. The two oldest age groups included more women than men, in proportions consistent with census data.

Race/Ethnicity: For each age group in the standardization samples, the proportions of Whites, African Americans, Hispanics, and other racial/ethnic groups were based on the racial/ethnic proportions of individuals within each age group of the U.S. population according to the census data.

Education Level: The standardization sample was stratified according to the following five education levels based on the number of years of school completed. For participants ages 0–21 years, highest parent education was used; for participants ages 22–89 years, participant education was used.

≤8 years

9–11 years

12 years

13–15 years

≥16 years

Geographic Region: The United States was divided into the four major geographic regions specified by the census reports (see Figures 4.1 and 4.2): Northeast, North Central, South, and West. The number of participants from each region was closely proportionate to the population percentages in each region.

Locating and Testing the Sample

The standardization data of the school-age forms and Adult Form were collected by 139 independent examiners in 107 cities in the United States. The standardization data of the infant-preschool forms were collected by 214 independent examiners in 184 cities in the United States. Various methods were used to recruit participants to fit within the sampling matrix. These methods included random telephone calls and flyers placed in schools, preschools, daycare centers, military bases, senior centers, churches, parent-teacher associations and various community organizations. The data collection of the standardization samples of the school-age forms and Adult Forms took place from December 1998 to

December 1999; data collection of the standardization samples of the infant-preschool forms occurred from November 2001 to October 2002.

Representativeness of the Sample

Detailed demographic information of the U.S. population and the standardization samples is provided by age, race/ethnicity, and education in Tables 4.2, 4.3, and 4.4, respectively; by age, sex, and education in Tables 4.5, 4.6, and 4.7; and by age, sex, and race/ethnicity in Tables 4.8, 4.9, and 4.10.

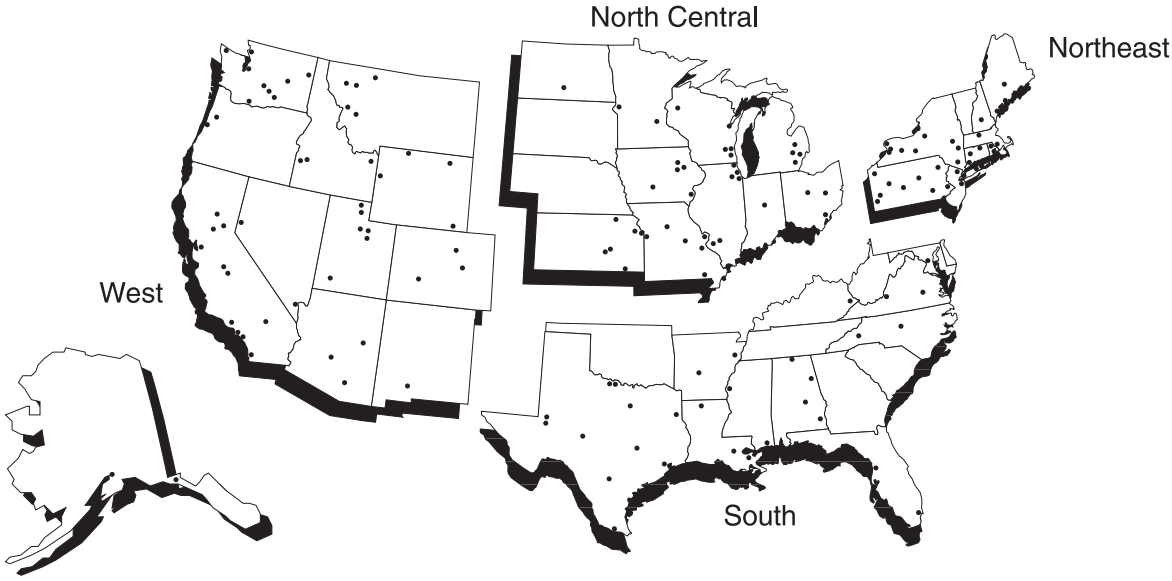


Figure 4.1 Standardization Sampling Sites for Infant-Preschool Forms

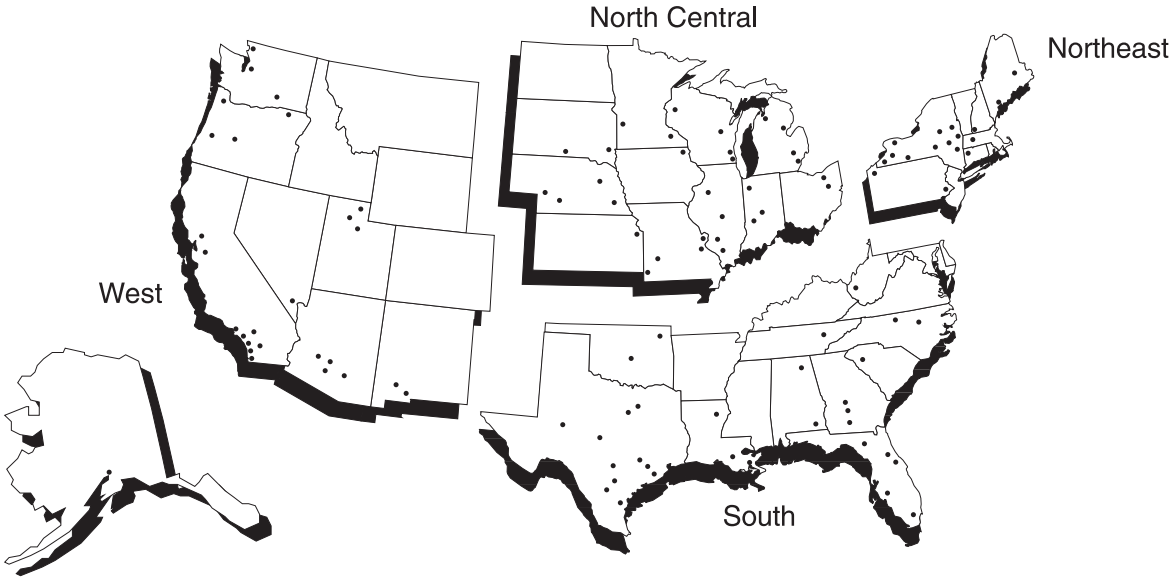


Figure 4.2 Standardization Sampling Sites for School-Age and Adult Forms

Table 4.2 Standardization Sample by Age, Race/Ethnicity, and Education: Parent/Primary Caregiver and Teacher/Daycare Provider Forms

		White					African American					Hispanic					Other				
Ages	Sample	≤8	9–11	12	13–15	≥16	≤8	9–11	12	13–15	≥16	≤8	9–11	12	13–15	≥16	≤8	9–11	12	13–15	≥16
0:0–0:3	U.S. Population	0.62	3.19	14.02	20.33	22.07	0.29	1.87	4.59	4.55	2.09	3.44	6.69	5.06	3.99	2.42	0.03	0.34	1.01	0.91	2.48
	Parent/Primary Caregiver	1.00	3.00	15.00	20.00	25.00	1.00	2.00	3.00	6.00	2.00	2.00	7.00	7.00	4.00	–	–	–	–	1.00	1.00
0:4–0:7	U.S. Population	0.62	3.19	14.02	20.33	22.07	0.29	1.87	4.59	4.55	2.09	3.44	6.69	5.06	3.99	2.42	0.03	0.34	1.01	0.91	2.48
	Parent/Primary Caregiver	–	4.00	14.00	20.00	22.00	–	3.00	4.00	3.00	3.00	4.00	6.00	5.00	5.00	2.00	–	–	1.00	2.00	2.00
0:8–0:11	U.S. Population	0.62	3.19	14.02	20.33	22.07	0.29	1.87	4.59	4.55	2.09	3.44	6.69	5.06	3.99	2.42	0.03	0.34	1.01	0.91	2.48
	Parent/Primary Caregiver	–	3.00	14.00	20.00	22.00	1.00	2.00	4.00	6.00	2.00	1.00	8.00	5.00	4.00	2.00	–	–	1.00	2.00	3.00
1:0–1:3	U.S. Population	1.02	2.63	13.17	21.09	22.69	0.53	2.72	5.38	5.83	1.88	2.78	5.08	4.75	2.91	1.70	0.21	0.30	1.02	1.85	2.49
	Parent/Primary Caregiver	–	4.00	13.00	22.00	23.00	–	3.00	4.00	5.00	2.00	3.00	5.00	6.00	5.00	2.00	–	–	–	1.00	2.00
1:4–1:7	U.S. Population	1.02	2.63	13.17	21.09	22.69	0.53	2.72	5.38	5.83	1.88	2.78	5.08	4.75	2.91	1.70	0.21	0.30	1.02	1.85	2.49
	Parent/Primary Caregiver	–	4.00	11.00	21.00	22.00	–	3.00	5.00	6.00	4.00	3.00	5.00	6.00	3.00	2.00	–	–	1.00	1.00	3.00
1:8–1:11	U.S. Population	1.02	2.63	13.17	21.09	22.69	0.53	2.72	5.38	5.83	1.88	2.78	5.08	4.75	2.91	1.70	0.21	0.30	1.02	1.85	2.49
	Parent/Primary Caregiver	1.00	3.00	14.00	21.00	23.00	–	4.00	4.00	5.00	–	3.00	5.00	5.00	5.00	1.00	–	–	–	1.00	5.00
2:0–2:5	U.S. Population	0.65	2.10	14.94	22.74	21.18	0.06	2.58	5.00	4.08	2.68	2.56	5.00	5.39	3.60	1.53	0.24	0.53	1.15	1.77	2.23
	Parent/Primary Caregiver	–	3.00	15.00	23.00	21.00	–	3.00	5.00	4.00	3.00	3.00	5.00	5.00	4.00	1.00	–	–	1.00	2.00	2.00
	Teacher/Daycare Provider	–	3.00	17.00	23.00	21.00	1.00	4.00	5.00	5.00	2.00	2.00	5.00	4.00	2.00	3.00	–	–	1.00	–	2.00
2:6–2:11	U.S. Population	0.65	2.10	14.94	22.74	21.18	0.06	2.58	5.00	4.08	2.68	2.56	5.00	5.39	3.60	1.53	0.24	0.53	1.15	1.77	2.23
	Parent/Primary Caregiver	–	3.00	15.00	24.00	20.00	–	3.00	5.00	4.00	3.00	4.00	4.00	5.00	4.00	1.00	–	1.00	1.00	1.00	2.00
	Teacher/Daycare Provider	–	2.00	15.00	23.00	21.00	2.00	5.00	5.00	4.00	3.00	2.00	3.00	5.00	4.00	1.00	–	–	2.00	2.00	1.00
3:0–3:5	U.S. Population	0.74	2.57	13.92	22.06	21.24	0.45	1.90	5.57	5.88	2.24	3.19	5.34	4.03	3.92	1.15	0.14	0.38	1.31	1.40	2.56
	Parent/Primary Caregiver	1.00	2.00	15.00	22.00	22.00	–	2.00	6.00	6.00	2.00	3.00	6.00	4.00	4.00	1.00	–	–	–	2.00	2.00
	Teacher/Daycare Provider	–	3.00	14.00	22.00	22.00	–	6.00	6.00	6.00	2.00	1.00	5.00	5.00	5.00	1.00	–	–	–	–	2.00
3:6–3:11	U.S. Population	0.74	2.57	13.92	22.06	21.24	0.45	1.90	5.57	5.88	2.24	3.19	5.34	4.03	3.92	1.15	0.14	0.38	1.31	1.40	2.56
	Parent/Primary Caregiver	1.00	2.00	14.00	22.00	21.00	–	3.00	6.00	6.00	2.00	3.00	5.00	4.00	4.00	1.00	–	–	2.00	1.00	3.00
	Teacher/Daycare Provider	1.00	2.00	14.00	22.00	21.00	–	5.00	5.00	7.00	2.00	–	4.00	5.00	4.00	2.00	–	–	2.00	–	4.00
4:0–4:5	U.S. Population	0.59	2.29	15.40	20.23	22.07	0.27	2.36	5.06	5.36	1.21	3.54	6.07	4.51	3.63	1.18	0.22	0.34	1.55	1.46	2.68
	Parent/Primary Caregiver	1.00	1.00	16.00	20.00	22.00	–	3.00	5.00	6.00	1.00	2.00	7.00	5.00	4.00	1.00	–	–	1.00	2.00	3.00
	Teacher/Daycare Provider	1.00	2.00	16.00	20.00	22.00	–	3.00	5.00	5.00	1.00	3.00	7.00	4.00	4.00	1.00	–	–	1.00	2.00	3.00
4:6–4:11	U.S. Population	0.59	2.29	15.40	20.23	22.07	0.27	2.36	5.06	5.36	1.21	3.54	6.07	4.51	3.63	1.18	0.22	0.34	1.55	1.46	2.68
	Parent/Primary Caregiver	1.00	2.00	16.00	20.00	22.00	–	3.00	5.00	5.00	1.00	3.00	7.00	4.00	4.00	1.00	–	–	2.00	2.00	2.00
	Teacher/Daycare Provider	1.00	4.00	15.00	20.00	22.00	–	2.00	5.00	5.00	1.00	5.00	5.00	4.00	4.00	1.00	–	–	2.00	1.00	3.00
5:0–5:11	U.S. Population	0.74	2.59	13.58	20.23	23.57	0.41	2.01	5.56	5.60	1.55	3.24	4.95	4.49	4.87	1.25	0.23	0.19	1.60	1.67	1.67
	Parent/Primary Caregiver	0.67	2.67	13.33	19.33	24.00	–	2.67	5.33	5.33	1.33	2.67	5.33	4.00	5.33	1.33	0.67	0.67	2.00	1.33	2.00
	Teacher/Daycare Provider	0.67	2.67	13.33	20.00	24.00	–	2.67	5.33	6.00	1.33	3.33	4.67	4.00	5.33	1.33	0.67	–	2.00	1.33	1.33

Note. U.S. population data are from *Current Population Survey, October 2000* [Machine-readable data file] by U.S. Bureau of the Census, 2000, Washington, DC: U.S. Bureau of the Census (Producer/Distributor). For individuals ages 0–21, education is based on parent education; for individuals ages 22–89, education is the number of years completed.

Table 4.3 Standardization Sample by Age, Race/Ethnicity, and Education: Parent and Teacher Forms

		White					African American					Hispanic					Other				
Ages	Sample	≤8	9–11	12	13–15	≥16	≤8	9–11	12	13–15	≥16	≤8	9–11	12	13–15	≥16	≤8	9–11	12	13–15	≥16
5	U.S. Population	0.80	2.66	14.74	18.58	23.68	0.49	3.14	4.50	5.49	2.06	3.67	3.81	4.77	3.86	1.91	0.23	0.56	1.42	1.34	2.25
	Parent	0.83	2.50	15.83	16.67	23.33	0.83	1.67	4.17	4.17	3.33	0.83	2.50	8.33	6.67	1.67	0.83	0.83	2.50	1.67	0.83
	Teacher	0.67	2.67	15.33	18.67	24.00	–	4.00	5.33	5.33	1.33	4.00	4.00	5.33	2.00	1.33	–	0.67	1.33	1.33	2.67
6	U.S. Population	0.67	2.46	16.27	20.53	23.39	0.54	2.82	4.94	4.52	1.68	3.44	3.18	4.57	3.60	1.94	0.31	0.59	1.30	1.43	1.81
	Parent	–	–	18.46	20.77	23.08	1.54	0.77	5.38	3.85	3.08	0.77	2.31	6.92	4.62	2.31	–	1.54	1.54	1.54	1.54
	Teacher	0.71	4.29	17.86	15.00	24.29	0.71	3.57	5.71	4.29	1.43	3.57	4.29	5.00	2.14	1.43	0.71	–	1.43	1.43	2.14
7	U.S. Population	0.77	2.57	15.85	19.56	23.64	0.42	3.35	6.89	4.61	2.07	3.64	3.03	4.27	3.41	1.72	0.23	0.13	0.92	0.78	2.12
	Parent	0.83	3.33	15.83	16.67	25.00	1.67	2.50	6.67	5.00	1.67	0.83	3.33	5.00	5.00	1.67	–	1.67	0.83	0.83	1.67
	Teacher	0.71	3.57	15.71	18.57	23.57	0.71	1.43	7.14	5.00	2.86	3.57	3.57	3.57	4.29	1.43	–	–	1.43	0.71	2.14
8	U.S. Population	0.86	2.76	15.41	21.31	22.69	0.39	2.57	5.62	6.16	2.42	3.45	2.77	3.77	3.12	1.79	0.30	0.32	0.96	1.53	1.80
	Parent	0.67	2.67	17.33	19.33	22.67	1.33	1.33	3.33	8.00	2.67	2.67	3.33	4.00	3.33	2.00	–	0.67	1.33	2.00	1.33
	Teacher	0.67	2.67	16.00	18.67	24.67	–	2.67	6.00	5.33	3.33	2.67	2.00	4.67	2.00	2.00	–	–	2.67	2.00	2.00
9	U.S. Population	0.73	2.20	16.59	21.55	23.26	0.38	2.59	5.17	4.94	2.50	3.28	2.99	3.52	3.50	1.70	0.30	0.26	0.61	1.69	2.25
	Parent	1.33	2.67	17.33	17.33	25.33	0.67	2.67	4.67	4.67	3.33	2.00	2.67	6.00	3.33	1.33	–	0.67	0.67	2.00	1.33
	Teacher	1.33	3.33	16.67	21.33	22.00	0.67	2.00	6.00	4.00	2.67	4.00	0.67	5.33	2.67	2.00	–	0.67	1.33	2.00	1.33
10	U.S. Population	0.72	3.14	15.22	20.73	22.74	0.36	3.09	6.21	5.59	2.55	3.17	2.48	4.24	3.37	1.43	0.26	0.53	1.13	1.36	1.68
	Parent	2.00	3.33	14.00	20.67	22.00	0.67	4.00	6.00	5.33	2.67	0.67	3.33	5.33	2.67	2.00	0.67	0.67	1.33	0.67	2.00
	Teacher	2.00	3.33	14.67	20.00	22.67	–	3.33	6.00	6.00	2.67	3.33	2.00	5.33	1.33	2.00	–	0.67	1.33	2.00	1.33
11	U.S. Population	0.68	2.90	18.20	20.45	23.94	0.66	2.47	4.51	4.47	2.27	0.01	0.33	0.19	0.55	0.06	0.23	0.54	0.99	1.03	2.24
	Parent	2.00	2.67	18.00	20.67	22.67	1.33	2.00	2.00	5.33	2.67	3.33	2.00	4.00	4.00	2.00	–	0.67	1.33	1.33	2.00
	Teacher	0.67	3.33	18.00	18.00	25.33	0.67	2.67	6.67	2.00	2.67	4.00	1.33	3.33	4.67	1.33	–	0.67	1.33	1.33	2.00
12	U.S. Population	0.58	2.58	17.51	21.24	22.84	0.44	1.86	5.55	4.31	2.23	3.41	2.85	3.85	3.21	1.78	0.49	0.58	1.44	1.53	1.72
	Parent	1.33	1.33	17.33	21.33	23.33	1.33	2.00	2.67	6.67	1.33	2.00	3.33	4.00	3.33	2.00	–	0.67	2.67	2.00	1.33
	Teacher	3.33	1.33	18.00	16.00	24.00	0.67	2.00	5.33	4.67	2.67	3.33	2.00	5.33	3.33	2.00	0.67	–	2.00	1.33	2.00
13–14	U.S. Population	0.77	2.77	18.09	20.07	23.66	0.76	3.12	5.14	4.53	2.53	2.93	2.14	3.51	3.04	1.49	0.78	0.39	1.49	1.21	1.56
	Parent	1.33	2.67	18.67	20.67	24.00	–	3.33	2.67	2.67	3.33	3.33	2.00	5.33	3.33	1.33	0.67	0.67	1.33	1.33	1.33
	Teacher	0.80	2.80	18.00	18.80	24.40	0.80	3.20	5.20	4.40	2.40	3.20	2.40	4.40	1.60	1.60	0.80	0.40	1.60	1.20	2.00
15–16	U.S. Population	0.92	3.33	17.75	19.94	23.17	0.55	2.46	5.56	4.59	2.75	3.50	2.91	3.31	2.53	1.57	0.43	0.31	1.33	1.37	1.74
	Parent	1.00	3.00	20.00	21.50	23.00	0.50	2.00	2.50	3.50	3.50	2.00	4.00	3.50	2.50	1.50	0.50	1.00	1.50	2.00	1.00
	Teacher	1.43	5.00	20.71	12.86	25.00	–	2.86	7.14	2.14	2.86	2.86	5.00	3.57	2.14	0.71	0.71	0.71	0.71	1.43	2.14
17–21	U.S. Population	0.59	3.91	19.65	19.79	21.31	0.53	2.51	5.79	4.37	2.11	3.68	3.09	4.01	2.58	1.28	0.33	0.42	1.16	1.10	1.79
	Parent	0.50	5.00	20.00	20.00	21.00	0.50	1.50	4.00	4.50	3.50	1.50	4.00	6.00	1.50	1.50	–	0.50	1.50	1.00	2.00
	Teacher	–	5.00	23.33	11.67	25.00	–	2.50	5.83	5.00	1.67	3.33	3.33	4.17	4.17	0.83	0.83	0.83	1.67	–	0.83

Note. U.S. population data are from *Current Population Survey, March 1999* [Machine-readable data file] by U.S. Bureau of the Census, 1999, Washington, DC: U.S. Bureau of the Census (Producer/Distributor). For individuals ages 0–21, education is based on parent education; for individuals ages 22–89, education is the number of years completed.

Table 4.4 Standardization Sample by Age, Race/Ethnicity, and Education: Adult Form, Self Report and Rated by Others

		White					African American					Hispanic					Other				
Ages	Sample	≤8	9–11	12	13–15	≥16	≤8	9–11	12	13–15	≥16	≤8	9–11	12	13–15	≥16	≤8	9–11	12	13–15	≥16
16–21	U.S. Population	0.59	3.91	19.65	19.79	21.31	0.53	2.51	5.79	4.37	2.11	3.68	3.09	4.01	2.58	1.28	0.33	0.42	1.16	1.10	1.79
	Self Report	0.67	5.33	19.33	20.00	20.00	–	3.33	5.33	4.67	1.33	3.33	2.67	4.00	3.33	2.00	–	0.67	2.00	0.67	1.33
	Rated by Others	2.00	5.00	20.00	24.00	19.00	–	2.00	2.00	4.00	1.00	1.00	5.00	6.00	3.00	2.00	1.00	–	–	2.00	1.00
22–29	U.S. Population	0.68	6.16	17.12	26.03	18.49	–	–	2.74	1.37	1.37	0.68	3.42	10.27	4.11	1.37	–	1.37	0.68	1.37	2.74
	Self Report	–	4.67	20.00	22.67	18.67	–	–	5.33	5.33	2.00	0.67	4.00	6.00	4.00	1.33	1.33	0.67	0.67	0.67	2.00
	Rated by Others	0.71	6.43	17.86	27.14	18.57	–	–	2.86	1.43	0.71	0.71	3.57	7.86	3.57	2.14	–	1.43	0.71	1.43	2.86
30–39	U.S. Population	2.44	2.44	24.39	20.73	19.51	–	–	3.66	1.22	2.44	2.44	4.88	4.27	3.05	4.27	–	–	1.22	0.61	2.44
	Self Report	0.56	3.89	23.33	18.89	22.22	–	2.22	4.44	3.89	2.22	2.78	2.78	3.33	2.78	1.67	0.56	0.56	0.56	1.11	2.22
	Rated by Others	2.50	2.50	25.00	21.25	20.00	–	–	3.75	1.25	2.50	2.50	5.00	3.75	3.13	2.50	–	–	1.25	0.63	2.50
40–49	U.S. Population	1.09	1.09	24.59	23.50	23.50	0.55	0.55	2.19	1.09	1.64	3.28	0.55	6.01	3.28	2.73	–	–	0.55	1.64	2.19
	Self Report	0.56	2.22	26.11	21.67	23.33	–	1.11	3.89	3.89	2.78	1.11	1.67	3.33	1.67	1.67	–	0.56	1.67	1.11	1.67
	Rated by Others	1.11	1.11	25.00	23.89	23.89	0.56	0.56	2.22	1.11	1.67	3.33	0.56	5.00	3.33	2.22	–	–	0.56	1.67	2.22
50–64	U.S. Population	1.83	1.83	27.44	17.68	28.05	1.22	–	0.61	–	1.83	6.10	3.05	4.27	4.27	0.61	0.61	–	0.61	–	–
	Self Report	1.82	5.45	30.00	20.00	21.82	–	0.91	–	3.64	0.91	2.73	1.82	2.73	0.91	1.82	0.91	0.91	0.91	0.91	1.82
	Rated by Others	2.00	1.33	30.67	19.33	30.00	1.33	–	0.67	–	2.00	2.67	3.33	2.00	2.67	0.67	0.67	–	0.67	–	–
65–74	U.S. Population	6.86	6.86	36.27	14.71	16.67	0.98	0.98	–	0.98	0.98	4.90	1.96	0.98	1.96	0.98	–	0.98	1.96	0.98	–
	Self Report	5.83	12.50	32.50	15.83	15.83	0.83	0.83	1.67	3.33	0.83	2.50	0.83	1.67	0.83	0.83	–	0.83	1.67	–	0.83
	Rated by Others	6.00	6.00	39.00	15.00	17.00	1.00	1.00	–	1.00	1.00	5.00	2.00	1.00	1.00	–	–	1.00	2.00	1.00	–
75–89	U.S. Population	12.22	7.78	31.11	15.56	15.56	–	–	5.56	1.11	2.22	3.33	2.22	1.11	1.11	–	1.11	–	–	–	–
	Self Report	14.00	11.00	31.00	16.00	15.00	2.00	2.00	3.00	1.00	–	3.00	–	1.00	–	–	–	1.00	–	–	–
	Rated by Others	12.22	7.78	31.11	15.56	15.56	–	–	5.56	1.11	2.22	3.33	2.22	1.11	1.11	–	1.11	–	–	–	–

Note. U.S. population data are from *Current Population Survey, March 1999* [Machine-readable data file] by U.S. Bureau of the Census, 1999, Washington, DC: U.S. Bureau of the Census (Producer/Distributor). For individuals ages 0–21, education is based on parent education; for individuals ages 22–89, education is the number of years completed.

Table 4.5 Standardization Sample by Age, Sex, and Education: Parent/Primary Caregiver and Teacher/Daycare Provider Forms

		Female					Male					Total				
Ages	Sample	≤8	9–11	12	13–15	≥16	≤8	9–11	12	13–15	≥16	≤8	9–11	12	13–15	≥16
0:0–0:3	U.S. Population	2.16	6.13	10.93	13.95	15.60	2.22	5.95	13.76	15.84	13.45	4.38	12.08	24.69	29.79	29.05
	Parent/Primary Caregiver	3.00	5.00	8.00	17.00	17.00	1.00	7.00	17.00	14.00	11.00	4.00	12.00	25.00	31.00	28.00
0:4–0:7	U.S. Population	2.16	6.13	10.93	13.95	15.60	2.22	5.95	13.76	15.84	13.45	4.38	12.08	24.69	29.79	29.05
	Parent/Primary Caregiver	3.00	6.00	12.00	14.00	15.00	1.00	7.00	12.00	16.00	14.00	4.00	13.00	24.00	30.00	29.00
0:8–0:11	U.S. Population	2.16	6.13	10.93	13.95	15.60	2.22	5.95	13.76	15.84	13.45	4.38	12.08	24.69	29.79	29.05
	Parent/Primary Caregiver	2.00	6.00	13.00	14.00	15.00	–	7.00	11.00	18.00	14.00	2.00	13.00	24.00	32.00	29.00
1:0–1:3	U.S. Population	1.78	5.19	12.25	14.81	14.73	2.76	5.53	12.06	16.88	14.03	4.54	10.72	24.31	31.69	28.76
	Parent/Primary Caregiver	2.00	6.00	12.00	16.00	14.00	1.00	6.00	11.00	17.00	15.00	3.00	12.00	23.00	33.00	29.00
1:4–1:7	U.S. Population	1.78	5.19	12.25	14.81	14.73	2.76	5.53	12.06	16.88	14.03	4.54	10.72	24.31	31.69	28.76
	Parent/Primary Caregiver	1.00	8.00	14.00	16.00	11.00	2.00	4.00	9.00	15.00	20.00	3.00	12.00	23.00	31.00	31.00
1:8–1:11	U.S. Population	1.78	5.19	12.25	14.81	14.73	2.76	5.53	12.06	16.88	14.03	4.54	10.72	24.31	31.69	28.76
	Parent/Primary Caregiver	–	5.00	14.00	16.00	15.00	4.00	7.00	9.00	16.00	14.00	4.00	12.00	23.00	32.00	29.00
2:0–2:5	U.S. Population	2.16	5.37	11.63	15.99	14.15	1.35	4.84	14.86	16.19	13.47	3.51	10.21	26.49	32.18	27.62
	Parent/Primary Caregiver	2.00	4.00	13.00	15.00	16.00	1.00	7.00	13.00	18.00	11.00	3.00	11.00	26.00	33.00	27.00
	Teacher/Daycare Provider	1.00	5.00	14.00	13.00	17.00	2.00	7.00	13.00	17.00	11.00	3.00	12.00	27.00	30.00	28.00
2:6–2:11	U.S. Population	2.16	5.37	11.63	15.99	14.15	1.35	4.84	14.86	16.19	13.47	3.51	10.21	26.49	32.18	27.62
	Parent/Primary Caregiver	2.00	7.00	13.00	15.00	13.00	2.00	4.00	13.00	18.00	13.00	4.00	11.00	26.00	33.00	26.00
	Teacher/Daycare Provider	3.00	6.00	12.00	16.00	13.00	1.00	4.00	15.00	17.00	13.00	4.00	10.00	27.00	33.00	26.00
3:0–3:5	U.S. Population	2.45	4.67	11.78	17.11	13.05	2.08	5.53	13.05	16.14	14.14	4.53	10.20	24.83	33.25	27.19
	Parent/Primary Caregiver	2.00	8.00	10.00	15.00	15.00	2.00	2.00	15.00	19.00	12.00	4.00	10.00	25.00	34.00	27.00
	Teacher/Daycare Provider	–	9.00	13.00	13.00	15.00	1.00	5.00	12.00	20.00	12.00	1.00	14.00	25.00	33.00	27.00
3:6–3:11	U.S. Population	2.45	4.67	11.78	17.11	13.05	2.08	5.53	13.05	16.14	14.14	4.53	10.20	24.83	33.25	27.19
	Parent/Primary Caregiver	2.00	7.00	14.00	14.00	13.00	2.00	3.00	12.00	19.00	14.00	4.00	10.00	26.00	33.00	27.00
	Teacher/Daycare Provider	–	8.00	12.00	13.00	17.00	1.00	3.00	14.00	20.00	12.00	1.00	11.00	26.00	33.00	29.00
4:0–4:5	U.S. Population	2.47	5.47	12.94	14.29	13.68	2.14	5.60	13.58	16.39	13.44	4.61	11.07	26.52	30.68	27.12
	Parent/Primary Caregiver	2.00	7.00	13.00	15.00	13.00	1.00	4.00	14.00	17.00	14.00	3.00	11.00	27.00	32.00	27.00
	Teacher/Daycare Provider	2.00	9.00	12.00	17.00	10.00	2.00	3.00	14.00	14.00	17.00	4.00	12.00	26.00	31.00	27.00
4:6–4:11	U.S. Population	2.47	5.47	12.94	14.29	13.68	2.14	5.60	13.58	16.39	13.44	4.61	11.07	26.52	30.68	27.12
	Parent/Primary Caregiver	1.00	8.00	12.00	15.00	14.00	3.00	4.00	15.00	16.00	12.00	4.00	12.00	27.00	31.00	26.00
	Teacher/Daycare Provider	4.00	6.00	11.00	15.00	14.00	2.00	5.00	15.00	15.00	13.00	6.00	11.00	26.00	30.00	27.00
5:0–5:11	U.S. Population	2.71	5.19	12.17	14.88	13.46	1.91	4.54	13.06	17.50	14.57	4.62	9.73	25.23	32.38	28.03
	Parent/Primary Caregiver	3.33	6.00	10.67	15.33	14.67	0.67	5.33	14.00	16.00	14.00	4.00	11.33	24.67	31.33	28.67
	Teacher/Daycare Provider	2.67	4.00	11.33	16.67	15.33	2.00	6.00	13.33	16.00	12.67	4.67	10.00	24.66	32.67	28.00

Note. U.S. population data are from *Current Population Survey, October 2000* [Machine-readable data file] by U.S. Bureau of the Census, 2000, Washington, DC: U.S. Bureau of the Census (Producer/Distributor). For individuals ages 0–21, education is based on parent education; for individuals ages 22–89, education is the number of years completed.

Table 4.6 Standardization Sample by Age, Sex, and Education: Parent and Teacher Forms

		Female					Male					Total				
Ages	Sample	≤8	9–11	12	13–15	≥16	≤8	9–11	12	13–15	≥16	≤8	9–11	12	13–15	≥16
5	U.S. Population	2.70	5.18	12.98	13.88	14.14	2.50	5.00	12.45	15.41	15.77	5.20	10.18	25.43	29.29	29.91
	Parent	0.83	3.33	17.50	18.33	10.00	2.50	4.17	13.33	10.83	19.17	3.33	7.50	30.83	29.16	29.17
	Teacher	3.33	8.67	12.67	12.67	12.67	1.33	2.67	14.67	14.67	16.67	4.66	11.34	27.34	27.34	29.34
6	U.S. Population	2.23	4.46	12.34	15.96	14.30	2.74	4.59	14.74	14.12	14.53	4.97	9.05	27.08	30.08	28.83
	Parent	1.54	3.08	15.38	14.62	15.38	0.77	1.54	16.92	16.15	14.62	2.31	4.62	32.30	30.77	30.00
	Teacher	1.43	7.14	17.86	9.29	14.29	4.29	5.00	12.14	13.57	15.00	5.72	12.14	30.00	22.86	29.29
7	U.S. Population	2.91	4.27	14.13	13.72	13.81	2.15	4.82	13.81	14.64	15.74	5.06	9.09	27.94	28.36	29.55
	Parent	2.50	5.00	13.33	11.67	17.50	0.83	5.83	15.00	15.83	12.50	3.33	10.83	28.33	27.50	30.00
	Teacher	4.29	3.57	12.14	17.14	12.86	0.71	5.00	15.71	11.43	17.14	5.00	8.57	27.85	28.57	30.00
8	U.S. Population	2.24	4.37	13.01	15.67	13.82	2.76	4.06	12.74	16.45	14.88	5.00	8.43	25.75	32.12	28.70
	Parent	2.00	3.33	11.33	18.00	15.33	2.67	4.67	14.67	14.67	13.33	4.67	8.00	26.00	32.67	28.66
	Teacher	1.33	3.33	15.33	14.00	16.00	2.00	4.00	14.00	14.00	16.00	3.33	7.33	29.33	28.00	32.00
9	U.S. Population	2.50	4.56	11.51	15.16	14.69	2.19	3.48	14.38	16.51	15.02	4.69	8.04	25.89	31.67	29.71
	Parent	0.67	4.67	14.00	16.00	14.67	3.33	4.00	14.67	11.33	16.67	4.00	8.67	28.67	27.33	31.34
	Teacher	2.00	4.00	16.67	18.00	9.33	4.00	2.67	12.67	12.00	18.67	6.00	6.67	29.34	30.00	28.00
10	U.S. Population	2.27	4.72	13.92	14.20	14.26	2.23	4.53	12.88	16.84	14.14	4.50	9.25	26.80	31.04	28.40
	Parent	2.67	7.33	14.00	14.00	12.00	1.33	4.00	12.67	15.33	16.67	4.00	11.33	26.67	29.33	28.67
	Teacher	2.67	5.33	14.67	11.33	16.00	2.67	4.00	12.67	18.00	12.67	5.34	9.33	27.34	29.33	28.67
11	U.S. Population	2.83	4.22	13.37	14.13	13.82	2.62	4.28	13.42	15.39	15.93	5.45	8.50	26.79	29.52	29.75
	Parent	4.67	3.33	14.00	14.67	13.33	2.00	4.00	11.33	16.67	16.00	6.67	7.33	25.33	31.34	29.33
	Teacher	3.33	4.67	14.67	12.00	15.33	2.00	3.33	14.67	14.00	16.00	5.33	8.00	29.34	26.00	31.33
12	U.S. Population	2.22	3.81	13.24	14.75	13.56	2.70	4.06	15.11	15.54	15.00	4.92	7.87	28.35	30.29	28.56
	Parent	2.67	3.33	14.00	16.00	14.00	2.00	4.00	12.67	17.33	14.00	4.67	7.33	26.67	33.33	28.00
	Teacher	5.33	4.00	17.33	8.67	14.67	2.67	1.33	13.33	16.67	16.00	8.00	5.33	30.66	25.34	30.67
13–14	U.S. Population	2.51	3.99	13.78	14.54	14.61	2.73	4.43	14.46	14.32	14.63	5.24	8.42	28.24	28.86	29.24
	Parent	3.33	4.67	15.33	13.33	13.33	2.00	4.00	12.67	14.67	16.67	5.33	8.67	28.00	28.00	30.00
	Teacher	2.80	4.80	15.20	13.20	14.00	2.80	4.00	14.00	12.80	16.40	5.60	8.80	29.20	26.00	30.40
15–16	U.S. Population	2.39	4.45	13.62	13.72	14.20	3.01	4.55	14.32	14.71	15.02	5.40	9.00	27.94	28.43	29.22
	Parent	2.00	5.50	12.00	15.50	15.00	2.00	4.50	15.50	14.00	14.00	4.00	10.00	27.50	29.50	29.00
	Teacher	4.29	5.71	14.29	9.29	16.43	0.71	7.86	17.86	9.29	14.29	5.00	13.57	32.15	18.58	30.72
17–21	U.S. Population	2.35	5.37	15.30	13.94	12.66	2.77	4.55	15.31	13.90	13.83	5.12	9.92	30.61	27.84	26.49
	Parent	1.00	5.50	17.00	14.00	12.50	1.50	5.50	14.50	13.00	15.50	2.50	11.00	31.50	27.00	28.00
	Teacher	1.67	5.83	17.50	9.17	15.83	2.50	5.83	17.50	11.67	12.50	4.17	11.66	35.00	20.84	28.33

Note. U.S. population data are from *Current Population Survey, March 1999* [Machine-readable data file] by U.S. Bureau of the Census, 1999, Washington, DC: U.S. Bureau of the Census (Producer/Distributor). For individuals ages 0–21, education is based on parent education; for individuals ages 22–89, education is the number of years completed.

Table 4.7 Standardization Sample by Age, Sex, and Education: Adult Form, Self Report and Rated by Others

		Female					Male					Total				
Ages	**Sample**	**≤8**	**9–11**	**12**	**13–15**	**≥16**	**≤8**	**9–11**	**12**	**13–15**	**≥16**	**≤8**	**9–11**	**12**	**13–15**	**≥16**
16–21	U.S. Population	2.35	5.37	15.30	13.94	12.66	2.77	4.55	15.31	13.90	13.83	5.12	9.92	30.61	27.84	26.49
	Self Report	1.33	5.33	19.33	13.33	10.67	2.67	6.67	11.33	15.33	14.00	4.00	12.00	30.66	28.66	24.67
	Rated by Others	1.00	5.00	16.00	16.00	12.00	3.00	7.00	12.00	17.00	11.00	4.00	12.00	28.00	33.00	23.00
22–29	U.S. Population	1.38	4.11	14.66	17.30	13.29	1.85	5.09	15.92	15.63	10.76	3.23	9.20	30.58	32.93	24.05
	Self Report	2.00	6.00	19.33	14.00	8.67	–	3.33	12.67	18.67	15.33	2.00	9.33	32.00	32.67	24.00
	Rated by Others	1.43	8.57	10.71	15.00	14.29	–	2.86	18.57	18.57	10.00	1.43	11.43	29.28	33.57	24.29
30–39	U.S. Population	1.81	3.98	15.96	14.48	14.31	2.08	4.47	17.24	12.01	13.68	3.89	8.45	33.20	26.49	27.99
	Self Report	2.22	3.33	12.78	15.56	16.11	1.67	6.11	18.89	11.11	12.22	3.89	9.44	31.67	26.67	28.33
	Rated by Others	1.25	2.50	11.25	13.75	21.25	3.75	5.00	22.50	12.50	6.25	5.00	7.50	33.75	26.25	27.50
40–49	U.S. Population	2.13	3.50	17.29	14.11	13.85	2.07	3.51	15.42	13.51	14.60	4.20	7.01	32.71	27.62	28.45
	Self Report	0.56	1.67	18.89	16.11	12.78	1.11	3.89	16.11	12.22	16.67	1.67	5.56	35.00	28.33	29.45
	Rated by Others	2.78	0.56	15.56	16.11	15.00	2.22	1.67	17.22	13.89	15.00	5.00	2.23	32.78	30.00	30.00
50–64	U.S. Population	3.32	5.04	19.98	12.45	11.09	3.47	4.44	14.66	11.12	14.43	6.79	9.48	34.64	23.57	25.52
	Self Report	3.64	8.18	16.36	10.00	11.82	1.82	0.91	17.27	15.45	14.55	5.46	9.09	33.63	25.45	26.37
	Rated by Others	4.67	4.00	18.00	12.67	10.67	2.00	0.67	16.00	9.33	22.00	6.67	4.67	34.00	22.00	32.67
65–74	U.S. Population	6.74	8.13	23.25	10.14	6.75	7.11	5.62	13.46	8.44	10.36	13.85	13.75	36.71	18.58	17.11
	Self Report	6.67	11.67	26.67	8.33	2.50	2.50	3.33	10.83	11.67	15.83	9.17	15.00	37.50	20.00	18.33
	Rated by Others	4.00	6.00	22.00	10.00	9.00	8.00	4.00	20.00	8.00	9.00	12.00	10.00	42.00	18.00	18.00
75–89	U.S. Population	12.99	9.71	21.31	10.39	5.90	8.56	5.27	12.02	6.92	6.92	21.55	14.98	33.33	17.31	12.82
	Self Report	12.00	10.00	24.00	10.00	4.00	7.00	4.00	11.00	7.00	11.00	19.00	14.00	35.00	17.00	15.00
	Rated by Others	6.67	5.56	26.67	15.56	5.56	10.00	4.44	11.11	2.22	12.22	16.67	10.00	37.78	17.78	17.78

Note. U.S. population data are from *Current Population Survey, March 1999* [Machine-readable data file] by U.S. Bureau of the Census, 1999, Washington, DC: U.S. Bureau of the Census (Producer/Distributor). For individuals ages 0–21, education is based on parent education; for individuals ages 22–89, education is the number of years completed.

Table 4.8 Standardization Sample by Age, Sex, and Race/Ethnicity: Parent/Primary Caregiver and Teacher/Daycare Provider Forms

		Female				Male				Total			
Ages	Sample	White	African American	Hispanic	Other	White	African American	Hispanic	Other	White	African American	Hispanic	Other
0:0–0:3	U.S. Population	29.60	6.61	10.27	2.31	30.64	6.78	11.34	2.47	60.24	13.39	21.61	4.78
	Parent/Primary Caregiver	29.00	10.00	10.00	1.00	35.00	4.00	10.00	1.00	64.00	14.00	20.00	2.00
0:4–0:7	U.S. Population	29.60	6.61	10.27	2.31	30.64	6.78	11.34	2.47	60.24	13.39	21.61	4.78
	Parent/Primary Caregiver	29.00	6.00	12.00	3.00	31.00	7.00	10.00	2.00	60.00	13.00	22.00	5.00
0:8–0:11	U.S. Population	29.60	6.61	10.27	2.31	30.64	6.78	11.34	2.47	60.24	13.39	21.61	4.78
	Parent/Primary Caregiver	28.00	9.00	10.00	3.00	31.00	6.00	10.00	3.00	59.00	15.00	20.00	6.00
1:0–1:3	U.S. Population	29.72	7.62	8.24	3.18	30.89	8.71	8.97	2.67	60.61	16.33	17.21	5.85
	Parent/Primary Caregiver	29.00	9.00	10.00	2.00	33.00	5.00	11.00	1.00	62.00	14.00	21.00	3.00
1:4–1:7	U.S. Population	29.72	7.62	8.24	3.18	30.89	8.71	8.97	2.67	60.61	16.33	17.21	5.85
	Parent/Primary Caregiver	31.00	9.00	9.00	1.00	27.00	9.00	10.00	4.00	58.00	18.00	19.00	5.00
1:8–1:11	U.S. Population	29.72	7.62	8.24	3.18	30.89	8.71	8.97	2.67	60.61	16.33	17.21	5.85
	Parent/Primary Caregiver	37.00	4.00	6.00	3.00	25.00	9.00	13.00	3.00	62.00	13.00	19.00	6.00
2:0–2:5	U.S. Population	30.09	7.27	8.98	2.96	31.54	7.13	9.10	2.94	61.63	14.40	18.08	5.90
	Parent/Primary Caregiver	28.00	9.00	10.00	3.00	34.00	6.00	8.00	2.00	62.00	15.00	18.00	5.00
	Teacher/Daycare Provider	27.00	12.00	10.00	1.00	37.00	5.00	6.00	2.00	64.00	17.00	16.00	3.00
2:6–2:11	U.S. Population	30.09	7.27	8.98	2.96	31.54	7.13	9.10	2.94	61.63	14.40	18.08	5.90
	Parent/Primary Caregiver	32.00	6.00	10.00	2.00	30.00	9.00	8.00	3.00	62.00	15.00	18.00	5.00
	Teacher/Daycare Provider	31.00	10.00	7.00	2.00	30.00	9.00	8.00	3.00	61.00	19.00	15.00	5.00
3:0–3:5	U.S. Population	29.92	7.96	8.15	3.03	30.60	8.08	9.48	2.78	60.52	16.04	17.63	5.81
	Parent/Primary Caregiver	31.00	6.00	11.00	2.00	31.00	10.00	7.00	2.00	62.00	16.00	18.00	4.00
	Teacher/Daycare Provider	35.00	8.00	6.00	1.00	26.00	12.00	11.00	1.00	61.00	20.00	17.00	2.00
3:6–3:11	U.S. Population	29.92	7.96	8.15	3.03	30.60	8.08	9.48	2.78	60.52	16.04	17.63	5.81
	Parent/Primary Caregiver	31.00	8.00	7.00	4.00	29.00	9.00	10.00	2.00	60.00	17.00	17.00	6.00
	Teacher/Daycare Provider	28.00	8.00	8.00	6.00	32.00	11.00	7.00	–	60.00	19.00	15.00	6.00
4:0–4:5	U.S. Population	28.65	6.83	9.87	3.50	31.92	7.43	9.06	2.75	60.57	14.26	18.93	6.25
	Parent/Primary Caregiver	29.00	8.00	10.00	3.00	31.00	7.00	9.00	3.00	60.00	15.00	19.00	6.00
	Teacher/Daycare Provider	28.00	9.00	10.00	3.00	33.00	5.00	9.00	3.00	61.00	14.00	19.00	6.00
4:6–4:11	U.S. Population	28.65	6.83	9.87	3.50	31.92	7.43	9.06	2.75	60.57	14.26	18.93	6.25
	Parent/Primary Caregiver	30.00	7.00	10.00	3.00	31.00	7.00	9.00	3.00	61.00	14.00	19.00	6.00
	Teacher/Daycare Provider	30.00	7.00	10.00	3.00	32.00	6.00	9.00	3.00	62.00	13.00	19.00	6.00
5:0–5:11	U.S. Population	29.29	7.47	9.42	2.23	31.41	7.66	9.39	3.13	60.70	15.13	18.81	5.36
	Parent/Primary Caregiver	30.67	7.33	10.00	2.00	29.33	7.33	8.67	4.67	60.00	14.66	18.67	6.67
	Teacher/Daycare Provider	30.67	7.33	9.33	2.67	30.00	8.00	9.33	2.67	60.67	15.33	18.66	5.34

Note. U.S. population data are from *Current Population Survey, October 2000* [Machine-readable data file] by U.S. Bureau of the Census, 2000, Washington, DC: U.S. Bureau of the Census (Producer/Distributor).

Table 4.9 Standardization Sample by Age, Sex, and Race/Ethnicity: Parent and Teacher Forms

		Female				Male				Total			
Ages	Sample	White	African American	Hispanic	Other	White	African American	Hispanic	Other	White	African American	Hispanic	Other
5	U.S. Population	29.21	7.73	8.98	2.91	31.09	7.95	9.22	2.91	60.30	15.68	18.20	5.82
	Parent	30.00	6.67	10.83	2.50	29.17	7.50	9.17	4.17	59.17	14.17	20.00	6.67
	Teacher	28.67	8.00	8.67	4.67	32.67	8.00	8.00	1.33	61.34	16.00	16.67	6.00
6	U.S. Population	31.30	7.22	7.84	3.06	32.10	7.16	9.00	2.33	63.40	14.38	16.84	5.39
	Parent	27.69	10.00	9.23	3.08	34.62	4.62	7.69	3.08	62.31	14.62	16.92	6.16
	Teacher	32.14	7.14	7.86	2.86	30.00	8.57	8.57	2.86	62.14	15.71	16.43	5.72
7	U.S. Population	30.00	8.41	8.42	1.99	32.28	8.95	7.77	2.17	62.28	17.36	16.19	4.16
	Parent	26.67	8.33	10.00	5.00	35.00	9.17	5.83	–	61.67	17.50	15.83	5.00
	Teacher	28.57	9.29	10.00	2.14	33.57	7.86	6.43	2.14	62.14	17.15	16.43	4.28
8	U.S. Population	30.72	8.99	7.38	2.22	32.33	8.17	7.47	2.72	63.05	17.16	14.85	4.94
	Parent	31.33	10.00	8.00	0.67	31.33	6.67	7.33	4.67	62.66	16.67	15.33	5.34
	Teacher	29.33	8.00	9.33	3.33	33.33	9.33	4.00	3.33	62.66	17.33	13.33	6.66
9	U.S. Population	30.98	6.92	7.75	2.87	33.46	8.48	7.35	2.18	64.44	15.40	15.10	5.05
	Parent	34.00	7.33	5.33	3.33	30.00	8.67	10.00	1.33	64.00	16.00	15.33	4.66
	Teacher	31.33	12.00	6.00	0.67	33.33	3.33	8.67	4.67	64.66	15.33	14.67	5.34
10	U.S. Population	31.34	8.06	7.30	2.61	31.27	9.58	7.54	2.30	62.61	17.64	14.84	4.91
	Parent	29.33	10.00	9.33	1.33	32.67	8.67	4.67	4.00	62.00	18.67	14.00	5.33
	Teacher	28.00	8.00	10.67	3.33	34.67	10.00	3.33	2.00	62.67	18.00	14.00	5.33
11	U.S. Population	31.17	7.75	7.17	2.40	35.09	6.70	7.09	2.63	66.26	14.45	14.26	5.03
	Parent	33.33	8.00	7.33	1.33	32.67	5.33	8.00	4.00	66.00	13.33	15.33	5.33
	Teacher	28.67	8.67	10.67	2.00	36.67	6.00	4.00	3.33	65.34	14.67	14.67	5.33
12	U.S. Population	30.73	7.45	6.93	2.38	34.12	6.91	8.13	3.35	64.85	14.36	15.06	5.73
	Parent	30.67	7.33	8.00	4.00	34.00	6.67	6.67	2.67	64.67	14.00	14.67	6.67
	Teacher	34.00	6.67	8.00	1.33	28.67	8.67	8.00	4.67	62.67	15.34	16.00	6.00
13–14	U.S. Population	32.53	7.80	6.35	2.63	32.71	8.29	6.87	2.82	65.24	16.09	13.22	5.45
	Parent	32.00	6.67	8.67	2.67	35.33	5.33	6.67	2.67	67.33	12.00	15.34	5.34
	Teacher	32.00	7.60	8.00	2.40	32.80	8.40	5.20	3.60	64.80	16.00	13.20	6.00
15–16	U.S. Population	31.87	7.76	6.36	2.37	33.17	8.08	7.51	2.89	65.04	15.84	13.87	5.26
	Parent	37.50	3.00	7.00	2.50	31.00	9.00	6.50	3.50	68.50	12.00	13.50	6.00
	Teacher	29.29	6.43	10.00	4.29	35.71	8.57	4.29	1.43	65.00	15.00	14.29	5.72
17–21	U.S. Population	32.49	7.57	6.91	2.54	33.54	7.15	7.45	2.34	66.03	14.72	14.36	4.88
	Parent	31.00	10.00	7.00	2.00	35.50	4.00	7.50	3.00	66.50	14.00	14.50	5.00
	Teacher	29.17	9.17	9.17	2.50	35.83	5.83	6.67	1.67	65.00	15.00	15.84	4.17

Note. U.S. population data are from *Current Population Survey, March 1999* [Machine-readable data file] by U.S. Bureau of the Census, 1999, Washington, DC: U.S. Bureau of the Census (Producer/Distributor).

Table 4.10 Standardization Sample by Age, Sex, and Race/Ethnicity: Adult Form, Self Report and Rated by Others

		Female				Male				Total			
Ages	Sample	White	African American	Hispanic	Other	White	African American	Hispanic	Other	White	African American	Hispanic	Other
16–21	U.S. Population	32.49	7.57	6.91	2.54	33.54	7.15	7.45	2.34	66.03	14.72	14.36	4.88
	Self Report	32.00	8.67	6.67	2.67	33.33	6.00	8.67	2.00	65.33	14.67	15.34	4.67
	Rated by Others	35.00	5.00	9.00	1.00	35.00	4.00	8.00	3.00	70.00	9.00	17.00	4.00
22–29	U.S. Population	32.81	7.66	7.32	2.94	32.65	5.99	7.69	2.93	65.46	13.65	15.01	5.87
	Self Report	32.00	7.33	7.33	3.33	34.00	5.33	8.67	2.00	66.00	12.66	16.00	5.33
	Rated by Others	34.29	1.43	10.71	3.57	36.43	3.57	7.14	2.86	70.72	5.00	17.85	6.43
30–39	U.S. Population	34.89	6.83	6.22	2.60	34.73	5.79	6.48	2.46	69.62	12.62	12.70	5.06
	Self Report	37.22	6.11	5.00	1.67	31.67	6.67	8.33	3.33	68.89	12.78	13.33	5.00
	Rated by Others	38.13	3.13	7.50	1.25	33.13	4.38	9.38	3.13	71.26	7.51	16.88	4.38
40–49	U.S. Population	37.48	6.36	4.49	2.56	37.29	5.36	4.37	2.09	74.77	11.72	8.86	4.65
	Self Report	38.89	5.56	3.89	1.67	35.00	6.11	5.56	3.33	73.89	11.67	9.45	5.00
	Rated by Others	36.11	2.78	9.44	1.67	38.89	3.33	5.00	2.78	75.00	6.11	14.44	4.45
50–64	U.S. Population	40.08	5.53	4.18	2.09	38.33	4.31	3.47	2.02	78.41	9.84	7.65	4.11
	Self Report	42.73	1.82	4.55	0.91	36.36	3.64	5.45	4.55	79.09	5.46	10.00	5.46
	Rated by Others	35.33	2.67	11.33	0.67	48.00	1.33	–	0.67	83.33	4.00	11.33	1.34
65–74	U.S. Population	44.55	5.23	3.33	1.89	37.19	3.65	2.79	0.18	81.74	8.88	6.12	2.07
	Self Report	47.50	3.33	4.17	0.83	35.00	4.17	2.50	2.50	82.50	7.50	6.67	3.33
	Rated by Others	44.00	2.00	3.00	2.00	39.00	2.00	6.00	2.00	83.00	4.00	9.00	4.00
75–89	U.S. Population	52.11	4.64	2.48	1.07	34.23	2.76	1.70	1.02	86.34	7.40	4.18	2.09
	Self Report	50.00	6.00	3.00	1.00	37.00	2.00	1.00	–	87.00	8.00	4.00	1.00
	Rated by Others	52.22	6.67	1.11	–	30.00	2.22	6.67	1.11	82.22	8.89	7.78	1.11

Note. U.S. population data are from *Current Population Survey, March 1999* [Machine-readable data file] by U.S. Bureau of the Census, 1999, Washington, DC: U.S. Bureau of the Census (Producer/Distributor).

Efforts were made to ensure that a representative proportion of individuals across the entire range of adaptive skill was sampled during standardization. To prevent truncated norms, whenever possible, individuals with specific clinical diagnoses were included in the normative sample according to the percentages reported by the U.S. Department of Education (1998, 2001) and the theoretical distribution. Table 4.11 reports the detailed percentages of the clinical cases in the standardization samples. Finally, information regarding respondents who completed the rating forms during the standardization studies is reported in Table 4.12.

Table 4.11 Percentage of Clinical Cases Included in the Standardization Samples

Clinical Group	Teacher/Daycare Provider	Parent/Primary Caregiver	Teacher	Parent	Adult, Rated by Others	Adult, Self Report
Biological Risk Factors	0.53	0.81	–	–	–	–
Language Disorders	0.13	0.52	–	–	–	–
PDD-NOS	–	0.07	–	–	–	–
Developmental Delay	1.20	0.89	–	–	–	–
Motor Impairment	–	0.22	–	–	–	–
ADHD	–	–	0.41	1.02	0.22	0.10
Alzheimer's Disease	–	–	–	–	0.76	0.20
Autistic Disorder	0.13	0.07	0.41	0.24	–	–
Behavior Disorder	–	–	0.71	0.12	–	–
Emotional Disturbance	–	–	0.59	0.12	–	–
Epilepsy	–	–	–	–	–	0.30
Deaf and Hard of Hearing	–	–	0.36	0.06	0.11	0.71
Learning Disability	–	–	3.08	1.08	–	0.81
Mental Retardation	0.93	0.30	2.01	1.26	1.63	0.51
Parkinson's Disease	–	–	–	–	–	0.30
Speech Impairment	–	–	0.47	0.36	–	–
Stroke	–	–	–	–	–	0.91
Brain Injury	–	–	0.12	–	0.33	0.81
Visual Impairment	–	–	–	0.12	0.11	0.91
Other	–	–	0.30	0.42	0.43	1.31
Total	**2.93**	**2.89**	**8.46**	**4.97**	**4.24**	**7.17**

Note. PDD-NOS = Pervasive Developmental Disorder Not Otherwise Specified; ADHD = Attention-Deficit/Hyperactivity Disorder.

Table 4.12 Information Regarding the Respondents of the Standardization Samples

Teacher/Daycare Provider Sample	
Category of Respondent	**Percent**
General Education Teacher	9.47
Preschool Teacher	37.07
Special Education Teacher/Teacher's Aide	5.33
Daycare or Child Care Provider	33.33
Other Service Provider	11.60
Unknown	3.20

Parent/Primary Caregiver Sample	
Category of Respondent	**Percent**
Mother	89.26
Father	7.93
Grandparent	1.41
Other Relative	1.26
Unknown	0.14

Adult Sample, Rated By Others	
Category of Respondent	**Percent**
Mother	11.63
Father	1.96
Husband	20.33
Brother	1.20
Son	4.24
Daughter	11.09
Wife	22.39
Sister	4.13
Other Relative	6.30
Roommate	1.74
Romantic Friend	4.24
Non-romantic Friend	4.02
Work Supervisor	0.33
Professional Caregiver	1.20
Teacher	0.65
Teacher's Aide	0.11
Other	2.61
Unknown	1.83

Teacher Sample	
Category of Respondent	**Percent**
General Education Teacher	68.52
Teacher's Aide	8.82
Special Education Teacher	10.00
Other Teacher	12.01
Unknown	0.65

Parent Sample	
Category of Respondent	**Percent**
Mother	82.22
Father	11.08
Grandparent	3.23
Other Relative	3.23
Unknown	0.24

Norms Development

Derivation of Skill Area Scaled Scores

For each age group, the total raw scores of each skill area were converted to percentiles and then converted into scaled scores with a mean of 10 and a standard deviation of 3. This conversion was accomplished by preparing a cumulative frequency distribution of raw scores for each age group, normalizing these distributions where possible, and calculating the appropriate scaled score for each raw score. For each skill area, the progression of means, skewness, and variance values across the age groups were examined and minor sampling fluctuations smoothed. The progression of scaled scores within each age group and across age groups was then examined. Further smoothing eliminated minor irregularities. The scaled score equivalents of skill area raw scores are provided in Tables A.1, A.5, A.9, and A.12.

Norms for the Community Use, Functional Pre-Academics and Home Living Skill Areas are not developed for ages younger than 1 year, because children this age have not yet reached the developmental stage necessary to perform most of the activities described in these areas. The Community Use Skill Area is not included in the Teacher/Daycare Provider norms because most teachers do not regularly observe their students outside of the classroom and the ratings would produce an unacceptably high average guess rate. On the infant-preschool forms, the Motor Skill Area, which assesses fine and gross motor development, replaces the Work Skill Area. The norms for the Work Skill Area are not developed for ages 5–16 years on the Parent and Teacher Forms or for ages 75–89 years on the Adult Form because the majority of children or adults in these age ranges are not employed.

Derivation of Average Guessing

For each age group, the average number of items guessed by the respondents was calculated for each skill area and reported in Tables A.3, A.7, A.11, and A.14 for each normative sample. The standard error of the means, also reported in these tables, allows the test user to calculate the confidence interval of the mean number of items guessed.

Derivation of Adaptive Domain Composite Scores

The sums of skill area scaled scores for each adaptive domain were calculated by summing each individual's actual age-corrected scaled scores on the skill areas included in the adaptive domain (refer to Table 1.3).

For each age group and rating form, the means and standard deviations of the sums of scaled score distributions were calculated and are reported in Tables C.1, C.2, C.3, and C.4. Due to a ceiling effect, the range of scaled scores and the sum of scaled scores vary by age group.

For each standardization sample, the distribution of the sums of scaled scores was converted to a scale with a mean of 100 and a standard deviation of 15 for each age group independently. This conversion was accomplished by preparing a cumulative frequency distribution of actual sums of scaled scores for each age group, smoothing and normalizing these distributions, and then calculating the appropriate adaptive domain composite score equivalent for each sum of scaled scores. Successive adjustments were based on computerized smoothing and visual inspection of the distributions. The adaptive domain composite score equivalents of sums of scaled scores are provided in Tables A.2, A.6, A.10, and A.13 for each of the standardization samples.

Due to the nature of adaptive skills, the distributions of the standardization data are skewed for the skill areas. Therefore, even though the reliabilities of the adaptive domain composite scores are generally very high, the differential ability decreases when the score reaches the natural ceiling of the scale. To prevent misinterpretation of the adaptive domain composites for the school-age forms and Adult Form, this manual provides normative data only for the range of scores that closely approximates the normal distribution and can be meaningfully interpreted. The range of obtainable adaptive domain scores is 40–160 on infant-preschool forms, 40–130 for ages 5–7 years on the school-age forms, and 40–120 for ages 8–89 years on school-age forms or the Adult Form.

Derivation of the GAC

The sums of skill area scaled scores for the GAC were calculated by summing each individual's actual age-corrected scaled scores on the relevant skill areas. For the Parent/Primary Caregiver Form, the sums of scaled scores for children ages birth–11 months were calculated using only seven skill areas because three of the ten skill areas are not administered to this age group. For ages 1–5 years using the Parent/Primary Caregiver Form, the GAC is calculated using all 10 skill areas. The sums of scaled scores for the Teacher/Daycare Provider Form were calculated using all nine of the skill areas included on the form. For the school-age Parent and Teacher Forms, the sums of the scaled scores were calculated using only nine of the ten skill areas. The Work Skill Area is not included in the GAC because it is irrelevant for most school-aged children. For the adult norms, the sums of the scaled scores were calculated with and without the Work Skill Area, depending on whether or not the individual being rated was employed (refer to Table 1.3).

For each age group, the means and standard deviations of the sums of scaled score distributions were calculated and are reported in Tables C.1, C.2, C.3, and C.4. Due to a ceiling effect, the range of scaled scores and the sum of scaled scores vary by age group. An analysis of variance revealed statistically significant variation by age group in the mean scores for the scales. Moreover, the results of Bartlett's test for homogeneity of variance indicated that the variance across ages was significant. Consequently, GAC score equivalents of sums of scaled scores also were derived separately by age group.

For each standardization sample, the distribution of the sums of scaled scores was converted to a scale with a mean of 100 and a standard deviation of 15 separately for each age group. This conversion was accomplished by preparing a cumulative frequency distribution of actual sums of scaled scores for each age group, smoothing and normalizing these distributions, and then calculating the appropriate GAC score equivalent for each sum of scaled scores. Successive adjustments were based on computerized smoothing and visual inspection of the distributions. The GAC score equivalents of sums of scaled scores are provided Tables A.2, A.6, A.10, and A.13 in Appendix A for each of the standardization samples.

Due to the nature of adaptive skills, the distributions of the standardization data are skewed for the skill areas. Therefore, even though the reliability of the GAC scale is very high, the differential ability decreases when the score reaches the natural ceiling of the scale. To prevent misinterpretation, this manual provides normative data only for the range of scores that closely approximates the normal distribution and can be meaningfully interpreted. The range of obtainable GAC scores is 40–160 on infant-preschool forms, 40–130 for ages 5–7 years on school-age forms, and 40–120 for ages 8–89 years on school-age forms and the Adult Form.

Derivation of Test-Age Equivalents

The ABAS–II provides the test-age equivalents of skill area raw scores for individuals ages 0–21 years who are rated using the infant-preschool or school-age forms (Tables A.4 and A.8). The test-age equivalents represent the average performance of each age group on each skill area. Tables A.4 and A.8 were developed in the following manner. For each age interval, the raw score (or scores) corresponding to a scaled score of 10 represents the mean test performance for that particular age. For each skill area, the tables show these raw scores for the indicated test ages. If the same raw score appeared at two successive test ages, it was assigned to the middle age. If the raw score bands overlapped by more than 1 point, the overlap was divided evenly between the adjacent test ages. The test-age distributions of some skill areas were smoothed.

Chapter 5

Reliability and Validity

The statistical properties of the ABAS–II presented in this chapter determine the confidence clinicians can have in the accuracy of obtained scores. The psychometric properties that are critical to the interpretation of scores are reliability coefficients, standard errors of measurement, confidence intervals, statistical significance of the differences between scores (critical values), frequency of score differences (base rates), and the validity of the instrument. This chapter reports and discusses these statistics as they relate to the quantitative interpretation of ABAS–II scores. This chapter extends an understanding of the ABAS–II by summarizing considerable empirical evidence that informs professional users about the instrument's psychometric qualities that should guide its use. ABAS–II is a relatively new measure for which prior research is unavailable. The authors encourage additional research that will provide further empirical evidence of its statistical properties.

Evidence of Reliability

Reliability refers to consistency in behavior. When behaviors are quantified as test scores, reliability refers to the consistency or stability of such scores. Behavior itself, however, is rarely entirely consistent. Even the most habitual behaviors display differences from time to time. Furthermore, respondents may view and rate behaviors differently, or may be more attentive on some days than others. Thus, while the goal to develop perfectly reliable rating scales is laudatory, realistically it is unattainable. Some degree of error exists in every measurement. Moreover, measurement error tends to be random and difficult to predict for any given individual.

A relatively high degree of reliability is essential when making decisions that may impact an individual's life (e.g., making a diagnosis of mental retardation). Error in classification and diagnosis is most likely to occur when scores are close to a cut score (a specific point on a scale at which scores at or above are interpreted or acted upon differently than scores below). Estimates of a test's reliability should be considered when attempting to classify or diagnose behaviors based on one or more scores that are close to a cut score. Fortunately, a statistic is available to inform test users of the degree of error in scores that may be expected. This statistic, the standard error of measurement (*SEM*), provides test users with a band of scores that surrounds an observed score and likely includes the true score. This error score reflects the size of a test's measurement error (as reflected in a test's reliability coefficients) combined with its standard deviation. The use of the *SEM* is intended to increase the accuracy of descriptions of an individual's test behaviors, to establish confidence intervals around the observed scores, and to assist in comparing scores from different tests. Information on measurement error is essential to the use of the ABAS–II.

This chapter examines the following four forms of reliability: internal consistency, test-retest reliability, inter-rater reliability, and cross-form consistency. In addition, standard errors of measurement are provided to assist in increasing the accuracy of test interpretations. The data included in these analyses were obtained during standardization.

Internal Consistency

Estimates of internal consistency are typically displayed through correlation coefficients that reflect relationships among scores derived from individual items or subsets of items within a test following a single administration of the test (American Educational Research Association et al., 1999). For the ABAS–II, the internal consistency reliability was estimated using coefficient alpha and is reported in Tables 5.1–5.4 for each of the six standardization samples by age group. The average internal consistency reliability coefficients of the skill areas, adaptive domains, and the GAC were calculated using Fisher's *z* transformation.

In addition, the tables provide the internal consistency reliability by level of performance and by clinical groups whenever available. For the purposes of this data analysis, the levels of performance were classified by the GAC scores. Individuals with GAC scores of 89 or less were classified as *below average*, individuals with GAC scores of 90–109 were classified as *average,* and individuals with GAC scores of 110 or higher were classified as *above average*. However, due to the limited ceilings and significant restriction of range, internal consistency reliability data were not reported for the *above average* level. For both *average* and *below average* levels, reliability coefficients were calculated by 3, 4, 5, or 6 age bands (4 age bands for the Teacher/Daycare Provider Form, 6 age bands for the Parent/Primary Caregiver Form, 5 age bands for the Teacher and Parent Forms, and 3 age bands for the Adult Form). Because the variability of the samples analyzed by performance level differs from that of the overall standardization samples, reliability coefficients corrected for the variability of each performance level sample are also reported. The corrected reliability coefficients were calculated using the method developed by Allen and Yen (1979).

The reliability coefficients for the GAC were consistent across the six standardization samples; average reliability coefficients ranged from .97–.99. Average reliability coefficients of the adaptive domains ranged from .91–.98. Average reliability coefficients of the skill areas were typically in the .90s, ranging from .80 to .97. When analyzed by levels of performance, the average corrected reliability coefficients for the GAC of individuals with average or below average performance were in the .90s, ranging from .92–.99. Average corrected reliability coefficients for the adaptive domains were typically in the .90s for individuals with average or below average performance, ranging from .80–.98. The average corrected reliability coefficients of the skill areas of each performance level were mostly in .80s and .90s, ranging from .78–.98.

Tables 5.1–5.4 also indicate that the reliability coefficients of the samples with different clinical diagnoses ranged from .96–.99 for the GAC, from .86–.98 for the adaptive domains, and from .67–.98 for the skill areas. In addition, when analyzed by age bands, the reliability coefficients of the samples with mixed clinical diagnoses ranged from .97–.99 for the GAC, from .90–.99 for the adaptive domains, and from .79–.98 for the skill areas.

Overall, the reliability data suggest that the scaled scores for the skill areas, as well as the adaptive domain and GAC scores, reflect a high degree of internal consistency in the items and that the ABAS–II is equally reliable for assessing individuals with different levels of adaptive functioning or individuals with different clinical diagnoses.

Table 5.1 Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Teacher/Daycare Provider and Teacher Forms

Standardization Sample by Age Group: Teacher/Daycare Provider Form

	Age Group							
Skill Area/Composite	**2:0–2:5**	**2:6–2:11**	**3:0–3:5**	**3:6–3:11**	**4:0–4:5**	**4:6–4:11**	**5:0–5:11**	**Average r_{xx}**
Communication	.91	.92	.95	.93	.93	.91	.92	.93
Functional Pre-Academics	.89	.91	.94	.92	.94	.93	.93	.92
School Living	.94	.95	.95	.94	.94	.93	.93	.94
Health and Safety	.83	.88	.88	.85	.86	.83	.89	.86
Leisure	.89	.86	.92	.87	.89	.89	.92	.89
Self-Care	.84	.84	.90	.78	.85	.73	.72	.82
Self-Direction	.90	.87	.94	.92	.92	.93	.94	.92
Social	.87	.86	.93	.90	.93	.94	.94	.91
Motor	.82	.85	.84	.76	.83	.87	.88	.84
Conceptual Domain	.95	.95	.97	.96	.97	.96	.97	.96
Social Domain	.93	.92	.96	.93	.95	.95	.96	.94
Practical Domain	.93	.95	.96	.93	.94	.92	.93	.94
GAC	.97	.98	.99	.98	.98	.98	.98	.98

Standardization Sample by Age Group: Teacher Form

	Age Group											
Skill Area/Composite	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13–14**	**15–16**	**17–21**	**Average r_{xx}**
Communication	.91	.93	.93	.95	.94	.95	.96	.94	.94	.96	.93	.94
Community Use	.79	.85	.84	.88	.85	.88	.94	.93	.91	.93	.91	.89
Functional Academics	.93	.95	.95	.96	.96	.95	.98	.97	.95	.97	.96	.96
School Living	.90	.93	.92	.95	.94	.95	.96	.95	.95	.95	.95	.94
Health and Safety	.87	.93	.89	.94	.94	.94	.96	.96	.95	.95	.94	.94
Leisure	.91	.93	.92	.94	.93	.93	.95	.95	.94	.95	.94	.94
Self-Care	.85	.95	.92	.95	.93	.94	.94	.93	.94	.95	.88	.93
Self-Direction	.92	.94	.94	.96	.96	.97	.98	.97	.97	.97	.96	.96
Social	.94	.96	.93	.96	.96	.96	.97	.95	.95	.96	.94	.95
Work	–	–	–	–	–	–	–	–	–	–	.96	.96
Conceptual Domain	.96	.97	.97	.98	.98	.98	.99	.98	.98	.99	.98	.98
Social Domain	.96	.97	.96	.97	.97	.97	.98	.97	.97	.98	.97	.97
Practical Domain	.95	.97	.96	.98	.97	.97	.98	.98	.98	.98	.97	.97
GAC	.98	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99	.99

Note. Average reliability coefficients (r_{xx}) were calculated using Fisher's *z* transformation.

Table 5.1 Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Teacher/Daycare Provider and Teacher Forms *(continued)*

Standardization Sample by Level of Performance[a]: Teacher/Daycare Provider Form

Average (GAC = 90–109)

	Age 2 (n = 110)			Age 3 (n = 102)			Age 4 (n = 98)			Age 5 (n = 81)			Average r_{xx}	
Skill Area/Composite	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*r*	r^c
Communication	2.20	.88	.93	2.20	.92	.95	2.40	.88	.92	2.10	.70	.85	.86	.92
Functional Pre-Academics	2.30	.88	.93	2.30	.91	.95	2.60	.90	.92	2.50	.91	.93	.90	.93
School Living	2.20	.90	.95	2.00	.88	.95	2.00	.85	.93	2.20	.78	.88	.86	.93
Health and Safety	2.20	.78	.88	2.00	.76	.89	2.10	.61	.81	2.20	.72	.85	.72	.86
Leisure	2.10	.78	.89	1.80	.75	.91	2.10	.69	.85	1.90	.62	.85	.72	.88
Self-Care	2.30	.78	.87	2.40	.82	.88	2.50	.62	.73	2.50	.22	.46	.66	.78
Self-Direction	2.10	.76	.88	1.90	.86	.94	1.80	.82	.93	2.10	.85	.93	.83	.92
Social	2.00	.70	.87	2.00	.83	.92	2.20	.88	.94	1.90	.84	.93	.82	.92
Motor	2.70	.79	.83	2.20	.67	.83	2.60	.75	.82	2.30	.78	.87	.75	.84
Conceptual Domain		.87	.93		.89	.94		.86	.92		.81	.90	.86	.92
Social Domain		.80	.91		.82	.93		.81	.91		.76	.90	.80	.91
Practical Domain		.85	.92		.86	.93		.73	.84		.65	.78	.79	.88
GAC		.88	.93		.89	.95		.83	.90		.84	.91	.86	.92

Below Average (GAC = 89 or Less)

	Age 2 (n = 39)			Age 3 (n = 46)			Age 4 (n = 53)			Age 5 (n = 33)			Average r_{xx}	
Skill Area/Composite	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*r*	r^c
Communication	2.00	.87	.94	2.80	.92	.93	2.60	.91	.93	2.50	.90	.93	.90	.93
Functional Pre-Academics	2.10	.81	.90	2.70	.93	.94	2.90	.95	.95	2.30	.93	.96	.92	.94
School Living	2.50	.90	.93	2.70	.95	.96	2.00	.89	.95	2.60	.92	.94	.92	.95
Health and Safety	2.50	.79	.85	2.20	.87	.93	1.90	.74	.90	2.40	.85	.90	.82	.90
Leisure	2.60	.88	.91	2.30	.91	.95	2.10	.86	.93	2.10	.90	.95	.89	.94
Self-Care	2.30	.81	.89	2.20	.91	.95	2.70	.87	.90	2.30	.82	.89	.86	.91
Self-Direction	2.30	.83	.90	2.50	.93	.95	1.80	.81	.93	2.20	.91	.95	.88	.94
Social	2.00	.80	.91	2.30	.91	.94	2.10	.86	.93	2.60	.93	.95	.88	.93
Motor	2.40	.82	.88	1.90	.82	.93	2.40	.85	.90	2.40	.88	.92	.84	.91
Conceptual Domain		.87	.93		.95	.96		.93	.96		.95	.97	.93	.96
Social Domain		.88	.94		.94	.96		.90	.95		.95	.97	.92	.96
Practical Domain		.90	.93		.95	.97		.91	.95		.91	.94	.92	.95
GAC		.95	.97		.98	.99		.96	.98		.97	.98	.97	.98

Note. SD = standard deviation; *r* = internal consistency reliability coefficient (coefficient alpha); r^c = corrected internal consistency reliability. Average reliability coefficients (r_{xx}) were calculated using Fisher's *z* transformation.

[a]Conditional reliability coefficients for the above average level are not reported due to significant restriction of the range.

Table 5.1 Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Teacher/Daycare Provider and Teacher Forms *(continued)*

Standardization Sample by Level of Performance[a]: Teacher Form

	Average (GAC = 90–109)																
	Ages 5–6 (n = 132)			Ages 7–8 (n = 130)			Ages 9–10 (n = 109)			Ages 11–12 (n = 100)			Ages 13–21 (n = 219)			Average r_{xx}	
Skill Area/Composite	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*r*	r^c
Communication	2.10	.75	.88	1.66	.79	.94	1.64	.72	.92	2.00	.79	.91	2.06	.84	.93	.81	.92
Community Use	2.30	.59	.76	2.12	.63	.82	2.23	.68	.82	2.24	.68	.82	1.81	.74	.91	.81	.83
Functional Academics	2.86	.91	.92	2.02	.91	.96	2.16	.90	.95	1.52	.76	.94	1.64	.85	.95	.81	.95
School Living	2.02	.81	.91	1.75	.77	.92	1.84	.79	.92	1.79	.72	.90	1.56	.83	.95	.84	.92
Health and Safety	1.83	.66	.88	1.67	.67	.90	1.86	.73	.90	2.02	.68	.85	1.40	.74	.94	.65	.90
Leisure	1.86	.75	.90	1.88	.81	.93	1.92	.80	.92	1.67	.80	.94	1.69	.81	.94	.89	.93
Self-Care	2.01	.72	.87	1.54	.77	.94	1.97	.70	.87	1.49	.56	.89	1.85	.77	.91	.69	.90
Self-Direction	1.87	.76	.91	1.67	.85	.95	2.03	.86	.94	2.21	.88	.93	1.99	.90	.95	.78	.94
Social	2.06	.86	.94	1.71	.85	.95	2.02	.90	.96	1.78	.85	.95	1.75	.85	.95	.81	.95
Conceptual Domain		.80	.90		.87	.96		.87	.95		.85	.94		.90	.96	.86	.95
Social Domain		.86	.94		.89	.96		.88	.95		.86	.96		.88	.96	.87	.95
Practical Domain		.80	.90		.80	.93		.78	.90		.67	.87		.85	.95	.79	.91
GAC		.86	.93		.90	.96		.87	.94		.83	.94		.91	.97	.85	.95

	Below Average (GAC = 89 or Less)																
	Ages 5–6 (n = 80)			Ages 7–8 (n = 75)			Ages 9–10 (n = 77)			Ages 11–12 (n = 84)			Ages 13–21 (n = 139)			Average r_{xx}	
Skill Area/Composite	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*r*	r^c
Communication	2.63	.89	.92	3.14	.89	.88	2.53	.89	.92	2.96	.95	.95	2.77	.91	.93	.88	.92
Community Use	2.94	.72	.73	3.07	.85	.84	2.66	.82	.86	3.19	.93	.92	3.29	.88	.86	.85	.85
Functional Academics	2.78	.88	.90	2.71	.96	.97	2.65	.96	.97	3.15	.97	.97	2.84	.95	.96	.91	.96
School Living	2.33	.87	.92	2.67	.91	.93	2.86	.93	.94	3.35	.95	.94	3.29	.91	.89	.84	.93
Health and Safety	2.86	.89	.90	2.57	.91	.93	2.93	.94	.94	3.09	.95	.95	3.53	.93	.90	.78	.93
Leisure	2.81	.85	.87	2.32	.86	.91	2.27	.86	.92	2.50	.91	.94	2.79	.90	.91	.83	.91
Self-Care	3.43	.91	.89	3.43	.93	.90	3.90	.93	.88	3.85	.93	.89	4.02	.94	.88	.86	.89
Self-Direction	3.10	.89	.88	2.89	.92	.92	2.86	.94	.94	2.81	.96	.96	3.07	.94	.94	.88	.93
Social	2.81	.93	.94	2.64	.90	.92	2.86	.93	.93	2.96	.94	.94	2.96	.92	.92	.89	.93
Conceptual Domain		.93	.94		.96	.96		.96	.97		.98	.98		.96	.97	.96	.97
Social Domain		.93	.94		.92	.94		.93	.95		.95	.96		.93	.94	.93	.95
Practical Domain		.92	.93		.95	.95		.95	.95		.97	.96		.96	.94	.95	.95
GAC		.97	.97		.98	.98		.98	.98		.99	.99		.98	.97	.95	.98

Note. SD = standard deviation; *r* = internal consistency reliability coefficient (coefficient alpha); r^c = corrected internal consistency reliability.
Average reliability coefficients (r_{xx}) were calculated using Fisher's *z* transformation.

[a]Conditional reliability coefficients for the above average level are not reported due to significant restriction of the range.

Table 5.1 Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Teacher/Daycare Provider and Teacher Forms *(continued)*

Clinical Sample by Diagnoses: Teacher/Daycare Provider Form

Skill Area/Composite	Autistic Disorder (n = 35)	Developmental Delay (n = 48)	Motor Impairment (n = 32)	Mild Mental Retardation (n = 31)	Moderate Mental Retardation (n = 19)	PDD-NOS (n = 19)	Rec./Exp. Language Disorder (n = 52)	Biological Risk Factors (n = 30)	Average r_{xx}
Communication	.90	.94	.96	.91	.91	.95	.94	.92	.93
Functional Pre-Academics	.94	.96	.97	.94	.95	.95	.95	.97	.96
School Living	.93	.95	.96	.94	.91	.94	.95	.96	.94
Health and Safety	.84	.92	.89	.89	.86	.84	.91	.89	.88
Leisure	.84	.89	.93	.93	.75	.90	.88	.85	.88
Self-Care	.71	.86	.89	.88	.67	.83	.87	.75	.82
Self-Direction	.90	.94	.95	.94	.82	.94	.93	.91	.92
Social	.92	.92	.94	.94	.84	.93	.93	.89	.92
Motor	.74	.89	.91	.82	.82	.81	.87	.82	.84
Conceptual Domain	.95	.97	.98	.96	.95	.98	.97	.97	.97
Social Domain	.93	.94	.96	.96	.88	.95	.95	.92	.94
Practical Domain	.92	.96	.96	.95	.86	.94	.96	.89	.94
GAC	.97	.99	.99	.98	.96	.98	.98	.97	.98

Clinical Sample by Diagnoses: Teacher Form

Skill Area/Composite	ADHD (n = 30)	Autistic Disorder (n = 32)	Emotional Disturbance (n = 73)	Deaf and Hard of Hearing (n = 19)	Learning Disability (n = 248)	Mental Retardation (n = 199)	Physical Impairment (n = 52)	Behavior Disorder (n = 56)	Average r_{xx}
Communication	.94	.95	.95	.94	.93	.94	.97	.94	.95
Community Use	.92	.93	.91	.86	.91	.91	.96	.90	.92
Functional Academics	.98	.97	.97	.97	.97	.97	.98	.95	.97
School Living	.95	.95	.93	.96	.93	.95	.98	.95	.95
Health and Safety	.92	.96	.94	.94	.93	.94	.97	.92	.94
Leisure	.95	.95	.92	.93	.93	.91	.96	.94	.94
Self-Care	.93	.89	.92	.90	.92	.95	.95	.91	.92
Self-Direction	.93	.93	.95	.95	.95	.95	.97	.95	.95
Social	.95	.96	.94	.96	.94	.94	.98	.95	.95
Conceptual Domain	.98	.98	.98	.98	.98	.98	.99	.98	.98
Social Domain	.97	.97	.96	.97	.96	.96	.98	.97	.97
Practical Domain	.98	.98	.97	.97	.97	.98	.99	.92	.97
GAC	.99	.99	.99	.99	.99	.99	.99	.99	.99

Note. Average reliability coefficients (r_{xx}) were calculated using Fisher's z transformation.

Table 5.1 Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Teacher/Daycare Provider and Teacher Forms *(continued)*

Mixed Clinical Sample by Age: Teacher/Daycare Provider Form

Skill Area/Composite	2 (n = 42)	3 (n = 66)	4 (n = 81)	5 (n = 77)	Average r_{xx}
Communication	.92	.93	.94	.93	.93
Functional Pre-Academics	.93	.93	.94	.94	.94
School Living	.94	.94	.94	.93	.94
Health and Safety	.88	.88	.84	.89	.87
Leisure	.83	.89	.90	.90	.88
Self-Care	.81	.84	.83	.79	.82
Self-Direction	.84	.94	.93	.93	.92
Social	.85	.92	.93	.94	.92
Motor	.82	.81	.82	.91	.85
Conceptual Domain	.94	.97	.97	.97	.96
Social Domain	.90	.95	.95	.95	.94
Practical Domain	.92	.95	.94	.94	.94
GAC	.97	.98	.98	.98	.98

Mixed Clinical Sample by Age: Teacher Form

Skill Area/Composite	5–6 (n = 75)	7–8 (n = 99)	9–10 (n = 131)	11–12 (n = 124)	13–14 (n = 146)	15–21 (n = 165)	Average r_{xx}
Communication	.93	.95	.95	.96	.96	.96	.95
Community Use	.85	.92	.90	.95	.93	.95	.92
Functional Academics	.92	.97	.97	.97	.97	.98	.97
School Living	.96	.96	.95	.97	.96	.96	.96
Health and Safety	.95	.94	.95	.97	.96	.96	.96
Leisure	.91	.92	.94	.96	.94	.94	.94
Self-Care	.95	.95	.94	.95	.95	.95	.95
Self-Direction	.91	.95	.95	.97	.96	.96	.95
Social	.96	.96	.96	.96	.96	.95	.96
Conceptual Domain	.96	.98	.98	.99	.98	.99	.98
Social Domain	.96	.97	.97	.98	.97	.97	.97
Practical Domain	.98	.98	.98	.99	.98	.99	.98
GAC	.99	.99	.99	.99	.99	.99	.99

Note. Average reliability coefficients (r_{xx}) were calculated using Fisher's z transformation.

Table 5.2 Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Parent/Primary Caregiver and Parent Forms

Standardization Sample by Age Group: Parent/Primary Caregiver Form

	Age Group													
Skill Area/Composite	**0:0–0:3**	**0:4–0:7**	**0:8–0:11**	**1:0–1:3**	**1:4–1:7**	**1:8–1:11**	**2:0–2:5**	**2:6–2:11**	**3:0–3:5**	**3:6–3:11**	**4:0–4:5**	**4:6–4:11**	**5:0–5:11**	**Average r_{xx}**
Communication	.66	.74	.79	.87	.86	.88	.92	.91	.94	.91	.85	.87	.86	.87
Community Use	–	–	–	.89	.89	.87	.92	.91	.92	.85	.91	.88	.84	.89
Functional Pre-Academics	–	–	–	.86	.92	.88	.90	.89	.92	.92	.90	.93	.90	.90
Home Living	–	–	–	.93	.92	.91	.92	.92	.94	.91	.91	.92	.89	.92
Health and Safety	.48	.72	.75	.81	.84	.87	.87	.88	.89	.83	.83	.83	.82	.82
Leisure	.68	.80	.82	.87	.85	.83	.89	.84	.91	.88	.86	.86	.91	.85
Self-Care	.53	.84	.79	.78	.80	.77	.86	.76	.87	.82	.84	.80	.78	.80
Self-Direction	.60	.78	.78	.84	.85	.84	.89	.82	.90	.88	.88	.90	.90	.85
Social	.75	.86	.79	.85	.82	.86	.90	.87	.90	.88	.87	.86	.88	.86
Motor	.65	.86	.82	.85	.81	.75	.88	.80	.80	.81	.81	.73	.84	.81
Conceptual Domain	.70	.79	.84	.92	.94	.93	.96	.94	.96	.95	.94	.95	.94	.92
Social Domain	.81	.88	.89	.91	.89	.90	.94	.91	.94	.92	.92	.91	.94	.91
Practical Domain	.65	.86	.82	.94	.95	.94	.96	.95	.97	.94	.96	.94	.94	.93
GAC	.86	.94	.94	.97	.98	.97	.98	.97	.98	.98	.98	.97	.98	.97

Standardization Sample by Age Group: Parent Form

	Age Group											
Skill Area/Composite	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13–14**	**15–16**	**17–21**	**Average r_{xx}**
Communication	.90	.91	.91	.93	.89	.91	.91	.94	.91	.92	.95	.92
Community Use	.92	.93	.88	.92	.91	.89	.91	.91	.92	.91	.94	.91
Functional Academics	.94	.93	.92	.94	.90	.91	.90	.94	.92	.92	.96	.93
Home Living	.89	.92	.91	.93	.90	.92	.93	.93	.92	.94	.95	.92
Health and Safety	.86	.85	.84	.87	.82	.84	.82	.90	.88	.87	.92	.86
Leisure	.89	.91	.90	.91	.90	.91	.91	.94	.92	.92	.94	.91
Self-Care	.90	.87	.86	.88	.79	.85	.80	.91	.84	.86	.91	.87
Self-Direction	.91	.93	.89	.91	.91	.94	.93	.94	.93	.95	.95	.93
Social	.90	.91	.90	.92	.92	.93	.91	.94	.93	.94	.94	.92
Work	–	–	–	–	–	–	–	–	–	–	.92	.92
Conceptual Domain	.96	.97	.96	.97	.96	.96	.96	.97	.97	.97	.98	.97
Social Domain	.94	.95	.94	.95	.95	.95	.95	.96	.96	.96	.96	.95
Practical Domain	.96	.96	.95	.97	.94	.95	.95	.97	.96	.96	.98	.96
GAC	.98	.98	.98	.99	.98	.98	.98	.99	.98	.98	.99	.98

Note. Average reliability coefficients (r_{xx}) were calculated using Fisher's *z* transformation.

Table 5.2 Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Parent/Primary Caregiver and Parent Forms *(continued)*

Standardization Sample by Level of Performance[a]: Parent/Primary Caregiver Form

Average (GAC = 90–109)

	Age 0 (*n* = 150)			Age 1 (*n* = 155)			Age 2 (*n* = 97)			Age 3 (*n* = 108)			Age 4 (*n* = 97)			Age 5 (*n* = 63)			Average r_{xx}	
Skill Area/Composite	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*r*	r^c
Communication	2.30	.75	.85	2.00	.87	.94	2.20	.89	.94	1.90	.78	.91	2.20	.77	.87	1.90	.66	.86	.80	.90
Community Use	–	–	–	2.00	.83	.92	2.20	.84	.91	1.90	.76	.91	2.20	.70	.84	1.90	.76	.90	.78	.90
Functional Pre-Academics	–	–	–	2.20	.79	.89	2.10	.85	.92	2.50	.89	.93	2.40	.87	.92	2.50	.88	.92	.86	.92
Home Living	–	–	–	2.10	.93	.97	2.10	.84	.92	2.00	.77	.90	2.00	.77	.90	1.90	.76	.90	.83	.92
Health and Safety	2.20	.69	.84	2.00	.84	.93	2.00	.76	.89	2.00	.73	.88	2.20	.75	.86	1.60	.64	.90	.74	.89
Leisure	2.10	.85	.93	2.20	.83	.91	2.00	.79	.91	2.00	.73	.88	2.10	.72	.86	2.10	.78	.89	.79	.90
Self-Care	1.80	.85	.95	2.10	.79	.90	2.50	.79	.86	2.40	.59	.74	2.20	.50	.73	2.10	.76	.88	.73	.86
Self-Direction	2.10	.76	.88	1.80	.79	.92	1.40	.67	.93	1.80	.64	.87	2.00	.75	.89	1.90	.78	.91	.74	.90
Social	1.70	.81	.94	1.80	.83	.94	2.00	.79	.91	1.90	.66	.86	1.90	.73	.89	2.00	.74	.89	.77	.91
Motor	2.00	.90	.96	2.20	.85	.92	2.00	.68	.86	2.30	.69	.82	2.30	.67	.81	2.40	.77	.86	.78	.89
Conceptual Domain		.68	.82		.80	.91		.84	.94		.76	.90		.81	.90		.68	.85	.77	.89
Social Domain		.85	.94		.86	.94		.83	.93		.71	.88		.77	.89		.81	.91	.81	.92
Practical Domain		.78	.90		.88	.94		.86	.93		.77	.88		.73	.86		.74	.90	.80	.91
GAC		.75	.88		.89	.95		.87	.94		.80	.91		.81	.90		.82	.92	.83	.92

Below Average (GAC = 89 or Less)

	Age 0 (*n* = 68)			Age 1 (*n* = 70)			Age 2 (*n* = 45)			Age 3 (*n* = 46)			Age 4 (*n* = 52)			Age 5 (*n* = 42)			Average r_{xx}	
Skill Area/Composite	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*r*	r^c
Communication	2.40	.72	.82	2.50	.83	.88	2.40	.91	.94	2.50	.92	.95	2.40	.80	.87	3.00	.88	.88	.86	.90
Community Use	–	–	–	2.50	.78	.85	2.40	.87	.92	2.50	.89	.92	2.40	.90	.94	3.00	.74	.74	.85	.89
Functional Pre-Academics	–	–	–	2.10	.50	.75	2.60	.87	.90	2.50	.93	.95	2.20	.88	.93	2.30	.89	.94	.85	.91
Home Living	–	–	–	1.80	.91	.97	2.30	.92	.95	2.10	.91	.96	2.50	.91	.94	2.40	.86	.91	.90	.95
Health and Safety	2.70	.78	.82	2.20	.84	.91	2.40	.87	.92	2.20	.85	.92	2.10	.68	.84	2.20	.74	.86	.80	.88
Leisure	1.90	.81	.92	2.30	.86	.92	2.00	.85	.94	2.60	.88	.91	2.40	.84	.90	2.70	.87	.90	.85	.92
Self-Care	2.50	.87	.91	2.00	.77	.90	2.50	.87	.91	2.50	.86	.90	2.40	.81	.88	2.80	.70	.74	.82	.88
Self-Direction	2.40	.74	.83	2.30	.83	.90	2.10	.84	.92	2.10	.83	.92	1.80	.76	.91	1.70	.69	.90	.79	.90
Social	2.30	.84	.91	2.10	.77	.89	2.10	.88	.94	2.40	.88	.93	2.00	.76	.89	2.20	.78	.88	.83	.91
Motor	2.20	.91	.95	2.00	.85	.93	2.70	.91	.93	2.70	.83	.86	2.20	.73	.85	3.10	.83	.82	.85	.90
Conceptual Domain		.72	.82		.78	.88		.93	.95		.94	.96		.87	.93		.82	.91	.86	.92
Social Domain		.86	.93		.86	.93		.91	.96		.91	.94		.83	.91		.87	.92	.88	.93
Practical Domain		.86	.89		.90	.95		.95	.97		.95	.97		.90	.94		.84	.88	.91	.94
GAC		.87	.92		.94	.97		.97	.98		.97	.98		.94	.97		.90	.93	.94	.96

Note. SD = standard deviation; *r* = internal consistency reliability coefficient (coefficient alpha); r^c = corrected internal consistency reliability.

Average reliability coefficients (r_{xx}) were calculated using Fisher's *z* transformation.

[a]Conditional reliability coefficients for the above average level are not reported due to significant restriction of the range.

Table 5.2 Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Parent/Primary Caregiver and Parent Forms *(continued)*

Standardization Sample by Level of Performance[a]: Parent Form

Average (GAC = 90–109)

	Ages 5–6 (*n* = 113)			Ages 7–8 (*n* = 129)			Ages 9–10 (*n* = 137)			Ages 11–12 (*n* = 127)			Ages 13–21 (*n* = 219)			Average r_{xx}	
Skill Area/Composite	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*r*	r^c
Communication	2.00	.79	.91	1.89	.76	.90	2.10	.82	.91	2.00	.82	.92	1.80	.83	.94	.81	.92
Community Use	2.61	.84	.88	2.02	.77	.90	1.69	.78	.93	1.96	.77	.90	1.69	.85	.95	.81	.92
Functional Academics	2.41	.91	.94	2.01	.86	.94	2.08	.82	.91	1.67	.67	.90	1.76	.71	.90	.81	.92
Home Living	2.01	.79	.91	2.89	.86	.87	2.71	.82	.85	2.79	.86	.87	2.52	.87	.91	.84	.88
Health and Safety	2.36	.75	.85	1.88	.60	.84	1.91	.61	.84	1.97	.65	.85	1.62	.62	.89	.65	.86
Leisure	1.90	.76	.91	1.97	.78	.91	2.15	.78	.89	2.06	.84	.92	1.79	.77	.92	.89	.91
Self-Care	2.39	.85	.90	2.00	.64	.84	2.54	.68	.77	1.97	.68	.86	1.75	.52	.83	.69	.85
Self-Direction	1.87	.84	.94	2.11	.70	.85	2.01	.76	.89	1.74	.73	.91	1.83	.85	.95	.78	.92
Social	2.32	.82	.89	2.21	.79	.89	2.28	.80	.88	2.19	.77	.88	2.02	.84	.93	.81	.90
Conceptual Domain		.88	.95		.83	.92		.82	.91		.80	.93		.85	.95	.84	.93
Social Domain		.85	.93		.83	.92		.85	.92		.83	.91		.82	.93	.84	.84
Practical Domain		.86	.92		.79	.90		.79	.89		.78	.89		.78	.92	.80	.80
GAC		.89	.94		.84	.92		.81	.90		.83	.93		.85	.94	.85	.93

Below Average (GAC = 89 or Less)

	Ages 5–6 (*n* = 60)			Ages 7–8 (*n* = 70)			Ages 9–10 (*n* = 84)			Ages 11–12 (*n* = 79)			Ages 13–21 (*n* = 149)			Average r_{xx}	
Skill Area/Composite	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*r*	r^c
Communication	2.79	.88	.90	3.02	.87	.87	2.34	.84	.90	2.53	.91	.94	2.48	.90	.93	.88	.91
Community Use	2.87	.78	.80	3.22	.86	.84	1.98	.84	.93	2.29	.85	.91	2.24	.91	.95	.85	.90
Functional Academics	2.83	.87	.88	2.95	.91	.91	2.19	.87	.93	1.87	.92	.97	2.47	.95	.96	.91	.94
Home Living	2.18	.80	.89	2.97	.77	.78	3.55	.86	.80	3.23	.86	.83	3.57	.90	.85	.84	.83
Health and Safety	2.69	.75	.80	2.63	.76	.81	2.09	.69	.85	2.56	.81	.86	2.78	.85	.87	.78	.84
Leisure	2.01	.80	.91	2.60	.83	.87	2.13	.78	.89	2.22	.87	.93	2.04	.86	.94	.83	.91
Self-Care	2.14	.84	.92	2.69	.88	.90	2.78	.81	.83	2.87	.87	.88	3.46	.89	.85	.86	.88
Self-Direction	1.89	.84	.93	3.31	.84	.80	2.91	.88	.89	2.97	.92	.92	2.71	.89	.91	.88	.90
Social	2.03	.83	.92	3.15	.87	.86	2.99	.91	.91	3.18	.90	.89	3.05	.90	.89	.89	.90
Conceptual Domain		.92	.95		.92	.91		.91	.94		.95	.96		.95	.96	.93	.95
Social Domain		.87	.94		.91	.92		.88	.93		.91	.93		.91	.94	.90	.93
Practical Domain		.84	.88		.90	.91		.87	.90		.91	.92		.94	.93	.90	.91
GAC		.93	.95		.95	.95		.92	.94		.96	.97		.97	.97	.95	.96

Note. SD = standard deviation; *r* = internal consistency reliability coefficient (coefficient alpha); r^c = corrected internal consistency reliability.

Average reliability coefficients (r_{xx}) were calculated using Fisher's *z* transformation.

[a]Conditional reliability coefficients for the above average level are not reported due to significant restriction of the range.

Table 5.2 Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Parent/Primary Caregiver and Parent Forms *(continued)*

Clinical Sample by Diagnoses: Parent/Primary Caregiver Form

Skill Area/Composite	Autistic Disorder ($n = 34$)	Developmental Delay ($n = 78$)	Motor Impairment ($n = 50$)	Mild Mental Retardation ($n = 27$)	Moderate Mental Retardation ($n = 22$)	PDD-NOS ($n = 18$)	Rec./Exp. Language Disorder ($n = 52$)	Biological Risk Factors ($n = 66$)	Average r_{xx}
Communication	.86	.95	.96	.83	.86	.75	.89	.97	.91
Community Use	.93	.97	.97	.85	.91	.90	.92	.98	.94
Functional Pre-Academics	.96	.97	.97	.92	.95	.92	.94	.97	.95
Home Living	.93	.96	.98	.87	.93	.92	.85	.98	.94
Health and Safety	.93	.94	.96	.86	.79	.80	.86	.97	.91
Leisure	.88	.93	.95	.87	.87	.89	.86	.96	.91
Self-Care	.75	.92	.96	.70	.83	.86	.75	.95	.87
Self-Direction	.86	.94	.95	.87	.88	.88	.89	.96	.91
Social	.87	.93	.95	.86	.89	.88	.82	.96	.91
Motor	.81	.91	.94	.75	.79	.80	.83	.95	.87
Conceptual Domain	.92	.98	.98	.94	.95	.93	.95	.98	.96
Social Domain	.92	.96	.97	.92	.93	.94	.90	.97	.94
Practical Domain	.96	.98	.99	.94	.95	.94	.93	.99	.97
GAC	.98	.99	.99	.97	.98	.98	.97	.99	.98

Clinical Sample by Diagnoses: Parent Form

Skill Area/Composite	ADHD ($n = 49$)	Learning Disability ($n = 26$)	Mental Retardation ($n = 40$)	Average r_{xx}
Communication	.93	.94	.96	.94
Community Use	.96	.96	.97	.96
Functional Academics	.95	.97	.97	.96
Home Living	.95	.92	.96	.95
Health and Safety	.91	.95	.95	.94
Leisure	.94	.94	.94	.94
Self-Care	.88	.92	.96	.93
Self-Direction	.95	.92	.96	.95
Social	.92	.94	.96	.94
Conceptual Domain	.97	.98	.99	.98
Social Domain	.96	.97	.97	.97
Practical Domain	.97	.98	.99	.98
GAC	.99	.99	.99	.99

Note. Average reliability coefficients (r_{xx}) were calculated using Fisher's *z* transformation.

Table 5.3 Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Adult Form, Self Report

Standardization Sample by Age Group

	Age Group							
Skill Area/Composite	**16–21**	**22–29**	**30–39**	**40–49**	**50–64**	**65–74**	**75–89**	**Average r_{xx}**
Communication	.91	.91	.93	.93	.92	.93	.91	.92
Community Use	.90	.90	.93	.93	.92	.93	.95	.92
Functional Academics	.90	.90	.93	.92	.92	.93	.94	.92
Home Living	.90	.92	.92	.93	.93	.94	.95	.93
Health and Safety	.89	.86	.90	.91	.85	.92	.90	.89
Leisure	.94	.94	.95	.95	.97	.96	.96	.95
Self-Care	.93	.90	.86	.86	.82	.87	.87	.88
Self-Direction	.94	.94	.93	.95	.94	.95	.94	.94
Social	.93	.91	.93	.91	.91	.92	.95	.92
Work	.90	.92	.89	.88	.89	.94	–	.92
Conceptual Domain	.96	.96	.97	.97	.97	.97	.97	.97
Social Domain	.96	.96	.97	.96	.96	.97	.97	.96
Practical Domain (without Work)	.96	.96	.97	.97	.96	.97	.97	.97
Practical Domain (with Work)	.97	.97	.97	.97	.97	.98	–	.97
GAC (without Work)	.99	.98	.99	.99	.99	.99	.99	.99
GAC (with Work)	.99	.99	.99	.99	.99	.99	–	.99

Note. Average reliability coefficients (r_{xx}) were calculated using Fisher's *z* transformation.

Table 5.3 Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Adult Form, Self Report *(continued)*

Standardization Sample By Level of Performance[a]

	Average (GAC = 90–109)										
	Ages 16–29 (n = 145)			Ages 30–49 (n = 152)			Ages 50–89 (n = 160)			Average r_{xx}	
Skill Area/Composite	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*r*	r^c
Communication	2.20	.81	.90	2.29	.81	.89	2.40	.86	.91	.86	.90
Community Use	2.03	.80	.91	2.00	.83	.92	2.17	.85	.92	.87	.92
Functional Academics	2.13	.75	.87	2.02	.77	.89	2.02	.77	.89	.85	.88
Home Living	2.24	.81	.90	2.27	.87	.93	2.34	.88	.93	.88	.92
Health and Safety	2.21	.78	.88	1.43	.59	.91	1.77	.63	.87	.78	.89
Leisure	2.16	.85	.92	2.41	.91	.94	2.06	.91	.96	.90	.94
Self-Care	1.56	.56	.88	1.49	.44	.86	1.43	.62	.91	.64	.89
Self-Direction	2.20	.85	.92	1.98	.78	.90	1.92	.79	.91	.87	.91
Social	2.30	.82	.90	2.02	.72	.87	2.06	.79	.90	.84	.89
Work	2.39	.83	.89	2.28	.69	.82	2.30	.85	.91	.80	.88
Conceptual Domain		.85	.92		.86	.93		.89	.94	.87	.93
Social Domain		.86	.93		.85	.92		.88	.95	.86	.93
Practical Domain (without Work)		.79	.92		.78	.93		.81	.93	.79	.93
Practical Domain (with Work)		.82	.92		.79	.93		.86	.94	.83	.93
GAC (without Work)		.89	.95		.89	.96		.92	.97	.90	.96
GAC (with Work)		.91	.95		.89	.95		.93	.97	.91	.96

	Below Average (GAC = 89 or Less)										
	Ages 16–29 (n = 72)			Ages 30–49 (n = 91)			Ages 50–89 (n = 80)			Average r_{xx}	
Skill Area/Composite	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*r*	r^c
Communication	2.21	.84	.91	2.28	.88	.93	2.44	.87	.91	.86	.92
Community Use	1.63	.65	.90	2.02	.85	.93	1.96	.89	.95	.82	.93
Functional Academics	1.79	.82	.93	1.95	.86	.94	2.26	.89	.94	.86	.94
Home Living	2.37	.87	.92	2.32	.88	.93	2.25	.91	.95	.89	.94
Health and Safety	1.95	.80	.91	2.67	.86	.89	2.31	.86	.92	.84	.91
Leisure	1.90	.83	.93	2.12	.84	.92	2.25	.89	.94	.86	.93
Self-Care	3.45	.93	.91	2.91	.82	.83	2.74	.78	.82	.86	.86
Self-Direction	2.07	.89	.95	2.09	.88	.94	1.98	.89	.95	.89	.95
Social	2.54	.89	.92	2.24	.86	.92	2.59	.89	.92	.88	.92
Work	3.07	.92	.92	3.18	.87	.85	2.68	.94	.95	.91	.92
Conceptual Domain		.89	.95		.93	.96		.93	.96	.92	.96
Social Domain		.89	.94		.89	.94		.91	.95	.93	.94
Practical Domain (without Work)		.87	.94		.93	.95		.92	.95	.93	.95
Practical Domain (with Work)		.91	.95		.94	.95		.94	.96	.93	.95
GAC (without Work)		.93	.97		.96	.98		.96	.97	.96	.97
GAC (with Work)		.95	.97		.96	.98		.96	.98	.96	.98

Note. SD = standard deviation; *r* = internal consistency reliability coefficient (coefficient alpha); r^c = corrected internal consistency reliability.

Average reliability coefficients (r_{xx}) were calculated using Fisher's *z* transformation.

[a]Conditional reliability coefficients for the above average level are not reported due to significant restriction of the range.

Table 5.4 Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Adult Form, Rated by Others

Standardization Sample by Age Group

	Age Group							
Skill Area/Composite	**16–21**	**22–29**	**30–39**	**40–49**	**50–64**	**65–74**	**75–89**	**Average r_{xx}**
Communication	.95	.93	.92	.93	.93	.91	.97	.94
Community Use	.95	.94	.95	.94	.93	.93	.98	.95
Functional Academics	.96	.96	.96	.96	.97	.97	.99	.97
Home Living	.94	.95	.94	.95	.95	.94	.98	.95
Health and Safety	.91	.93	.91	.94	.93	.86	.98	.93
Leisure	.93	.95	.95	.95	.95	.95	.97	.95
Self-Care	.94	.91	.91	.93	.94	.82	.98	.93
Self-Direction	.96	.95	.95	.95	.96	.92	.98	.96
Social	.95	.93	.92	.93	.95	.95	.96	.94
Work	.95	.97	.92	.94	.97	.99	–	.97
Conceptual Domain	.98	.98	.98	.98	.98	.97	.99	.98
Social Domain	.96	.97	.96	.97	.97	.97	.98	.97
Practical Domain (without Work)	.98	.98	.98	.98	.98	.96	.99	.98
Practical Domain (with Work)	.98	.98	.98	.98	.98	.97	–	.98
GAC (without Work)	.99	.99	.99	.99	.99	.99	.99	.99
GAC (with Work)	.99	.99	.99	.99	.99	.99	–	.99

Note. Average reliability coefficients (r_{xx}) were calculated using Fisher's *z* transformation.

Table 5.4 Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Adult Form, Rated by Others *(continued)*

Standardization Sample By Level of Performance[a]

	Average (GAC = 90–109)										
	Ages 16–29 (*n* = 106)			Ages 30–49 (*n* = 149)			Ages 50–89 (*n* = 153)			Average r_{xx}	
Skill Area/Composite	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*r*	r^c
Communication	2.11	.86	.93	2.16	.82	.91	1.96	.85	.94	.84	.93
Community Use	1.85	.79	.92	1.95	.77	.90	2.02	.88	.95	.82	.93
Functional Academics	1.95	.85	.94	1.98	.74	.89	2.17	.88	.94	.83	.93
Home Living	2.08	.90	.95	2.36	.88	.93	2.45	.90	.94	.89	.94
Health and Safety	1.97	.69	.87	1.51	.53	.88	1.57	.58	.89	.60	.88
Leisure	2.16	.88	.94	2.08	.87	.94	1.98	.91	.96	.89	.95
Self-Care	2.03	.68	.86	1.86	.75	.91	1.64	.68	.91	.71	.90
Self-Direction	1.97	.86	.94	2.09	.83	.92	1.89	.85	.94	.85	.93
Social	2.21	.83	.91	2.04	.81	.91	1.79	.84	.94	.83	.92
Work	2.24	.92	.96	2.12	.87	.94	2.07	.95	.98	.92	.96
Conceptual Domain		.90	.95		.86	.94		.90	.96	.89	.95
Social Domain		.89	.94		.88	.94		.89	.96	.89	.94
Practical Domain (without Work)		.84	.93		.83	.94		.83	.95	.83	.95
Practical Domain (with Work)		.87	.94		.84	.94		.86	.95	.86	.95
GAC (without Work)		.92	.97		.91	.96		.92	.97	.92	.97
GAC (with Work)		.93	.97		.92	.97		.93	.97	.93	.97

	Below Average (GAC = 89 or Less)										
	Ages 16–29 (*n* = 72)			Ages 30–49 (*n* = 91)			Ages 50–89 (*n* = 80)			Average r_{xx}	
Skill Area/Composite	*SD*	*r*	r^c	*SD*	*r*	r^c	*SD*	*r*	r^c	*r*	r^c
Communication	1.99	.90	.96	2.35	.87	.92	2.38	.95	.97	.91	.95
Community Use	2.29	.93	.96	1.99	.92	.96	2.17	.97	.99	.95	.98
Functional Academics	2.60	.96	.97	2.61	.96	.97	2.57	.98	.98	.97	.97
Home Living	2.18	.90	.95	2.66	.93	.95	2.93	.97	.97	.94	.96
Health and Safety	2.37	.90	.94	2.99	.91	.91	2.41	.97	.98	.94	.95
Leisure	2.14	.90	.95	1.84	.86	.95	1.92	.95	.98	.91	.96
Self-Care	2.40	.93	.95	2.79	.92	.93	3.32	.98	.97	.95	.95
Self-Direction	1.91	.91	.97	2.14	.92	.96	2.12	.97	.99	.94	.98
Social	2.32	.92	.95	2.12	.87	.93	2.42	.95	.97	.92	.95
Work	3.04	.94	.94	2.80	.93	.94	3.71	.99	.98	.97	.96
Conceptual Domain		.96	.98		.95	.97		.98	.99	.97	.98
Social Domain		.93	.96		.91	.96		.97	.98	.94	.97
Practical Domain (without Work)		.97	.98		.96	.97		.99	.99	.98	.98
Practical Domain (with Work)		.97	.98		.97	.98		.99	.99	.98	.98
GAC (without Work)		.98	.99		.98	.99		.99	.99	.98	.99
GAC (with Work)		.98	.99		.98	.99		.99	.99	.98	.99

Note. SD = standard deviation; *r* = internal consistency reliability coefficient (coefficient alpha); r^c = corrected internal consistency reliability.

Average reliability coefficients (r_{xx}) were calculated using Fisher's *z* transformation.

[a]Conditional reliability coefficients for the above average level are not reported due to significant restriction of the range.

Table 5.4 Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Adult Form, Rated by Others *(continued)*

Clinical Sample by Diagnoses

Skill Area/Composite	Alzheimer's Disease (n = 25)	Mental Retardation (n = 30)	Neuropsychological Disorders (n = 20)	Average r_{xx}
Communication	.96	.94	.94	.95
Community Use	.96	.96	.97	.96
Functional Academics	.97	.97	.98	.97
Home Living	.95	.93	.97	.95
Health and Safety	.93	.91	.96	.94
Leisure	.95	.94	.95	.95
Self-Care	.97	.94	.97	.96
Self-Direction	.93	.95	.95	.94
Social	.95	.95	.94	.95
Work	.86	.95	.98	.95
Conceptual Domain	.98	.98	.98	.98
Social Domain	.97	.97	.97	.97
Practical Domain (without Work)	.98	.98	.99	.98
Practical Domain (with Work)	.98	.98	.99	.98
GAC (without Work)	.99	.99	.99	.99
GAC (with Work)	.99	.99	.99	.99

Note. Average reliability coefficients (r_{xx}) were calculated using Fisher's z transformation.

Standard Errors of Measurement

The *SEM* provides an estimate of the amount of error in an individual's observed score. The *SEM* is inversely related to the reliability of a scale. Therefore, greater reliability means a smaller *SEM*, and increases the amount of confidence the clinician can have in the precision of the observed test score. The *SEM* is calculated with the following formula:

$$SEM = SD\sqrt{1 - r_{xx}}$$

where *SD* is the standard deviation unit of the scale, and r_{xx} is the reliability coefficient of the scale. Comparisons between the *SEM*s of the skill area scaled scores and GAC or adaptive domain scores should not be made because they are based on different standard deviation units. Because the standard deviation for the skill area scaled scores is 3 and for the GAC and adaptive domain scores is 15, the *SEM*s of the skill area scaled scores usually appear smaller than those of the GAC and adaptive domain scores. In fact, GAC and adaptive domain scores are actually more reliable measures than any of the individual skill area scaled scores. The *SEM*s for the skill area, adaptive domain and GAC scores, based on the internal consistency reliability coefficients for the six standardization samples, are shown in Tables 5.5–5.8. As demonstrated by internal consistency data, the ABAS–II reliability coefficients range from good to excellent for assessing individuals with different adaptive levels and individuals with different clinical diagnoses. Therefore, the *SEM*s provided in Tables 5.5–5.8 for the standardization samples may also be used for individuals with related adaptive levels or clinical diagnoses.

The *SEM* is used to calculate the confidence interval of the expected true score. Confidence intervals provide another means of expressing the precision of test scores. The clinician can use confidence intervals to report an individual's score as an interval that is likely to contain the individual's true score. Confidence intervals also serve as a reminder that measurement error is inherent in all test scores and that the observed test score is only an estimate of true ability or skill. Confidence intervals based on the *SEM* are calculated using the following formula:

$$\text{Confidence Interval of } p\% = \text{Observed Score} \pm Zp\,(SEM)$$

where *p* is the confidence level, such as 90% or 95%, and *Zp* is the *Z* value associated with the confidence level, which can be located in the normal probability tables. Critical values for calculating 90% and 95% confidence intervals are reported in Appendix Tables A.2, A.6, A.10, and A.13.

Table 5.5 Standard Errors of Measurement of Skill Areas, Adaptive Domains, and the GAC by Age: Teacher/Daycare Provider and Teacher Forms

Teacher/Daycare Provider Form

Skill Area/Composite	Age Group 2:0–2:5	2:6–2:11	3:0–3:5	3:6–3:11	4:0–4:5	4:6–4:11	5:0–5:11	Average *SEM*
Communication	0.90	0.85	0.67	0.79	0.79	0.90	0.85	0.82
Functional Pre-Academics	0.99	0.90	0.73	0.85	0.73	0.79	0.79	0.83
School Living	0.73	0.67	0.67	0.73	0.73	0.79	0.79	0.73
Health and Safety	1.24	1.04	1.04	1.16	1.12	1.24	0.99	1.12
Leisure	0.99	1.12	0.85	1.08	0.99	0.99	0.85	0.99
Self-Care	1.20	1.20	0.95	1.41	1.16	1.56	1.59	1.31
Self-Direction	0.95	1.08	0.73	0.85	0.85	0.79	0.73	0.86
Social	1.08	1.12	0.79	0.95	0.79	0.73	0.73	0.90
Motor	1.27	1.16	1.20	1.47	1.24	1.08	1.04	1.22
Conceptual Domain	3.35	3.35	2.60	3.00	2.60	3.00	2.60	2.95
Social Domain	3.97	4.24	3.00	3.97	3.35	3.35	3.00	3.58
Practical Domain	3.97	3.35	3.00	3.97	3.67	4.24	3.97	3.76
GAC	2.60	2.12	1.50	2.12	2.12	2.12	2.12	2.12

Teacher Form

Skill Area/Composite	Age Group 5	6	7	8	9	10	11	12	13–14	15–16	17–21	Average *SEM*
Communication	0.90	0.79	0.79	0.67	0.73	0.67	0.60	0.73	0.73	0.60	0.79	0.73
Community Use	1.37	1.16	1.20	1.04	1.16	1.04	0.73	0.79	0.90	0.79	0.90	1.03
Functional Academics	0.79	0.67	0.67	0.60	0.60	0.67	0.42	0.52	0.67	0.52	0.60	0.62
School Living	0.95	0.79	0.85	0.67	0.73	0.67	0.60	0.67	0.67	0.67	0.67	0.73
Health and Safety	1.08	0.79	0.99	0.73	0.73	0.73	0.60	0.60	0.67	0.67	0.73	0.77
Leisure	0.90	0.79	0.85	0.73	0.79	0.79	0.67	0.67	0.73	0.67	0.73	0.76
Self-Care	1.16	0.67	0.85	0.67	0.79	0.73	0.73	0.79	0.73	0.67	1.04	0.82
Self-Direction	0.85	0.73	0.73	0.60	0.60	0.52	0.42	0.52	0.52	0.52	0.60	0.61
Social	0.73	0.60	0.79	0.60	0.60	0.60	0.52	0.67	0.67	0.60	0.73	0.65
Work	–	–	–	–	–	–	–	–	–	–	0.60	0.60
Conceptual Domain	3.00	2.60	2.60	2.12	2.12	2.12	1.50	2.12	2.12	1.50	2.12	2.22
Social Domain	3.00	2.60	3.00	2.60	2.60	2.60	2.12	2.60	2.60	2.12	2.60	2.60
Practical Domain	3.35	2.60	3.00	2.12	2.60	2.60	2.12	2.12	2.12	2.12	2.60	2.52
GAC	2.12	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.57

Note. The average *SEM*s were calculated by averaging the sum of the squared *SEM*s for each age group and obtaining the square root of the result.

Table 5.6 Standard Errors of Measurement of Skill Areas, Adaptive Domains, and the GAC by Age: Parent/Primary Caregiver and Parent Forms

Parent/Primary Caregiver Form

Skill Area/Composite	Age Group													Average *SEM*
	0:0–0:3	0:4–0:7	0:8–0:11	1:0–1:3	1:4–1:7	1:8–1:11	2:0–2:5	2:6–2:11	3:0–3:5	3:6–3:11	4:0–4:5	4:6–4:11	5:0–5:11	
Communication	1.75	1.53	1.37	1.08	1.12	1.04	0.85	0.90	0.73	0.90	1.16	1.08	1.12	1.16
Community Use	–	–	–	0.99	0.99	1.08	0.85	0.90	0.85	1.16	0.90	1.04	1.20	1.00
Functional Pre-Academics	–	–	–	1.12	0.85	1.04	0.95	0.99	0.85	0.85	0.95	0.79	0.95	0.94
Home Living	–	–	–	0.79	0.85	0.90	0.85	0.85	0.73	0.90	0.90	0.85	0.99	0.86
Health and Safety	2.16	1.59	1.50	1.31	1.20	1.08	1.08	1.04	0.99	1.24	1.24	1.24	1.27	1.34
Leisure	1.70	1.34	1.27	1.08	1.16	1.24	0.99	1.20	0.90	1.04	1.12	1.12	0.90	1.18
Self-Care	2.06	1.20	1.37	1.41	1.34	1.44	1.12	1.47	1.08	1.27	1.20	1.34	1.41	1.38
Self-Direction	1.90	1.41	1.41	1.20	1.16	1.20	0.99	1.27	0.95	1.04	1.04	0.95	0.95	1.22
Social	1.50	1.12	1.37	1.16	1.27	1.12	0.95	1.08	0.95	1.04	1.08	1.12	1.04	1.15
Motor	1.77	1.12	1.27	1.16	1.31	1.50	1.04	1.34	1.34	1.31	1.31	1.56	1.20	1.34
Conceptual Domain	8.22	6.87	6.00	4.24	3.67	3.97	3.00	3.67	3.00	3.35	3.67	3.35	3.67	4.63
Social Domain	6.54	5.20	4.97	4.50	4.97	4.74	3.67	4.50	3.67	4.24	4.24	4.50	3.67	4.63
Practical Domain	8.87	5.61	6.36	3.67	3.35	3.67	3.00	3.35	2.60	3.67	3.00	3.67	3.67	4.52
GAC	5.61	3.67	3.67	2.60	2.12	2.60	2.12	2.60	2.12	2.12	2.12	2.60	2.12	2.94

Parent Form

Skill Area/Composite	Age Group											Average *SEM*
	5	6	7	8	9	10	11	12	13–14	15–16	17–21	
Communication	0.95	0.90	0.90	0.79	0.99	0.90	0.90	0.73	0.90	0.85	0.67	0.87
Community Use	0.85	0.79	1.04	0.85	0.90	0.99	0.90	0.90	0.85	0.90	0.73	0.89
Functional Academics	0.73	0.79	0.85	0.73	0.95	0.90	0.95	0.73	0.85	0.85	0.60	0.82
Home Living	0.99	0.85	0.90	0.79	0.95	0.85	0.79	0.79	0.85	0.73	0.67	0.84
Health and Safety	1.12	1.16	1.20	1.08	1.27	1.20	1.27	0.95	1.04	1.08	0.85	1.12
Leisure	0.99	0.90	0.95	0.90	0.95	0.90	0.90	0.73	0.85	0.85	0.73	0.88
Self-Care	0.95	1.08	1.12	1.04	1.37	1.16	1.34	0.90	1.20	1.12	0.90	1.12
Self-Direction	0.90	0.79	0.99	0.90	0.90	0.73	0.79	0.73	0.79	0.67	0.67	0.81
Social	0.95	0.90	0.95	0.85	0.85	0.79	0.90	0.73	0.79	0.73	0.73	0.84
Work	–	–	–	–	–	–	–	–	–	–	0.85	0.85
Conceptual Domain	3.00	2.60	3.00	2.60	3.00	3.00	3.00	2.60	2.60	2.60	2.12	2.75
Social Domain	3.67	3.35	3.67	3.35	3.35	3.35	3.35	3.00	3.00	3.00	3.00	3.29
Practical Domain	3.00	3.00	3.35	2.60	3.67	3.35	3.35	2.60	3.00	3.00	2.12	3.03
GAC	2.12	2.12	2.12	1.50	2.12	2.12	2.12	1.50	2.12	2.12	1.50	1.97

Note. The average *SEM*s were calculated by averaging the sum of the squared *SEM*s for each age group and obtaining the square root of the result.

Table 5.7 Standard Errors of Measurement of Skill Areas, Adaptive Domains, and the GAC by Age: Adult Form, Self Report

Skill Area/Composite	Age Group 16–21	22–29	30–39	40–49	50–64	65–74	75–89	Average *SEM*
Communication	0.90	0.90	0.79	0.79	0.85	0.79	0.90	0.85
Community Use	0.95	0.95	0.79	0.79	0.85	0.79	0.67	0.85
Functional Academics	0.95	0.95	0.79	0.85	0.85	0.79	0.73	0.85
Home Living	0.95	0.85	0.85	0.79	0.79	0.73	0.67	0.79
Health and Safety	0.99	1.12	0.95	0.90	1.16	0.85	0.95	0.99
Leisure	0.73	0.73	0.67	0.67	0.52	0.60	0.60	0.67
Self-Care	0.79	0.95	1.12	1.12	1.27	1.08	1.08	1.04
Self-Direction	0.73	0.73	0.79	0.67	0.73	0.67	0.73	0.73
Social	0.79	0.90	0.79	0.90	0.90	0.85	0.67	0.85
Work	0.95	0.85	0.99	1.04	0.99	0.73	–	0.85
Conceptual Domain	3.00	3.00	2.60	2.60	2.60	2.60	2.60	2.72
Social Domain	3.00	3.00	2.60	3.00	3.00	2.60	2.60	2.84
Practical Domain (without Work)	3.00	3.00	2.60	2.60	3.00	2.60	2.60	2.78
Practical Domain (with Work)	2.60	2.60	2.60	2.60	2.60	2.12	–	2.47
GAC (without Work)	1.50	2.12	1.50	1.50	1.50	1.50	1.50	1.60
GAC (with Work)	1.50	1.50	1.50	1.50	1.50	1.50	–	1.50

Note. The average *SEM*s were calculated by averaging the sum of the squared *SEM*s for each age group and obtaining the square root of the result.

Table 5.8 Standard Errors of Measurement of Skill Areas, Adaptive Domains, and the GAC by Age: Adult Form, Rated by Others

Skill Area/Composite	Age Group 16–21	22–29	30–39	40–49	50–64	65–74	75–89	Average *SEM*
Communication	0.67	0.79	0.85	0.79	0.79	0.90	0.52	0.73
Community Use	0.67	0.73	0.67	0.73	0.79	0.79	0.42	0.67
Functional Academics	0.60	0.60	0.60	0.60	0.52	0.52	0.30	0.52
Home Living	0.73	0.67	0.73	0.67	0.67	0.73	0.42	0.67
Health and Safety	0.90	0.79	0.90	0.73	0.79	1.12	0.42	0.79
Leisure	0.79	0.67	0.67	0.67	0.67	0.67	0.52	0.67
Self-Care	0.73	0.90	0.90	0.79	0.73	1.27	0.42	0.79
Self-Direction	0.60	0.67	0.67	0.67	0.60	0.85	0.42	0.60
Social	0.67	0.79	0.85	0.79	0.67	0.67	0.60	0.73
Work	0.67	0.52	0.85	0.73	0.52	0.30	–	0.52
Conceptual Domain	2.12	2.12	2.12	2.12	2.12	2.60	1.50	2.12
Social Domain	3.00	2.60	3.00	2.60	2.60	2.60	2.12	2.66
Practical Domain (without Work)	2.12	2.12	2.12	2.12	2.12	3.00	1.50	2.19
Practical Domain (with Work)	2.12	2.12	2.12	2.12	2.12	2.60	–	2.12
GAC (without Work)	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
GAC (with Work)	1.50	1.50	1.50	1.50	1.50	1.50	–	1.50

Note. The average *SEM*s were calculated by averaging the sum of the squared *SEM*s for each age group and obtaining the square root of the result.

Test-Retest Reliability

Test-retest reliability was investigated by asking teachers, daycare providers, parents, and adults to each rate a child, adult, or themselves two times using the same form. The test-retest interval for the Teacher/Daycare Provider Form ranged from 2 days to 6 weeks, with a mean retest interval of 13 days and standard deviation of 10 days. The test-retest interval for the Parent/Primary Caregiver Form ranged from 2 days to 5 weeks, with a mean retest interval of 12 days and standard deviation of 10 days. The test-retest interval for the Teacher Form ranged from 3 days to 3 weeks, with a mean retest interval of 11 days and standard deviation of 3 days. The test-retest interval for the Parent Form ranged from 5 days to 6 weeks, with a mean retest interval of 11 days and standard deviation of 5 days. The test-retest interval for the Adult Form, Self Report ranged from 6 days to 3 weeks and 4 days, with a mean retest interval of 10 days and standard deviation of 3 days. The test-retest interval for the Adult Form, Rated by Others ranged from 3 days to 6 weeks, with a mean retest interval of 12 days and standard deviation of 6 days. The infant-preschool teacher/daycare and parent/primary caregiver samples included 115 and 207 children, respectively. School-age teacher and parent samples included 143 and 104 children, respectively. The two adult samples included 66 adults (self report) and 52 adults (rated by others).

Test-retest reliability was estimated using Pearson's product-moment correlation coefficient and is reported in Tables 5.9–5.12 for the six standardization samples by age group. The tables report the standardized differences between the first and second administrations. In this manual Cohen's *d* is used to report standardized differences (Cohen, 1996). The tables also report the correlation coefficients corrected for the variability of the standardization sample. References made in text are to corrected correlations.

The test-retest reliability coefficients of the GAC, mostly in the .90s, are consistent across all six samples. The mean GAC scores of the two administrations are also consistent, with mean retest scores being slightly higher. The test-retest reliability coefficients of the adaptive domains are generally in the upper .80s and .90s. As expected, the test-retest reliability coefficients of the skill areas are slightly lower, mainly in the .70s, .80s, and .90s on the infant-preschool forms, and in the .80s and .90s on the school-age and adult forms.

Table 5.9 Test-Retest Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Teacher/Daycare Provider and Teacher Forms

Teacher/Daycare Provider Form

Ages 2–3 (*n* = 59)	First Testing		Second Testing				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	10.9	2.9	10.9	2.8	.00	.87	.87
Functional Pre-Academics	10.7	3.1	10.5	2.7	–.07	.76	.75
School Living	11.0	2.8	11.1	2.5	.04	.83	.85
Health and Safety	10.8	2.7	10.5	2.6	–.11	.82	.86
Leisure	10.3	2.9	10.4	2.9	.03	.85	.86
Self-Care	10.4	2.6	10.3	2.5	–.04	.81	.85
Self-Direction	10.7	2.7	10.8	2.4	.04	.81	.85
Social	10.8	3.2	10.8	2.8	.00	.83	.81
Motor	11.0	3.0	11.0	2.9	.00	.88	.88
Conceptual Domain	103.7	15.1	103.5	14.3	–.01	.88	.88
Social Domain	102.0	16.3	102.6	15.0	.04	.87	.85
Practical Domain	103.3	13.8	102.5	12.2	–.06	.86	.88
GAC	103.6	15.5	103.3	14.3	–.02	.91	.90

Ages 4–5 (*n* = 56)	First Testing		Second Testing				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	11.1	2.3	11.6	2.6	.20	.66	.80
Functional Pre-Academics	9.5	2.8	9.6	2.7	.04	.92	.93
School Living	10.6	2.3	10.8	2.6	.08	.79	.88
Health and Safety	10.0	2.5	10.1	2.6	.04	.70	.79
Leisure	10.1	2.6	9.9	2.4	–.08	.79	.84
Self-Care	10.6	2.7	10.5	2.5	–.04	.85	.87
Self-Direction	10.1	2.5	10.2	2.5	.04	.83	.88
Social	11.0	2.3	11.1	2.4	.04	.79	.88
Motor	10.8	2.6	10.9	2.4	.04	.75	.81
Conceptual Domain	100.0	13.1	101.6	13.5	.12	.87	.90
Social Domain	102.0	12.7	101.3	12.6	–.06	.86	.90
Practical Domain	101.3	12.0	101.7	12.8	.03	.87	.92
GAC	101.3	12.9	101.8	13.2	.04	.90	.92

All Ages[b] (*n* = 115)	First Testing		Second Testing				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	11.0	2.6	11.3	2.7	.11	.79	.84
Functional Pre-Academics	10.1	3.0	10.1	2.8	.00	.86	.87
School Living	10.8	2.6	11.0	2.5	.08	.81	.87
Health and Safety	10.4	2.6	10.3	2.6	–.04	.77	.83
Leisure	10.2	2.8	10.1	2.7	–.04	.82	.85
Self-Care	10.5	2.6	10.4	2.5	–.04	.83	.86
Self-Direction	10.4	2.6	10.5	2.5	.04	.82	.87
Social	10.9	2.8	10.9	2.6	.00	.81	.85
Motor	10.9	2.8	10.9	2.7	.00	.83	.85
Conceptual Domain	101.9	14.2	102.5	13.9	.04	.88	.89
Social Domain	102.0	14.6	102.0	13.8	.00	.87	.88
Practical Domain	102.3	12.9	102.1	12.5	–.02	.87	.90
GAC	102.4	14.3	102.6	13.8	.01	.91	.91

[a]Correlations were corrected for the variability of the standardization sample (Guilford & Fruchter, 1978).

[b]Reliability coefficients for the overall sample were calculated using Fisher's *z* transformation.

Table 5.9 Test-Retest Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Teacher/Daycare Provider and Teacher Forms *(continued)*

Teacher Form

Ages 5–9 (*n* = 39)	First Testing		Second Testing				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	8.7	3.1	9.0	3.0	.10	.95	.95
Community Use	8.6	3.0	8.7	2.9	.03	.95	.95
Functional Academics	9.2	3.2	9.2	3.3	.00	.96	.96
School Living	9.2	2.4	9.3	2.2	.04	.97	.98
Health and Safety	9.3	3.0	9.3	3.1	.00	.96	.96
Leisure	9.4	2.7	9.4	2.8	.00	.97	.97
Self-Care	8.6	3.4	8.7	3.2	.03	.98	.98
Self-Direction	8.9	3.2	8.9	3.0	.00	.95	.94
Social	9.3	2.2	9.3	2.2	.00	.97	.99
Conceptual Domain	97.4	16.7	98.4	16.3	.06	.98	.97
Social Domain	97.2	12.5	97.3	12.8	.01	.99	.99
Practical Domain	94.9	15.6	95.3	14.4	.03	.99	.99
GAC	96.4	16.0	96.8	15.2	.03	.99	.99

Ages 10–12 (*n* = 50)	First Testing		Second Testing				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	7.9	3.4	8.3	3.8	.11	.82	.76
Community Use	6.7	3.7	7.0	3.8	.08	.80	.70
Functional Academics	7.9	3.8	7.9	3.7	.00	.95	.92
School Living	7.9	3.5	8.0	3.8	.03	.88	.84
Health and Safety	8.0	3.5	8.0	3.5	.00	.88	.83
Leisure	8.4	3.3	8.2	3.4	–.06	.94	.93
Self-Care	8.3	3.6	8.5	3.4	.06	.95	.93
Self-Direction	7.6	3.8	7.5	4.0	–.03	.87	.79
Social	8.7	3.6	8.7	3.5	.00	.86	.80
Conceptual Domain	91.8	19.0	93.0	20.8	.06	.94	.90
Social Domain	94.3	18.0	93.5	18.0	–.04	.92	.89
Practical Domain	91.2	20.2	92.3	21.6	.05	.92	.86
GAC	91.9	20.4	92.9	21.1	.05	.95	.91

[a]Correlations were corrected for the variability of the standardization sample (Guilford & Fruchter, 1978).

Table 5.9 Test-Retest Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Teacher/Daycare Provider and Teacher Forms *(continued)*

Teacher Form

Ages 13–21 (*n* = 54)	**First Testing**		**Second Testing**				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	8.2	3.5	8.5	3.4	.09	.83	.77
Community Use	8.8	3.0	8.8	3.1	.00	.91	.91
Functional Academics	9.1	2.8	9.2	2.7	.04	.94	.95
School Living	8.3	3.5	8.7	3.2	.12	.84	.79
Health and Safety	9.7	2.6	9.4	2.8	–.11	.90	.92
Leisure	9.0	3.0	9.2	2.8	.07	.85	.85
Self-Care	9.4	3.2	9.5	2.9	.03	.96	.95
Self-Direction	8.5	3.3	8.7	3.1	.06	.92	.90
Social	9.1	3.1	9.4	3.0	.10	.81	.80
Conceptual Domain	97.1	16.4	98.1	16.5	.06	.95	.94
Social Domain	97.4	16.9	98.7	16.4	.08	.91	.88
Practical Domain	96.5	16.2	97.5	16.1	.06	.97	.96
GAC	96.0	17.6	97.1	17.8	.06	.96	.94

All Ages[b] (*n* = 143)	**First Testing**		**Second Testing**				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	8.2	3.4	8.6	3.4	.12	.88	.86
Community Use	8.0	3.4	8.1	3.4	.03	.90	.89
Functional Academics	8.7	3.3	8.8	3.3	.03	.95	.95
School Living	8.4	3.3	8.6	3.2	.06	.92	.91
Health and Safety	9.0	3.1	8.9	3.2	–.03	.92	.92
Leisure	8.9	3.1	8.9	3.0	.00	.93	.93
Self-Care	8.8	3.4	8.9	3.2	.03	.97	.96
Self-Direction	8.3	3.5	8.3	3.5	.00	.92	.89
Social	9.0	3.1	9.1	3.0	.03	.91	.92
Conceptual Domain	95.3	17.5	96.4	18.1	.06	.96	.94
Social Domain	96.3	16.2	96.5	16.1	.01	.96	.95
Practical Domain	94.2	17.6	95.1	17.9	.05	.97	.96
GAC	94.7	18.2	95.6	18.4	.05	.97	.96

[a]Correlations were corrected for the variability of the standardization sample (Guilford & Fruchter, 1978).

[b]Reliability coefficients for the overall sample were calculated using Fisher's *z* transformation.

Table 5.10 Test-Retest Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Parent/Primary Caregiver and Parent Forms

Parent/Primary Caregiver Form

Ages 0:0–0:11 (n = 43)	First Testing		Second Testing				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	9.5	3.2	9.9	2.6	.14	.75	.71
Health and Safety	9.7	3.1	9.6	2.9	–.03	.75	.73
Leisure	10.1	2.7	10.4	2.1	.12	.70	.76
Self-Care	9.8	2.5	9.3	2.4	–.20	.78	.85
Self-Direction	10.3	2.9	10.4	2.4	.04	.79	.80
Social	10.5	2.6	10.6	2.2	.04	.76	.82
Motor	9.9	2.3	9.8	2.2	–.04	.71	.83
Conceptual Domain	99.0	16.4	101.0	14.4	.13	.85	.82
Social Domain	100.3	13.2	101.8	11.5	.12	.82	.86
Practical Domain	97.6	15.5	95.8	13.9	–.12	.82	.81
GAC	98.2	15.7	98.4	13.8	.01	.89	.88

Age 1 (n = 41)	First Testing		Second Testing				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	9.6	2.5	9.8	2.6	.08	.83	.88
Community Use	9.8	2.8	10.2	2.7	.15	.70	.74
Functional Pre-Academics	9.9	2.8	9.7	2.7	–.07	.75	.78
Home Living	10.5	3.0	10.6	3.1	.03	.89	.89
Health and Safety	9.9	2.5	10.0	2.6	.04	.85	.89
Leisure	10.4	2.7	10.6	2.4	.08	.74	.79
Self-Care	10.1	3.1	10.2	3.2	.03	.89	.88
Self-Direction	10.0	3.1	10.6	3.2	.19	.76	.74
Social	9.5	3.0	10.0	2.9	.17	.79	.79
Motor	10.5	3.0	10.4	2.9	–.03	.77	.77
Conceptual Domain	97.4	14.2	98.6	15.4	.08	.82	.84
Social Domain	98.2	15.0	100.3	14.6	.14	.81	.81
Practical Domain	98.9	14.7	100.0	15.3	.07	.90	.90
GAC	98.4	15.0	99.6	15.3	.08	.86	.86

Ages 2–3 (n = 61)	First Testing		Second Testing				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	10.5	2.7	11.1	3.1	.21	.81	.84
Community Use	10.5	2.6	10.6	3.0	.04	.81	.86
Functional Pre-Academics	10.5	3.0	10.3	3.2	–.06	.92	.92
Home Living	10.7	2.9	10.9	2.9	.07	.81	.82
Health and Safety	10.3	2.6	10.5	2.7	.08	.72	.79
Leisure	10.8	2.7	10.8	3.0	.00	.83	.86
Self-Care	10.9	2.9	10.9	2.9	.00	.76	.78
Self-Direction	10.4	2.8	10.9	3.1	.17	.84	.86
Social	10.7	2.4	10.8	2.8	.04	.79	.87
Motor	10.7	3.1	10.6	3.3	–.03	.83	.82
Conceptual Domain	101.5	14.9	103.4	16.6	.12	.90	.90
Social Domain	102.6	13.4	103.1	16.0	.03	.88	.90
Practical Domain	102.4	14.3	103.2	15.5	.05	.85	.86
GAC	102.4	14.4	103.3	16.3	.06	.91	.92

[a]Correlations were corrected for the variability of the standardization sample (Guilford & Fruchter, 1978).

Table 5.10 Test-Retest Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Parent/Primary Caregiver and Parent Forms *(continued)*

Parent/Primary Caregiver Form

Ages 4–5 (*n* = 62)	First Testing		Second Testing				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	11.0	2.5	11.7	2.6	.27	.71	.80
Community Use	10.1	2.8	10.3	2.6	.07	.73	.76
Functional Pre-Academics	10.0	3.1	10.3	2.8	.10	.83	.82
Home Living	9.8	2.7	10.6	2.8	.29	.69	.75
Health and Safety	10.9	2.7	10.9	2.7	.00	.74	.79
Leisure	9.9	3.1	10.3	3.1	.13	.80	.78
Self-Care	9.9	2.8	10.4	2.7	.18	.67	.71
Self-Direction	10.2	2.7	10.7	2.7	.19	.71	.77
Social	10.2	2.7	10.5	2.8	.11	.67	.74
Motor	11.0	2.4	11.4	2.5	.16	.68	.79
Conceptual Domain	100.9	14.7	104.2	13.0	.24	.85	.85
Social Domain	98.9	15.7	100.9	15.6	.13	.79	.77
Practical Domain	99.7	14.1	102.1	13.8	.17	.82	.84
GAC	100.5	14.1	103.3	13.5	.20	.84	.86

All Ages[c] (*n* = 207)	First Testing		Second Testing				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	10.3	2.8	10.8	2.8	.18	.78	.82
Community Use[b]	10.1	2.7	10.4	2.8	.11	.75	.79
Functional Pre-Academics[b]	10.2	3.0	10.2	2.9	.00	.85	.85
Home Living[b]	10.3	2.9	10.7	2.9	.14	.81	.83
Health and Safety	10.3	2.7	10.3	2.7	.00	.77	.81
Leisure	10.3	2.8	10.5	2.8	.07	.77	.80
Self-Care	10.2	2.9	10.3	2.8	.04	.79	.81
Self-Direction	10.3	2.8	10.7	2.8	.14	.78	.80
Social	10.3	2.7	10.5	2.7	.07	.76	.81
Motor	10.6	2.7	10.6	2.8	.00	.75	.80
Conceptual Domain	100.0	15.0	102.2	14.9	.15	.86	.86
Social Domain	100.1	14.4	101.6	14.7	.10	.83	.84
Practical Domain	99.9	14.6	100.7	14.8	.05	.85	.86
GAC	100.1	14.7	101.6	14.8	.10	.88	.88

[a]Correlations were corrected for the variability of the standardization sample (Guilford & Fruchter, 1978).

[b]Based on 164 observations.

[c]Reliability coefficients for the overall sample were calculated using Fisher's *z* transformation.

Table 5.10 Test-Retest Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Parent/Primary Caregiver and Parent Forms *(continued)*

Parent Form

Ages 5–9 (*n* = 30)	First Testing		Second Testing				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	8.4	3.9	8.9	3.8	.13	.88	.79
Community Use	9.0	3.6	8.4	4.0	–.16	.89	.84
Functional Academics	8.5	3.9	8.7	4.0	.05	.93	.89
Home Living	9.0	3.8	9.2	3.5	.05	.93	.89
Health and Safety	9.5	3.9	9.4	3.7	–.03	.89	.81
Leisure	9.3	3.6	8.9	4.0	–.11	.88	.82
Self-Care	9.3	3.1	9.4	3.2	.03	.91	.90
Self-Direction	8.7	4.0	8.3	4.1	–.10	.90	.83
Social	8.6	4.2	8.5	4.0	–.02	.96	.93
Conceptual Domain	92.6	19.9	92.9	20.1	.01	.96	.92
Social Domain	95.0	19.3	93.6	20.3	–.07	.95	.91
Practical Domain	97.0	18.5	96.0	18.1	–.05	.95	.92
GAC	93.8	20.5	93.0	20.7	–.04	.95	.91

Ages 10–12 (*n* = 31)	First Testing		Second Testing				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	11.2	2.0	11.8	1.7	.32	.56	.80
Community Use	11.2	2.2	11.6	2.1	.19	.85	.92
Functional Academics	11.4	2.7	11.4	2.5	.00	.90	.92
Home Living	9.5	4.0	10.0	3.9	.13	.92	.85
Health and Safety	10.7	2.5	11.2	2.1	.22	.81	.87
Leisure	11.0	2.1	11.5	2.2	.23	.82	.91
Self-Care	10.7	2.0	11.0	1.8	.16	.77	.90
Self-Direction	10.7	2.6	11.4	2.3	.29	.87	.90
Social	10.6	3.1	11.2	2.5	.21	.86	.85
Conceptual Domain	106.3	10.7	108.2	9.9	.18	.87	.93
Social Domain	104.8	12.8	107.3	11.4	.21	.84	.89
Practical Domain	104.6	12.8	107.2	12.0	.21	.91	.93
GAC	105.3	11.2	107.9	11.0	.23	.90	.94

[a]Correlations were corrected for the variability of the standardization sample (Guilford & Fruchter, 1978).

Table 5.10 Test-Retest Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Parent/Primary Caregiver and Parent Forms *(continued)*

Parent Form

Ages 13–21 (*n* = 43)	**First Testing**		**Second Testing**				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	10.8	2.4	11.2	2.1	.18	.85	.90
Community Use	11.6	2.5	11.7	2.4	.04	.92	.95
Functional Academics	10.7	2.3	10.9	2.4	.09	.90	.94
Home Living	10.0	3.3	10.5	3.1	.16	.90	.87
Health and Safety	10.7	2.3	11.0	2.1	.14	.90	.94
Leisure	10.9	2.5	11.3	2.3	.17	.84	.89
Self-Care	11.1	2.0	11.1	2.2	.00	.76	.89
Self-Direction	10.5	2.6	11.0	2.6	.19	.86	.90
Social	10.3	2.4	10.9	2.4	.25	.87	.92
Conceptual Domain	104.8	14.3	106.4	13.4	.12	.91	.92
Social Domain	104.3	12.7	107.3	12.4	.24	.83	.88
Practical Domain	103.4	15.0	104.7	14.5	.09	.95	.95
GAC	105.3	14.9	107.3	13.9	.14	.93	.93

All Ages[b] (*n* = 104)	**First Testing**		**Second Testing**				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	10.3	3.0	10.7	2.9	.14	.80	.84
Community Use	10.8	3.0	10.7	3.2	–.03	.89	.91
Functional Academics	10.3	3.2	10.4	3.2	.03	.91	.92
Home Living	9.6	3.6	10.0	3.5	.11	.92	.87
Health and Safety	10.3	2.9	10.6	2.7	.11	.87	.89
Leisure	10.5	2.8	10.7	3.1	.07	.85	.88
Self-Care	10.5	2.5	10.6	2.5	.04	.83	.90
Self-Direction	10.1	3.1	10.3	3.3	.06	.88	.88
Social	9.9	3.3	10.3	3.2	.12	.91	.91
Conceptual Domain	101.7	16.2	103.1	16.1	.09	.92	.92
Social Domain	101.8	15.4	103.4	16.0	.10	.89	.89
Practical Domain	101.9	15.7	102.9	15.5	.06	.94	.93
GAC	102.0	16.5	103.4	16.7	.08	.93	.93

[a]Correlations were corrected for the variability of the standardization sample (Guilford & Fruchter, 1978).

[b]Reliability coefficients for the overall sample were calculated using Fisher's *z* transformation.

Table 5.11 Test-Retest Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Adult Form, Self Report

Ages 16–89 (*n* = 66)	First Testing		Second Testing				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	10.5	3.1	10.7	3.3	.06	.92	.91
Community Use	10.3	3.2	10.5	3.3	.06	.93	.92
Functional Academics	10.2	3.3	10.3	3.5	.03	.97	.96
Home Living	10.4	3.2	10.5	3.1	.03	.94	.93
Health and Safety	9.9	3.1	10.2	3.0	.10	.94	.94
Leisure	9.9	3.2	10.1	3.1	.06	.95	.94
Self-Care	10.3	2.7	10.3	2.7	.00	.92	.93
Self-Direction	10.2	3.2	10.2	3.3	.00	.96	.95
Social	10.3	3.1	10.5	2.9	.07	.93	.92
Work[b]	10.2	3.6	10.4	3.6	.06	.97	.96
Conceptual Domain	101.4	16.6	102.2	18.0	.05	.96	.95
Social Domain	101.1	15.8	102.1	15.9	.06	.95	.95
Practical Domain (without Work)	100.9	16.6	102.0	17.0	.07	.96	.95
Practical Domain (with Work)[b]	102.7	17.2	104.0	16.8	.08	.99	.98
GAC (without Work)	100.6	16.4	101.5	16.9	.05	.97	.96
GAC (with Work)[b]	102.3	15.5	103.3	15.6	.06	.99	.99

[a]Correlations were corrected for the variability of the standardization sample (Guilford & Fruchter, 1978).

[b]Based on 47 observations.

Table 5.12 Test-Retest Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Adult Form, Rated by Others

Ages 16–89 (*n* = 52)	First Testing		Second Testing				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	10.7	2.6	10.8	2.7	.04	.87	.91
Community Use	10.8	2.4	11.0	2.4	.08	.91	.94
Functional Academics	10.8	2.4	11.0	2.3	.09	.88	.92
Home Living	10.7	2.8	11.0	2.7	.11	.95	.96
Health and Safety	10.8	1.9	10.9	1.8	.05	.80	.92
Leisure	10.7	2.4	10.8	2.6	.04	.92	.95
Self-Care	10.7	2.0	10.8	2.0	.05	.89	.95
Self-Direction	10.6	2.6	10.7	2.8	.04	.89	.92
Social	10.5	2.7	10.6	2.7	.04	.90	.92
Work[b]	10.5	2.3	10.5	2.3	.00	.86	.91
Conceptual Domain	102.7	11.9	103.6	12.7	.07	.91	.94
Social Domain	102.3	13.3	103.2	13.8	.07	.95	.96
Practical Domain (without Work)	103.3	11.8	104.6	11.5	.11	.94	.96
Practical Domain (with Work)[b]	103.2	11.9	104.0	11.8	.07	.92	.95
GAC (without Work)	101.8	12.9	103.2	13.3	.11	.93	.95
GAC (with Work)[b]	101.7	11.7	102.9	11.9	.10	.94	.96

[a]Correlations were corrected for the variability of the standardization sample (Guilford & Fruchter, 1978).

[b]Based on 43 observations.

Inter-Rater Reliability

This estimate of reliability is based on correlations between scores obtained from different respondents (e.g., two teachers) who rated the same individual using the same form. Reliability estimates using this method can be expected to reflect more measurement error than the two previously discussed forms of reliability due to additional sources of error (e.g., errors due to differences in the levels of familiarity the two respondents have with the individual, and to ratings completed at slightly different times).

Inter-rater reliability was evaluated using five samples. The teacher/daycare provider sample included 42 children ages 2 years 0 months–5 years 9 months, each rated by two teachers or daycare providers. The parent/primary caregiver sample included 56 children ages 0 months–5 years 10 months, each rated by two parents. The teacher sample included 84 children, ages 5–18 years, each rated by two teachers; the parent sample consisted of 75 children, ages 5–21 years, each rated by two parents; the adult sample included 52 adults each rated by two other respondents.

Inter-rater reliability was estimated using Pearson's product-moment correlation coefficient and is reported in Tables 5.13–5.15 by age group and standardization sample. The tables also present the standardized differences (Cohen's *d*) between the two ratings and the correlation coefficients corrected for the variability of the standardization sample. References made in text are to corrected correlations.

Table 5.13 Inter-Rater Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Teacher/Daycare Provider and Teacher Forms

Teacher/Daycare Provider Form

Ages 2–5 (*n* = 42)	First Respondent		Second Respondent				
Skill Area/Composite	Mean	*SD*	Mean	*SD*	Cohen's *d*	r_{12}	Corrected *r*[a]
Communication	11.5	2.9	10.7	2.7	–.29	.72	.74
Functional Pre-Academics	10.8	2.8	10.5	2.7	–.11	.82	.85
School Living	10.2	2.2	10.6	2.9	.16	.46	.71
Health and Safety	10.8	2.4	10.5	2.9	–.11	.64	.77
Leisure	10.6	2.6	10.5	3.2	–.03	.44	.58
Self-Care	11.2	2.4	11.0	3.0	–.07	.46	.66
Self-Direction	11.0	3.0	11.1	2.9	.03	.53	.53
Social	11.3	2.6	10.8	2.8	–.19	.67	.75
Motor	12.2	2.3	11.2	3.1	–.37	.48	.70
Conceptual Domain	105.4	14.9	103.5	15.0	–.13	.83	.83
Social Domain	104.2	12.8	102.8	15.7	–.10	.65	.74
Practical Domain	103.5	8.8	102.3	14.4	–.10	.62	.87
GAC	105.3	12.2	104.0	15.9	–.09	.74	.83

[a]Correlations were corrected for the variability of the standardization sample (Guilford & Fruchter, 1978). Pooled standard deviation was used as the estimate of variability of the current sample.

Table 5.13 Inter-Rater Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Teacher/Daycare Provider and Teacher Forms *(continued)*

Teacher Form

Ages 5–9 (*n* = 34)	**First Respondent**		**Second Respondent**				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	6.3	3.6	5.3	3.4	–.29	.83	.75
Community Use	7.4	3.6	6.7	3.3	–.20	.73	.61
Functional Academics	7.0	3.5	6.4	3.3	–.18	.74	.65
School Living	8.1	3.3	7.7	3.5	–.12	.85	.82
Health and Safety	8.3	3.4	7.3	3.2	–.30	.86	.82
Leisure	7.9	3.8	7.1	3.5	–.22	.76	.62
Self-Care	9.1	3.6	8.8	3.9	–.08	.83	.75
Self-Direction	7.1	3.7	6.5	3.5	–.17	.85	.77
Social	7.7	3.5	7.2	3.8	–.14	.81	.74
Conceptual Domain	84.3	19.0	77.2	15.5	–.41	.74	.58
Social Domain	88.7	17.8	85.8	17.9	–.16	.82	.74
Practical Domain	91.3	18.4	87.8	17.9	–.19	.95	.92
GAC	88.2	19.3	84.2	17.7	–.22	.93	.89

Ages 10–18 (*n* = 50)	**First Respondent**		**Second Respondent**				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	7.0	4.1	6.8	3.9	–.05	.81	.65
Community Use	8.0	3.9	6.8	3.8	–.31	.80	.66
Functional Academics	8.2	3.7	7.3	3.5	–.25	.90	.85
School Living	8.1	3.5	7.0	3.8	–.30	.81	.74
Health and Safety	8.6	3.8	8.0	3.6	–.16	.81	.69
Leisure	8.3	3.8	7.3	3.4	–.28	.83	.73
Self-Care	8.4	3.8	8.2	3.6	–.05	.85	.76
Self-Direction	7.8	3.4	7.2	3.6	–.17	.87	.83
Social	9.2	3.1	8.1	3.3	–.34	.86	.85
Conceptual Domain	90.1	22.1	85.5	20.1	–.22	.92	.82
Social Domain	96.3	19.3	89.3	17.2	–.38	.85	.75
Practical Domain	93.5	20.4	90.2	17.7	–.17	.90	.82
GAC	91.7	20.8	89.2	18.6	–.13	.95	.90

All Ages[b] (*n* = 84)	**First Respondent**		**Second Respondent**				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	6.7	3.9	6.2	3.8	–.13	.82	.70
Community Use	7.7	3.8	6.8	3.6	–.24	.77	.64
Functional Academics	7.8	3.7	6.9	3.4	–.25	.84	.77
School Living	8.1	3.4	7.3	3.7	–.23	.83	.78
Health and Safety	8.5	3.6	7.7	3.5	–.23	.84	.76
Leisure	8.2	3.8	7.2	3.4	–.28	.80	.68
Self-Care	8.7	3.7	8.5	3.7	–.05	.84	.76
Self-Direction	7.5	3.5	6.9	3.6	–.17	.86	.80
Social	8.6	3.3	7.8	3.5	–.24	.84	.80
Conceptual Domain	87.8	21.0	82.1	18.7	–.29	.85	.72
Social Domain	93.3	19.0	87.9	17.5	–.30	.84	.75
Practical Domain	92.6	19.5	89.3	17.7	–.18	.93	.88
GAC	90.3	20.2	87.4	18.3	–.15	.94	.90

[a]Correlations were corrected for the variability of the standardization sample (Guilford & Fruchter, 1978). Pooled standard deviation was used as the estimate of variability of the current sample.

[b]Reliability coefficients for the overall sample were calculated using Fisher's *z* transformation.

Table 5.14 Inter-Rater Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Parent/Primary Caregiver and Parent Forms

Parent/Primary Caregiver Form

Ages 0–5 (n = 56)	First Respondent		Second Respondent				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	9.8	2.3	10.2	2.0	.19	.64	.79
Community Use[b]	10.2	2.7	9.5	2.5	–.27	.50	.59
Functional Pre-Academics[b]	9.8	2.7	9.4	2.5	–.15	.82	.85
Home Living[b]	9.9	2.9	9.4	3.0	–.17	.69	.71
Health and Safety	10.3	2.9	9.4	2.6	–.33	.61	.63
Leisure	10.0	2.8	9.5	3.4	–.16	.71	.75
Self-Care	10.4	2.4	9.9	2.7	–.20	.71	.81
Self-Direction	10.0	3.3	9.6	3.0	–.13	.73	.67
Social	10.3	2.6	9.8	2.7	–.19	.57	.68
Motor	11.0	2.4	10.2	2.7	–.31	.63	.76
Conceptual Domain	97.7	13.6	96.9	12.4	–.06	.83	.86
Social Domain	99.4	14.2	96.6	16.5	–.18	.69	.72
Practical Domain	100.1	14.3	96.0	13.7	–.29	.74	.77
GAC	99.7	13.3	96.4	13.1	–.25	.77	.82

[a]Correlations were corrected for the variability of the standardization sample (Guilford & Fruchter, 1978). Pooled standard deviation was used as the estimate of variability of the current sample.

[b]Based on 49 observations.

Table 5.14 Inter-Rater Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Parent/Primary Caregiver and Parent Forms *(continued)*

Parent Form

Ages 5–9 (*n* = 32)	First Respondent		Second Respondent				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	9.8	2.8	9.5	2.6	–.11	.89	.90
Community Use	10.3	3.0	9.3	2.4	–.37	.73	.73
Functional Academics	10.3	3.1	9.3	2.6	–.35	.69	.67
Home Living	9.7	3.2	8.7	3.4	–.30	.78	.74
Health and Safety	10.0	2.8	9.0	2.5	–.38	.68	.72
Leisure	10.0	3.4	9.2	2.9	–.25	.78	.72
Self-Care	10.8	3.2	10.4	2.9	–.13	.88	.87
Self-Direction	9.7	3.9	9.0	4.0	–.18	.86	.77
Social	10.4	3.2	9.3	3.3	–.34	.64	.59
Conceptual Domain	98.8	16.5	95.9	13.5	–.19	.88	.85
Social Domain	100.3	16.1	95.3	15.2	–.32	.76	.73
Practical Domain	100.8	14.2	95.3	14.2	–.39	.89	.90
GAC	101.8	15.8	96.7	13.3	–.35	.90	.88

Ages 10–21 (*n* = 43)	First Respondent		Second Respondent				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	10.6	2.2	10.3	2.2	–.14	.46	.71
Community Use	11.5	2.4	10.5	2.4	–.42	.71	.81
Functional Academics	10.9	2.4	10.2	2.2	–.30	.70	.81
Home Living	9.8	3.0	8.0	3.4	–.56	.74	.74
Health and Safety	10.6	2.8	10.1	2.8	–.18	.74	.77
Leisure	11.3	2.1	10.1	2.8	–.48	.78	.89
Self-Care	10.7	2.5	9.9	2.7	–.31	.85	.89
Self-Direction	10.0	3.0	9.1	3.4	–.28	.82	.82
Social[b]	10.0	3.0	9.5	3.2	–.16	.61	.61
Conceptual Domain	102.6	14.8	98.1	15.1	–.30	.82	.83
Social Domain	104.4	14.4	99.5	16.1	–.32	.77	.79
Practical Domain	103.1	14.7	96.4	16.1	–.43	.92	.92
GAC	104.8	13.5	98.8	15.8	–.41	.91	.93

All Ages[b] (*n* = 75)	First Respondent		Second Respondent				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	10.2	2.5	9.9	2.3	–.12	.74	.83
Community Use	11.0	2.7	10.0	2.4	–.39	.72	.77
Functional Academics	10.7	2.7	9.8	2.4	–.35	.70	.75
Home Living	9.7	3.1	8.3	3.4	–.43	.76	.74
Health and Safety	10.3	2.8	9.6	2.7	–.25	.71	.75
Leisure	10.7	2.8	9.7	2.9	–.35	.78	.82
Self-Care	10.7	2.8	10.1	2.8	–.21	.87	.88
Self-Direction	9.8	3.4	9.0	3.6	–.23	.84	.80
Social	10.2	3.1	9.4	3.2	–.25	.63	.60
Conceptual Domain	101.1	15.5	97.2	14.4	–.26	.85	.84
Social Domain	102.7	15.2	97.7	15.7	–.32	.77	.76
Practical Domain	102.1	14.4	96.0	15.2	–.41	.91	.91
GAC	103.6	14.4	97.9	14.8	–.39	.91	.91

[a]Correlations were corrected for the variability of the standardization sample (Guilford & Fruchter, 1978). Pooled standard deviation was used as the estimate of variability of the current sample.

[b]Reliability coefficients for the overall sample were calculated using Fisher's *z* transformation.

Table 5.15 Inter-Rater Reliability Coefficients of Skill Areas, Adaptive Domains, and the GAC: Adult Form, Rated by Others

Ages 16–89 (n = 52)	First Respondent		Second Respondent				
Skill Area/Composite	Mean	*SD*	Mean	*SD*	Cohen's *d*	r_{12}	Corrected r[a]
Communication	10.9	2.7	10.5	3.0	–.14	.76	.80
Community Use	11.2	2.5	10.4	2.7	–.31	.77	.84
Functional Academics	11.4	2.5	11.0	2.5	–.16	.66	.76
Home Living	10.6	3.0	9.5	3.2	–.35	.76	.76
Health and Safety	10.8	2.5	10.0	2.9	–.30	.72	.81
Leisure	11.0	2.5	10.1	2.9	–.33	.73	.81
Self-Care	10.9	2.5	10.3	2.6	–.24	.84	.89
Self-Direction	10.9	2.5	9.8	2.7	–.42	.78	.85
Social	11.0	2.8	10.4	3.0	–.21	.74	.78
Work[b]	11.3	2.2	10.8	2.4	–.22	.74	.86
Conceptual Domain	104.4	12.7	101.0	13.4	–.26	.82	.87
Social Domain	103.8	13.3	99.7	13.5	–.31	.81	.85
Practical Domain (without Work)	104.5	14.2	99.7	14.1	–.34	.85	.87
Practical Domain (with Work)[b]	106.0	11.6	100.5	13.0	–.45	.83	.90
GAC (without Work)	103.8	13.7	99.1	15.1	–.33	.86	.89
GAC (with Work)[b]	104.6	10.7	99.9	12.3	–.41	.86	.93

[a]Correlations were corrected for the variability of the standardization sample (Guilford & Fruchter, 1978). Pooled standard deviation was used as the estimate of variability of the current sample.

[b]Based on 37 observations.

On the Teacher/Daycare Provider Form, the inter-rater reliability coefficient of the GAC was .83. The mean GAC score difference between two respondents was approximately 1 point. The corrected reliability coefficients for the adaptive domains averaged .81. The inter-rater reliability coefficients for the skill areas averaged .70. The corrected inter-rater reliability coefficients of the GAC, adaptive domains, and skill areas are relatively higher than the uncorrected coefficients due to the low variability of the sample.

On the Teacher Form, the inter-rater reliability coefficient of the GAC was .90 for students from all age groups. The mean GAC score difference between two respondents was approximately 3 points. The inter-rater reliability coefficients for the adaptive domains averaged .78 for students from all age groups. The inter-rater reliability coefficients for the skill areas averaged .74 for students from all age groups. The corrected inter-rater reliability coefficients of the GAC, adaptive domains, and skill areas are relatively lower than the uncorrected coefficients due to the high variability of the sample.

On the Parent/Primary Caregiver Form, the inter-rater reliability coefficient of the GAC was .82. The mean GAC score difference between two respondents was approximately 3 points. The inter-rater reliability coefficients for the adaptive domains averaged .78. Inter-rater reliability coefficients for the skill areas averaged .72. The corrected inter-rater reliability coefficients of the GAC, adaptive domains and skill areas are generally higher than the uncorrected coefficients due to the low variability of the sample.

On the Parent Form, the inter-rater reliability coefficient of the GAC was .91 for the combined age group. The mean GAC score difference between two respondents was approximately 6 points. The inter-rater reliability coefficients for the adaptive domains averaged .84 for children from all age groups. The inter-rater reliability coefficients for the skill areas averaged .77 for children from all age groups.

On the Adult Form, the inter-rater reliability coefficient of the GAC scores of 52 adults rated by two respondents was .89 when calculated without the Work Skill Area and .93 when calculated with the Work Skill Area. The mean GAC score difference between the two respondents was approximately 5 points. The inter-rater reliability coefficient of the adaptive domain scores averaged .87. Inter-rater reliability coefficients for the skill areas averaged .82. Overall, the corrected inter-rater reliability coefficients of the GAC, adaptive domains and skill areas are slightly higher than the uncorrected coefficients due to the low variability of the sample.

Cross-Form Consistency

Correlations Between the Ratings of Different Respondents Using Different Forms

The consistency between teacher and parent ratings for children, and between self-report and the rating of others for adults was estimated using Pearson's product-moment correlation coefficient. Samples consisted of 130 children for the infant-preschool forms, 30 children for the school-age forms, and 105 individuals for the Adult Form. The results are reported in Tables 5.16–5.17. The tables also present the standardized differences (Cohen's *d*) between the two ratings and the correlation coefficients corrected for the variability of the standardization sample. References made in text are to corrected correlations.

Table 5.16 Consistency Between the Ratings of Teachers and Parents

Teacher/Daycare Provider and Parent/Primary Caregiver Forms

Ages 2–5 (*n* = 130)	Teacher/Daycare Provider		Parent/Primary Caregiver				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	10.3	3.0	9.9	2.7	–.14	.64	.64
Functional Pre-Academics	10.0	3.0	10.1	2.8	.03	.62	.62
School/Home Living	10.4	2.8	10.0	2.9	–.14	.44	.51
Health and Safety	10.2	3.0	9.7	2.7	–.18	.39	.39
Leisure	10.1	2.8	10.0	2.8	–.04	.60	.65
Self-Care	10.0	3.0	10.0	2.8	.00	.42	.42
Self-Direction	10.1	3.0	9.9	2.8	–.07	.43	.43
Social	10.0	3.1	10.0	2.9	.00	.46	.42
Motor	10.4	2.8	10.2	2.9	–.07	.39	.47
Conceptual Domain	99.8	15.2	98.0	13.8	–.12	.70	.69
Social Domain	99.3	15.3	98.5	14.7	–.05	.60	.58
Practical Domain	100.3	14.6	98.4	14.1	–.13	.56	.58
GAC	99.9	14.8	98.3	14.2	–.11	.68	.68

Teacher and Parent Forms

Ages 5–21 (*n* = 30)	Teacher		Parent				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	8.6	3.7	9.4	3.3	.23	.70	.54
Community Use	9.3	2.9	10.2	3.0	.31	.66	.68
Functional Academics	9.4	3.3	9.6	3.8	.06	.84	.81
School/Home Living	9.5	3.0	9.3	4.1	–.06	.51	.51
Health and Safety	9.8	2.8	9.9	3.5	.03	.59	.64
Leisure	9.8	2.9	10.1	3.4	.09	.70	.72
Self-Care	10.1	2.9	9.5	3.5	–.19	.53	.56
Self-Direction	9.1	3.2	10.2	3.5	.33	.82	.80
Social	9.6	3.1	10.0	3.2	.13	.67	.65
Conceptual Domain	99.2	18.0	99.2	18.0	.00	.85	.79
Social Domain	100.3	16.4	100.6	16.9	.02	.73	.67
Practical Domain	100.4	17.8	98.5	18.4	–.10	.73	.63
GAC	99.7	18.6	98.6	19.4	–.06	.81	.70

[a]Correlations were corrected for the variability of the standardization sample (Allen & Yen, 1979). Pooled standard deviation was used as the estimate of variability of the current sample.

Table 5.17 Consistency Between the Adult Form, Self Report and the Adult Form, Rated by Others

Ages 16–49 (*n* = 41)	Self Report		Rated by Others				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	11.2	2.7	11.3	2.6	.04	.69	.75
Community Use	10.7	2.6	10.8	2.8	.04	.76	.82
Functional Academics	10.9	2.5	11.4	2.4	.20	.59	.71
Home Living	10.2	2.8	10.1	2.9	–.04	.77	.80
Health and Safety	10.9	1.9	10.7	2.4	–.09	.75	.90
Leisure	9.9	2.8	10.2	3.0	.10	.71	.75
Self-Care	10.5	2.0	10.7	2.0	.10	.66	.85
Self-Direction	10.9	2.3	11.0	2.7	.04	.80	.88
Social	10.9	2.4	10.7	2.8	–.08	.81	.88
Work[b]	11.6	1.8	11.7	2.6	.04	.71	.89
Conceptual Domain	105.6	11.9	106.2	13.5	.05	.81	.88
Social Domain	101.4	13.6	101.5	13.9	.01	.82	.85
Practical Domain (without Work)	102.3	12.6	102.2	13.6	–.01	.85	.90
Practical Domain (with Work)[b]	102.3	12.7	103.8	13.6	.11	.84	.89
GAC (without Work)	103.3	11.7	103.8	13.5	.04	.87	.92
GAC (with Work)[b]	102.6	11.7	103.4	13.5	.06	.88	.93

Ages 50–89 (*n* = 64)	Self Report		Rated by Others				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	12.3	1.4	12.3	1.6	.00	.74	.94
Community Use	12.4	1.3	12.2	1.6	–.14	.53	.91
Functional Academics	12.0	1.5	12.0	1.5	.00	.47	.87
Home Living	11.8	2.0	11.7	2.1	–.05	.73	.88
Health and Safety	11.8	1.5	12.0	1.4	.14	.63	.91
Leisure	11.8	1.4	11.7	1.4	–.07	.68	.93
Self-Care	11.8	0.7	11.9	0.8	.13	.40	.97
Self-Direction	12.2	1.6	12.4	1.3	.14	.54	.87
Social	12.3	0.8	12.1	1.2	–.20	.60	.97
Work	–	–	–	–	–	–	–
Conceptual Domain	111.5	8.1	111.9	8.4	.05	.71	.92
Social Domain	111.5	6.7	108.2	6.4	–.50	.82	.96
Practical Domain (without Work)	111.8	8.8	112.4	8.7	.07	.73	.91
Practical Domain (with Work)	–	–	–	–	–	–	–
GAC (without Work)	109.9	6.4	110.0	6.6	.02	.82	.97
GAC (with Work)	–	–	–	–	–	–	–

[a]Correlations were corrected for the variability of the standardization sample (Allen & Yen, 1979). Pooled standard deviation was used as the estimate of variability of the current sample.

[b]Based on 38 observations.

Table 5.17 Consistency Between the Adult Form, Self Report and the Adult Form, Rated by Others *(continued)*

All Ages[c] (*n* = 105)	Self Report		Rated by Others				
Skill Area/Composite	Mean	*SD*	Mean	*SD*	Cohen's *d*	r_{12}	Corrected *r*[a]
Communication	11.9	2.1	11.9	2.1	.00	.72	.88
Community Use	11.7	2.1	11.7	2.2	.00	.66	.87
Functional Academics	11.6	2.0	11.8	1.9	.10	.53	.80
Home Living	11.2	2.4	11.1	2.6	–.04	.75	.84
Health and Safety	11.4	1.7	11.5	1.9	.06	.69	.91
Leisure	11.0	2.2	11.1	2.3	.04	.70	.87
Self-Care	11.3	1.5	11.4	1.5	.07	.54	.93
Self-Direction	11.7	2.0	11.9	2.1	.10	.69	.88
Social	11.7	1.7	11.6	2.1	–.05	.72	.94
Work[b]	11.6	1.8	11.7	2.6	.04	.71	.89
Conceptual Domain	109.2	10.1	109.7	11.0	.05	.76	.90
Social Domain	107.5	11.0	105.6	10.5	–.18	.82	.92
Practical Domain (without Work)	108.1	11.4	108.4	11.9	.03	.80	.91
Practical Domain (with Work)[b]	105.7	13.1	106.9	12.9	.09	.80	.90
GAC (without Work)	107.3	9.4	107.6	10.3	.03	.85	.95
GAC (with Work)[b]	102.6	11.7	103.4	13.5	.06	.88	.93

[a]Correlations were corrected for the variability of the standardization sample (Allen & Yen, 1979). Pooled standard deviation was used as the estimate of variability of the current sample.

[b]Based on 38 observations.

[c]Reliability coefficients for the overall sample were calculated using Fisher's *z* transformation.

For the infant-preschool sample, the correlation between the teacher/daycare provider and parent/primary caregiver ratings was .68 for the GAC. Mean GAC scores differed by approximately 2 points. The correlations for the adaptive domain scores averaged .62. Mean adaptive domain scores differed by approximately 2 points. The correlations for the skill areas averaged .51. Mean skill area scaled scores differed by less than 1 scaled score.

For the school-age sample, the correlation between the teacher and parent ratings was .70 for the GAC. Mean GAC scores differed by approximately 1 point. The correlations for the adaptive domain scores averaged .70. Mean adaptive domain scores differed by approximately 2 points or less. The correlations for the skill areas averaged .66. Mean skill area scaled scores differed by approximately 1 scaled score or less.

The moderate to high correlations between parent and teacher scores on both infant-preschool and school-age forms suggest good consistency between these primary respondents for children. Past research, summarized by Boan and Harrison (1997), has found generally low to moderate correlations between parent and teacher scores on adaptive skill instruments, perhaps because of different expectations of different respondents and because children display different behaviors in home and school settings. ABAS–II results show somewhat higher correlations between the ratings of parents and teachers than found in previous research. However, the correlations, especially for the skill areas, emphasize the potential distinctions between respondents' ratings and the importance of using both parents and teachers as respondents to obtain information about the child's skills in multiple settings.

For the adult sample, the correlation between self report and the ratings of others for the GAC was .95 without the Work Skill Area and .93 with the Work Skill Area for the overall sample. Mean GAC scores differed by less than 1 point. The correlations for the adaptive domain scores averaged .91. Mean adaptive domain scores differed by approximately 2 points or less. The correlations for the skill areas averaged .88. Mean skill area scaled scores displayed minimal differences between the two respondents. The results for the adult sample suggest that there is considerable consistency when adults rate themselves and when others rate them. However, the distinction between information provided by the two respondents (i.e., self and others) may provide important clinical data for decision-making.

Correlations Between the Ratings of the Same Respondent Using Alternate Forms for Children Age 5 Years

Because of the overlap in age ranges at 5 years, correlations between the Teacher/Daycare Provider Form and Teacher Form were investigated using a nonclinical sample of 49 children ages 5 years 0 months–5 years 11 months, with a mean age of 5 years 5 months. Each child in the sample was rated by the same respondent on both forms. The sample had the following composition: 51% female and 49% male; 57% White, 14 % African American, 23% Hispanic, and 6% of other racial/ethnic origin. Table 5.18 reports the mean scores and correlations between the two forms. References made in text are to corrected correlations.

Table 5.18 Correlation Between the Teacher/Daycare Provider and Teacher Forms: Age 5

(*n* = 49)	Teacher/Daycare Provider		Teacher				
Skill Area/Composite	**Mean**	***SD***	**Mean**	***SD***	**Cohen's *d***	r_{12}	**Corrected *r*[a]**
Communication	10.8	3.4	10.2	3.2	–.18	.78	.72
Functional (Pre-)Academics	10.4	3.0	9.8	3.0	–.20	.32	.32
School Living	11.2	3.0	10.8	2.5	–.14	.57	.57
Health and Safety	11.0	2.8	11.1	2.9	.04	.75	.78
Leisure	11.4	3.1	11.2	3.1	–.06	.63	.60
Self-Care	11.7	2.3	10.8	2.1	–.41	.62	.78
Self-Direction	11.2	3.2	10.2	2.4	–.35	.61	.56
Social	11.1	3.2	11.4	2.8	.10	.74	.70
Conceptual Domain	103.9	16.6	104.6	12.7	.05	.73	.67
Social Domain	105.7	16.6	106.6	15.1	.06	.75	.70
Practical Domain	105.9	14.4	105.4	11.6	–.04	.73	.75
GAC	105.7	16.4	105.7	13.1	.00	.78	.74

[a]Correlations were corrected for the variability of the standardization sample (Allen & Yen, 1979). Pooled standard deviation was used as the estimate of variability of the current sample.

The correlation between the Teacher/Daycare Provider Form GAC and the Teacher Form GAC was .74. Mean GAC scores did not differ. Correlations between adaptive domain scores averaged .71. Mean adaptive domain scores differed by 1 point or less. Skill area correlations were in the .70s and below, with an average of .63. Mean skill area scaled scores differed by 1 scaled score or less. The correlations between the two forms are substantial and provide evidence for the use of either form for 5-year-old children, based on results from this sample of children with no known disabilities or disorders.

Relationships between the Parent/Primary Caregiver Form and Parent Form ages were investigated using a nonclinical sample of 51 children ages 5 years 0 months–5 years 11 months, with a mean age of 5 years 6 months, rated by the same respondent on each form. The sample had the following composition: 56% female and 44% male; 46% White, 17% African American, 31% Hispanic, and 6% of other racial/ethnic origin. Table 5.19 reports the mean scores and correlations between the two forms.

The correlation between the Parent/Primary Caregiver GAC and the Parent Form GAC was .71. Mean GAC scores differed by approximately 3 points. Correlations between adaptive domain scores averaged .63. Mean adaptive domain scores differed by 2 points, on average. Skill area correlations averaged .50. Mean skill area scaled scores differed by 1 scaled score or less, on average. The correlations between the two forms, though slightly lower than those between the Teacher/Daycare Provider and Teacher Forms, ranged from moderate to high and support the use of either form for 5 year old children, based on results from this sample of children with no known disabilities or disorders.

Table 5.19 Correlation Between the Parent/Primary Caregiver and Parent Forms: Age 5

(*n* = 51)	Parent/Primary Caregiver		Parent				
Skill Area/Composite	Mean	*SD*	Mean	*SD*	Cohen's *d*	r_{12}	Corrected *r*[a]
Communication	10.8	3.3	11.3	3.2	.15	.61	.53
Community Use	10.4	3.8	10.4	3.0	.00	.50	.19
Functional (Pre-)Academics	10.4	3.4	9.4	4.2	–.26	.68	.59
Home Living	11.3	2.8	10.4	3.3	–.29	.63	.68
Health and Safety	10.2	3.4	10.8	3.0	.19	.57	.44
Leisure	10.8	3.2	11.3	3.1	.16	.53	.47
Self-Care	9.7	3.0	10.7	2.7	.35	.32	.32
Self-Direction	10.8	2.9	10.7	3.2	–.03	.53	.56
Social	10.6	2.7	10.5	3.4	–.03	.69	.75
Conceptual Domain	102.5	16.6	102.7	16.8	.01	.69	.62
Social Domain	102.6	15.5	104.8	16.4	.14	.70	.68
Practical Domain	100.8	16.8	104.6	13.7	.25	.68	.60
GAC	102.0	16.4	104.6	15.3	.16	.76	.71

[a]Correlations were corrected for the variability of the standardization sample (Allen & Yen, 1979). Pooled standard deviation was used as the estimate of variability of the current sample.

Evidence of Validity

Validity refers to the degree to which the accumulated evidence supports the interpretations of a test's scores for its intended purpose. This evidence is found in two forms: a test's theory and the empirical evidence that informs interpretations of test scores (American Educational Research Association et al., 1999). Test validation is the joint responsibility of test developers and test users. The test developer is responsible for providing relevant evidence that supports its use. Evidence that informs ABAS–II users and should help guide their use of the instrument is discussed in the following sections. However, professional users of the ABAS–II are responsible for evaluating this and other evidence in various applied and research settings. They are encouraged to examine the relevance of the ABAS–II in response to clinical needs and practices. Whenever possible, additional data should be acquired that examines the validity of the ABAS–II in various settings and for various purposes.

Validity cannot be summarized using only data. Instead, a test's validity is found in the viability of its theory and the relevance and richness of its empirical data. Both theory and empirical data impact the various ways in which a test is used. The ABAS–II developers and professional users have an ongoing responsibility to acquire, share, and examine evidence that informs the profession as to ways in which this instrument can and should be used. The various forms of evidence that are relevant to the validity of the ABAS–II include test content, response process, internal structure, internal consistency, age group differences, clinical validity, and the consequences of testing.

Test Content

An analysis of the test content should begin with an examination of test items to determine if they adequately represent and relate to the traits or skills that are being measured. The theory and constructs of the ABAS–II are derived from the AAMR's (1992) premise that ten skill areas are important to successful and independent functioning. These skill areas are: Communication, Community Use, Functional Academics, Health and Safety, Home or School Living, Leisure, Self-Care, Self-Direction, Social, and Work. More recent AAMR (2002b) guidelines that specify the grouping of the ten skill areas into three broad domains of adaptive behavior have also informed the structure of the ABAS–II. The ABAS–II addresses both skill areas and adaptive domains, and is highly relevant to its intended use.

The items in each of the skill areas reflect adaptive skills important in the lives of individuals who differ by age, gender, race/ethnicity, social status, and other demographic qualities. The authors conducted a comprehensive review of research concerning developmental skills in children, youth, and adults; functional skills necessary in home, school, community, work, and other settings; and individuals with

disabilities and other mental or physical health problems. Guided by AAMR (1992) descriptions, the goal was to identify categories of important adaptive skills, (e.g., eating, dressing) and then develop test items that addressed those categories. An initial item pool of almost 1,500 items was developed and reviewed by individuals knowledgeable in developmental psychology, education, mental retardation, and related areas. This review led to the selection of 460 items for the infant-preschool forms and 789 items for the school-age and adult forms. These two item sets were each subject to reviews through data collected during field trials and standardization.

During the initial field-testing, data was collected from more than 428 individuals for the school-age and adult forms. Infant-preschool forms were reviewed by focus groups. Following an analysis of the data from all forms, items were selected for inclusion in more extensive field trials. These field trials obtained information from nationally stratified samples of 1520 parents and teachers for the infant-preschool forms; and 1,045 parents, 980 teachers, and 1,406 adults for the school-age and adult forms. Again, the most promising items were selected and included in standardization. Item selection led to the identification of 342, 344, 242, 272, and 275 standardization items for the Teacher/Daycare Provider, Parent/Primary Caregiver, Teacher, Parent, and Adult Forms, respectively. Following the collection and thorough review of standardization data, the final items were selected (see Table 1.1): 216 on the Teacher/Daycare Provider Form, 241 on the Parent/Primary Caregiver Form, 193 on the Teacher Form, 232 on the Parent Form, and 239 on the Adult Form. More than 95% of the items are consistent between two or more forms.

Final item selection was guided by four principles: (1) to measure adaptive skills relevant to clinical and applied practice; (2) to ensure sufficient numbers of items to provide a comprehensive and robust measure of each skill area while not making the test too long (e.g., to not have more items than needed); (3) to measure qualities that could be readily observed; and (4) to ensure that the test displays suitable psychometric qualities.

The first principle was achieved by selecting items on which clinicians often rely. The second principle was achieved by ensuring that each rating form had a sufficient number of items (i.e., a mean of 23 items per skill area) and an acceptable level of internal consistency (e.g., the coefficient alpha of the GAC score should be at least .90 for each age group on all rating forms). The ABAS–II achieves this level of internal consistency except for the age group of 0:0–0:3 rated on the Parent/Primary Caregiver Form, which has a reliability coefficient of .86 for the GAC. Furthermore, the recommended use of two or more rating forms provides at least twice the amount of information about an individual's adaptive behavior. The third principle was addressed by designing items with strong behavior references and by eliminating items that had high rates of guessing. Average rates of guessing were determined for each of the six standardization samples (Tables A.3, A.7, A.11, and A.14). Teachers and daycare providers, on average, guessed at two or fewer items per skill area. Parents, on average, guessed less than once per skill area. Adults rating others, on average, guessed less than once per skill area. Adults providing self-ratings rarely guessed. The fourth principle, suitable psychometric qualities, is discussed later in this chapter.

Response Process

A primary purpose of this assessment instrument is to accurately describe the degree to which individuals display normal adaptive skills. A description of adaptive skills is enhanced when pertinent information is acquired from two or more knowledgeable respondents about the presence of desired behaviors as displayed in two or more settings. The ABAS–II uses a four-point response option that allows respondents to indicate either the presence or absence of skills and the frequency (never, sometimes, or always) of their display.

During standardization, respondents were asked to comment on the ease of completing the rating forms. The information they provided indicated that the items are easy to complete, the response options are clear, and there is little need for guessing.

The ABAS–II is often completed by more than one respondent. The use of different respondents across home, school, work, and other settings and the use of multiple sources of information is an important principle in the comprehensive, clinical assessment of which the ABAS–II is intended to be a part. For example, it is not unusual for a clinician to request that two or more teachers and one or both parents (or

grandparents) complete rating forms for a child. Information from two or more respondents may or may not agree. High inter-rater agreement provides some evidence about the accuracy of the assessment. Differences may be the result of the individual displaying different levels of adaptive skills in the various environments, failure of a respondent to accurately record ratings, or administrative or scoring difficulties. Furthermore, correlations between parent and teacher ratings on behavior rating scales are often low to moderate (Kamphaus & Frick, 1996). Consistency of results from two or more respondents is improved when the following standards apply to the measure: the behaviors being assessed are externalized and readily observable, the rating forms that are completed by the various respondents measure the same qualities, and the majority of the items are consistent between the various rating forms (Kamphaus & Frick, 1996). The ABAS–II meets these standards. Items measure only behaviors that are directly observable, and all five rating forms have at least eight out of the ten skill areas in common. These qualities are intended to ensure that the response processes enhance the quality of the data and the test's validity.

Internal Structure

Evidence of a test's internal structure is found in the degree to which relationships among test items and other test components conform to the construct on which score interpretations are based (American Education Research Association, et al., 1999). The AAMR (1992, 2002b) and *DSM–IV–TR* provided the internal theoretical structure of the ABAS–II by defining adaptive skill areas; domains of conceptual, social, and practical adaptive functioning; and overall adaptive behavior important in the assessment of individuals with mental retardation.

The theoretical structure of the ABAS–II outlines ten skill areas, all of which display considerable internal consistency, exhibit differences sensitive to age range, and are independent of one another yet assess common adaptive skills. These skill areas collectively form conceptual, social, and practical composites of adaptive functioning, as well as an overall construct of adaptive behavior (the GAC).

Internal Consistency

Internal consistency refers to relationships among scores derived from individual items or subsets of items within a test following a single administration of the test. All ABAS–II scores indicate considerable internal consistency, and are described in the reliability section of this chapter (see Tables 5.1–5.4).

Age Group Differences

Adaptive skills are acquired during the course of an individual's development and can be expected to vary with age. For example, many adaptive skills are acquired somewhat early in life (e.g., tying one's shoes), while others are acquired later in life (e.g., balancing a checkbook). Adaptive skills are often well developed before adulthood. Therefore, adults generally do not display significant increases in adaptive skills as they become older.

ABAS–II items are sensitive to age differences (i.e., persons who are older tend to display a behavior more frequently than those who are younger). Differences on the various items can be translated into age differences on each of the skill areas (see Tables A.4 and A.8). For example, on the Teacher Form (Table A.4), a raw score of 48 on Communication is equivalent to the average performance of children ages 5 years 4 months–5 years 7 months. A raw score of 58 on Communication is equivalent to the average performance of children ages 9 years 4 months–9 years 7 months. A raw score of 62 on Communication is equivalent to the average performance of children 15 years of age. All items in each of the skill areas display age differences.

Intercorrelations Among the Skill Areas

The theoretical structure of the ABAS–II suggests that the skill areas will be somewhat independent of one another and have low to moderate intercorrelations. However, all skill areas are expected to show a higher correlation with their respective adaptive domain and to correlate strongly with the GAC. Data examining these intercorrelations are provided in Tables 5.20–5.23 (all ages) and C.1–C.4 (by age group).

Table 5.20 Intercorrelations of Skill Area Scaled Scores and Sums of Scaled Scores for Adaptive Domains and the GAC: Teacher/Daycare Provider and Teacher Forms (All Ages)

Teacher/Daycare Provider Form

Skill Area/Composite	Com	FA	SL	HS	LS	SC	SD	Soc	MO	CON[a]	SO[a]	PR[a]	GAC[b]
Communication										.56			.65
Functional Pre-Academics	.47									.57			.60
School Living	.47	.51										.68	.76
Health and Safety	.54	.43	.66									.66	.75
Leisure	.57	.47	.62	.67							.69		.77
Self-Care	.42	.43	.53	.51	.50							.57	.62
Self-Direction	.51	.52	.75	.68	.71	.54				.60			.80
Social	.60	.49	.70	.65	.69	.49	.75				.69		.79
Motor	.52	.46	.45	.53	.53	.47	.47	.49					.63
Conceptual Domain	.81	.81	.70	.67	.71	.57	.83	.75	.60				.84
Social Domain	.63	.52	.72	.72	.92	.54	.80	.92	.56	.80			.84
Practical Domain	.57	.55	.86	.86	.71	.80	.78	.72	.58	.77	.78		.82
GAC	.73	.69	.82	.81	.83	.70	.85	.84	.71	.93	.91	.92	
Mean[c]	10.16	10.13	10.19	10.22	10.22	10.25	10.21	10.17	10.31	30.50	20.39	30.66	91.86
SD	3.00	3.01	2.99	3.04	2.96	2.96	3.00	3.00	2.98	7.36	5.47	7.57	20.87

Teacher Form

Skill Area/Composite	Com	CU	FA	SL	HS	LS	SC	SD	Soc	CON[a]	SO[a]	PR[a]	GAC[b]
Communication										.80			.85
Community Use	.74											.72	.78
Functional Academics	.73	.74								.76			.77
School Living	.71	.67	.65									.78	.84
Health and Safety	.69	.68	.63	.76								.80	.82
Leisure	.75	.69	.66	.75	.72						.78		.84
Self-Care	.61	.54	.53	.60	.62	.56						.65	.67
Self-Direction	.74	.63	.68	.77	.74	.77	.56			.76			.84
Social	.74	.62	.60	.74	.74	.78	.60	.81			.78		.83
Conceptual Domain	.92	.78	.89	.79	.76	.81	.63	.90	.80				.89
Social Domain	.79	.69	.66	.79	.77	.94	.62	.84	.95	.85			.87
Practical Domain	.80	.85	.75	.88	.89	.80	.80	.79	.79	.87	.84		.89
GAC	.88	.83	.82	.87	.86	.88	.73	.88	.87	.96	.92	.96	
Mean[c]	8.83	8.92	9.23	9.38	9.14	9.46	9.55	8.66	9.38	26.71	18.84	36.99	82.54
SD	3.40	3.25	3.14	3.19	3.13	3.06	2.97	3.38	3.14	8.88	5.85	10.69	24.16

Note. **Com** = Communication; **CU** = Community Use; **FA** = Functional (Pre-)Academics; **SL** = School Living; **HS** = Health and Safety; **LS** = Leisure; **SC** = Self-Care; **SD** = Self-Direction; **Soc** = Social; **MO** = Motor; **CON** = Conceptual Adaptive Domain; **SO** = Social Adaptive Domain; **PR** = Practical Adaptive Domain.

[a]Adaptive Domain correlations corrected by removing the skill area scaled score from the sum of the scaled scores.

[b]GAC correlations corrected by removing the skill area scaled score(s) from the sum of the scaled scores.

[c]Means and *SD*s reported under corrected adaptive domains and GAC were calculated using all skill areas included in the composite.

Table 5.21 Intercorrelations of Skill Area Scaled Scores and Sums of Scaled Scores for Adaptive Domains and the GAC: Parent/Primary Caregiver and Parent Forms (All Ages)

Parent/Primary Caregiver Form

Skill Area/Composite	Com	CU	FA	HL	HS	LS	SC	SD	Soc	MO	CON[a]	SO[a]	PR[a]	GAC[b]
Communication											.52			.64
Community Use	.38												.53	.59
Functional Pre-Academics	.39	.57									.45			.47
Home Living	.36	.65	.49										.58	.59
Health and Safety	.51	.61	.45	.61									.64	.69
Leisure	.54	.56	.46	.51	.56							.61		.71
Self-Care	.42	.44	.36	.55	.51	.48							.55	.62
Self-Direction	.46	.64	.49	.68	.55	.62	.53				.50			.73
Social	.57	.63	.49	.64	.56	.61	.53	.66				.61		.75
Motor	.49	.44	.44	.49	.47	.48	.44	.43	.45					.58
Conceptual Domain	.82	.69	.82	.67	.60	.66	.53	.81	.70	.55				
Social Domain	.62	.66	.52	.64	.62	.90	.57	.71	.90	.51	.76			
Practical Domain	.55	.82	.57	.85	.85	.62	.78	.69	.68	.53	.73	.73		.78
GAC	.73	.79	.68	.79	.77	.78	.71	.80	.82	.68	.91	.89	.91	
Mean[c]	10.21	10.25	10.22	10.23	10.16	10.29	10.24	10.26	10.29	10.23	28.42	20.57	36.32	95.54
SD	2.92	2.96	2.97	2.96	2.89	2.92	2.84	2.93	2.91	2.81	8.03	5.24	12.24	24.44

Parent Form

Skill Area/Composite	Com	CU	FA	HL	HS	LS	SC	SD	Soc	CON[a]	SO[a]	PR[a]	GAC[b]
Communication										.72			.75
Community Use	.61											.67	.73
Functional Academics	.68	.70								.74			.77
Home Living	.47	.58	.55									.69	.67
Health and Safety	.63	.64	.65	.62								.74	.79
Leisure	.69	.62	.64	.54	.68						.71		.79
Self-Care	.52	.47	.52	.56	.60	.53						.63	.67
Self-Direction	.64	.62	.66	.59	.66	.69	.60			.71			.81
Social	.66	.50	.55	.50	.64	.71	.56	.71			.71		.75
Conceptual Domain	.87	.73	.89	.61	.73	.76	.62	.88	.73				.86
Social Domain	.73	.61	.65	.56	.72	.92	.59	.76	.93	.81			.81
Practical Domain	.67	.81	.73	.85	.86	.71	.79	.74	.66	.81	.75		.82
GAC	.81	.79	.82	.76	.84	.84	.74	.85	.81	.94	.89	.94	
Mean[c]	9.76	10.07	9.93	9.39	9.87	9.96	9.87	9.72	9.50	29.41	19.46	39.19	88.07
SD	2.96	3.00	3.03	3.57	3.09	2.98	2.90	3.27	3.31	8.13	5.81	10.33	22.50

Note. **Com** = Communication; **CU** = Community Use; **FA** = Functional (Pre-)Academics; **HL** = Home Living; **HS** = Health and Safety; **LS** = Leisure; **SC** = Self-Care; **SD** = Self-Direction; **Soc** = Social; **MO** = Motor; **CON** = Conceptual Adaptive Domain; **SO** = Social Adaptive Domain; **PR** = Practical Adaptive Domain.

[a]Adaptive Domain correlations corrected by removing the skill area scaled score from the sum of the scaled scores.

[b]GAC correlations corrected by removing the skill area scaled score(s) from the sum of the scaled scores.

[c]Means and *SD*s reported under corrected adaptive domains and GAC were calculated using all skill areas included in the composite.

Table 5.22 Intercorrelations of Skill Area Scaled Scores and Sums of Scaled Scores for Adaptive Domains and the GAC: Adult Form, Self Report: (All Ages)

Skill Area/Composite	Com	CU	FA	HL	HS	LS	SC	SD	Soc	WK	CON[a]	SO[a]	PR-4[a]	PR-5[a]	GAC-9[b]	GAC-10[b]
Communication											.75				.77	.76
Community Use	.80												.75	.73	.85	.83
Functional Academics	.75	.81									.82				.84	.83
Home Living	.51	.64	.67										.74	.73	.73	.74
Health and Safety	.63	.70	.71	.67									.77	.76	.80	.79
Leisure	.68	.74	.73	.60	.66							.71			.81	.81
Self-Care	.52	.59	.58	.60	.62	.57							.69	.69	.70	.69
Self-Direction	.65	.73	.74	.68	.72	.74	.62				.75				.85	.85
Social	.62	.67	.66	.61	.65	.71	.63	.77				.71			.79	.81
Work	.53	.56	.58	.56	.58	.60	.56	.69	.65					.66		.70
Conceptual Domain	.89	.86	.92	.69	.76	.80	.64	.89	.76	.66					.89	.90
Social Domain	.70	.76	.75	.66	.71	.92	.65	.81	.92	.68	.84				.85	.87
Practical Domain-4	.72	.87	.81	.86	.87	.76	.81	.80	.75	.66	.87	.81		.98	.88	
Practical Domain-5	.73	.83	.81	.84	.85	.78	.79	.84	.80	.80	.88	.85	.98			.90
GAC-9	.82	.89	.88	.79	.84	.86	.75	.88	.84	.70	.96	.91	.96	.96		
GAC-10	.82	.86	.87	.79	.83	.85	.75	.89	.85	.76	.95	.92	.96	.97	1.00	
Mean[c]	9.98	9.85	9.93	10.05	10.17	9.60	10.39	10.08	10.15	10.42	29.99	19.75	40.47	51.35	90.20	101.52
SD	2.97	2.98	3.01	2.97	2.75	3.04	2.53	2.97	2.99	2.92	8.04	5.55	9.58	11.21	21.92	23.20

Note. **Com** = Communication; **CU** = Community Use; **FA** = Functional Academics; **HL** = Home Living; **HS** = Health and Safety; **LS** = Leisure; **SC** = Self-Care; **SD** = Self-Direction; **Soc** = Social; **WK** = Work; **CON** = Conceptual Adaptive Domain; **SO** = Social Adaptive Domain; **PR-4** = Practical Adaptive Domain without Work; **PR-5** = Practical Adaptive Domain with Work; **GAC-9** = GAC without Work; **GAC-10** = GAC with Work.

[a]Adaptive Domain correlations corrected by removing the skill area scaled score from the sum of the scaled scores.

[b]GAC correlations corrected by removing the skill area scaled score(s) from the sum of the scaled scores.

[c]Means and *SD*s reported under corrected adaptive domains and GAC were calculated using all skill areas included in the composite.

Table 5.23 Intercorrelations of Skill Area Scaled Scores and Sums of Scaled Scores for Adaptive Domains and the GAC: Adult Form, Rated by Others (All Ages)

Skill Area/Composite	Com	CU	FA	HL	HS	LS	SC	SD	Soc	WK	CON[a]	SO[a]	PR-4[a]	PR-5[a]	GAC-9[b]	GAC-10[b]
Communication											.78				.80	.81
Community Use	.78												.79	.84	.87	.88
Functional Academics	.75	.85									.82				.85	.85
Home Living	.61	.67	.67										.75	.73	.76	.75
Health and Safety	.71	.79	.79	.71									.84	.83	.86	.85
Leisure	.70	.78	.75	.63	.72							.75			.82	.81
Self-Care	.61	.65	.63	.64	.70	.60							.74	.77	.74	.75
Self-Direction	.72	.75	.78	.71	.78	.75	.68				.80				.87	.90
Social	.71	.71	.68	.66	.72	.75	.64	.80				.75			.82	.83
Work	.67	.66	.66	.55	.65	.62	.60	.76	.74					.69		.75
Conceptual Domain	.90	.87	.93	.73	.84	.80	.70	.91	.80	.76					.91	.92
Social Domain	.75	.79	.77	.69	.77	.93	.67	.83	.94	.73	.86				.87	.87
Practical Domain-4	.77	.89	.83	.87	.91	.78	.85	.83	.78	.69	.89	.83		.98	.90	
Practical Domain-5	.79	.90	.84	.83	.90	.78	.85	.88	.81	.81	.92	.85	.98			.93
GAC-9	.85	.90	.89	.82	.89	.87	.79	.90	.86	.75	.96	.92	.97	.97		
GAC-10	.85	.91	.88	.80	.88	.85	.80	.92	.86	.80	.96	.92	.96	.98	.99	
Mean[c]	10.11	9.76	10.06	10.10	9.98	10.05	10.26	10.02	10.21	10.16	30.19	20.26	40.10	50.40	90.55	100.92
SD	2.92	3.03	3.12	3.06	2.87	2.96	2.65	3.02	2.99	2.92	8.22	5.54	10.12	11.85	22.77	24.18

Note. **Com** = Communication; **CU** = Community Use; **FA** = Functional Academics; **HL** = Home Living; **HS** = Health and Safety; **LS** = Leisure; **SC** = Self-Care; **SD** = Self-Direction; **Soc** = Social; **WK** = Work; **CON** = Conceptual Adaptive Domain; **SO** = Social Adaptive Domain; **PR-4** = Practical Adaptive Domain without Work; **PR-5** = Practical Adaptive Domain with Work; **GAC-9** = GAC without Work; **GAC-10** = GAC with Work.

[a]Adaptive Domain correlations corrected by removing the skill area scaled score from the sum of the scaled scores.

[b]GAC correlations corrected by removing the skill area scaled score(s) from the sum of the scaled scores.

[c]Means and *SD*s reported under corrected adaptive domains and GAC were calculated using all skill areas included in the composite.

On the Teacher/Daycare Provider Form, intercorrelations among the skill areas generally were in the .50s. Corrected intercorrelations between the skill areas and their respective adaptive domains averaged .63. Corrected intercorrelations between the skill areas and the GAC averaged .71. All skill areas displayed higher correlations with the GAC than with other skill areas. Corrected intercorrelations between adaptive domains and the GAC averaged .83.

On the Teacher Form, intercorrelations among the skill areas generally were in the high .60s and .70s. Corrected intercorrelations between the skill areas and their respective adaptive domains averaged .76, and corrected intercorrelations between the skill areas and the GAC averaged .80. All skill areas displayed higher correlations with the GAC than with other skill areas. Corrected intercorrelations between adaptive domains and the GAC averaged .88.

On the Parent/Primary Caregiver Form, intercorrelations among the skill areas generally were in the .40s and .50s. Corrected intercorrelations between the skill areas and their respective adaptive domains averaged .55. In contrast, corrected intercorrelations between the skill areas and the GAC averaged .64. Skill areas typically displayed higher correlations with the GAC than with other skill areas.

Note. Mean sums of scaled scores for the GAC and adaptive domains of the Parent/Primary Caregiver Form reported in Table 5.21 are lower than average due to the inclusion of age groups younger than 1 year. These age groups include fewer skill areas in their composite scores than the older age groups in the sample, leading to lower sums of scaled scores.

On the Parent Form, intercorrelations among the skill areas generally were in the .60s. In contrast, the corrected intercorrelations between the skill areas and their respective adaptive domains averaged .70, and corrected intercorrelations between the skill areas and the GAC averaged .75. All skill areas displayed higher correlations with the GAC than with other skill areas. Corrected intercorrelations between adaptive domains and the GAC averaged .83.

On the Adult Form, Self Report, intercorrelations among the skill areas generally were in the .60s. In contrast, corrected intercorrelations between the skill areas and their respective adaptive domains averaged .74 (without Work) and .73 (with Work). Corrected intercorrelations between the skill areas and the GAC averaged .79 (without Work) and .78 (with Work). All skill areas displayed higher correlations with the GAC than with other skill areas. Corrected intercorrelations between adaptive domains and the GAC averaged .87 (without Work) and .89 (with Work).

On the Adult Form, Rated by Others, intercorrelations among the skill areas generally were in the .60s and .70s. Corrected intercorrelations between the skill areas and their respective adaptive domains averaged .78 (both with and without Work). Corrected intercorrelations between the skill areas and the GAC averaged .82 (both with and without Work). All skill areas displayed higher correlations with the GAC than with other skill areas. Corrected intercorrelations between adaptive domains and the GAC averaged .89 (without Work) and .91 (with Work).

Across all forms, trends observed in the data for all ages (Tables 5.20–5.23) exist in the data for each of the age groups within the sample (Tables C.1–C.4). Intercorrelations among the skill areas are moderate and lower than those between the skill areas and the GAC. Intercorrelations between the skill areas and adaptive domains are generally higher than those among skill areas, but lower than those between the skill areas and the GAC. Adaptive domains correlate most highly with the GAC. In summary, support for the theoretical structure of the ABAS–II is found in the intercorrelation data.

Factor Structure

Evidence of a test's factor structure is integral to examining a test's validity (American Educational Research Association, et al., 1999). Factor analysis is a principle means of determining a test's factor structure. In factor analysis, refined statistical techniques are used to analyze the interrelationships among behavioral data. The goal is to reduce a relatively large set of data to a smaller number of factors or common traits that best describe the qualities measured by the data set. The number of factors identified depends on the size and complexity of the data and the degree to which a test measures one or

more traits (Anastasi & Urbina, 1997). In confirmatory factor analysis, the specific relationships between observed variables (e.g., adaptive skill areas) and a latent variable (e.g., GAC) are specified in advance by the researcher. The model is then tested to determine if the relationships between observed and latent variables confirm the hypothesized structure.

Results from factor-analytic research of adaptive behavior scales offer evidence in support of both a unidimensional and multidimensional structure, and may differ by such variables as sample characteristics, scale content, and method of analysis (e.g., Bruininks, McGrew, Maruyama, 1988; Jacobson & Mulick, 1996). Although the controversy regarding the structure of adaptive behavior is likely to continue as more comprehensive measures such as the ABAS–II are developed and more advanced psychometric procedures are applied, the practical benefits of obtaining information about an individual's adaptive functioning in the ten skill areas have obvious implications for clinical decision-making and treatment planning.

The theoretical foundations of the ABAS–II assert that the ten skill areas constitute important aspects of adaptive behavior. Although the skill areas are assumed to be somewhat independent of one another, recent revisions to the AAMR's 1992 criteria for the assessment of mental retardation suggest that the skill areas may be grouped into three domains of conceptual, social, and practical adaptive behavior (AAMR, 2002b; see Table 1.3 for the skill areas included within each of the three adaptive domains). Based on these theoretical foundations, both a one-factor and three-factor structural model for the ABAS–II were tested and compared to a model with no common factors (null model). It was expected that both models would produce a superior fit to the data than the null model.

Confirmatory factor analysis was conducted with data from the entire standardization sample for each of the five rating forms. Because the Adult Form may be completed by the individual or by other respondents, confirmatory factor analysis was conducted separately for this form based on the respondent (i.e. self-report or rated by others). The factor models were evaluated using a number of goodness-of-fit measures, including the Tucker-Lewis Index (TLI; Tucker & Lewis, 1973) and the Adjusted Goodness-of-Fit Index (AGFI; Jöreskog & Sörbom, 1993). The TLI and AGFI provide values between 0 and 1, with a value of 1 indicating a perfect model fit. Model fit was also evaluated with Steiger's (1990) Root Mean Square Error of Approximation (RMSEA). RMSEA values ≤ .05 indicate a close model fit, and values up to .08 represent an adequate model fit with reasonable errors of approximation in the population (Browne & Cudeck, 1993).

The results shown in Table 5.24 confirm that a conservative one-factor model provides a good fit to the observed data from the standardization samples. These data confirm that the ABAS–II assesses a strong and unified single factor of adaptive skill. The confirmation of a one-factor model on the ABAS–II is consistent with research by McGrew and Bruininks (1989) that suggested that most adaptive functioning instruments measure a general, global factor. Although the one-factor model provided the most parsimonious fit to the data, results also indicate that the three-factor model produces a close fit to the data, providing support for the AAMR's (2002b) categorization of adaptive skill areas into three more general domains. Because the ABAS–II is designed to provide a more comprehensive measure of adaptive behavior than many existing measures, it is expected that future investigations utilizing this instrument with clinical samples will provide additional information regarding the structure of adaptive behavior.

Table 5.24 Goodness-of-Fit Statistics for Confirmatory Factor Analysis

	Goodness-of-Fit Indices of the One-Factor and Three-Factor Models						Improvement		
Standardization Sample	***n***	x^2	***df***	x^2/df	**AGFI**	**RMSEA**	x^2	***df***	**TLI**
Teacher/Daycare Provider	750								
Null Model		3659.9	28	130.7					
Model 1 (one factor)		142.1	20	7.1	.92	.09	3517.9	8	.95
Model 2 (three factors)		127.1	17	7.5	.91	.09	15.0	3	.95
Parent/Primary Caregiver	1050								
Null Model		5421.8	36	150.6					
Model 1 (one factor)		278.6	27	10.3	.91	.09	5143.2	9	.94
Model 2 (three factors)		245.9	24	10.3	.91	.09	32.7	3	.94
Teacher	1690								
Null Model		13220.7	36	367.2					
Model 1 (one factor)		753.9	27	27.9	.85	.13	12466.8	9	.93
Model 2 (three factors)		706.6	24	29.4	.84	.13	47.3	3	.92
Parent	1670								
Null Model		10129.3	36	281.4					
Model 1 (one factor)		687.3	27	25.5	.86	.12	9442.0	9	.91
Model 2 (three factors)		552.2	24	23.0	.87	.11	135.1	3	.92
Adult, Self Report	990								
Null Model		7401.8	36	205.6					
Model 1 (one factor)		502.7	27	18.6	.83	.13	6899.1	9	.91
Model 2 (three factors)		482.5	24	20.1	.82	.14	20.2	3	.91
Adult, Rated by Others	920								
Null Model		7699.7	36	213.9					
Model 1 (one factor)		428.0	27	15.9	.84	.13	7271.8	9	.93
Model 2 (three factors)		407.7	24	17.0	.83	.13	2.3	3	.92

Note. The Motor Skill Area was not included in factor analysis because AAMR (2002b) guidelines do not include this skill area in any of the three adaptive domains.

Note. The Work Skill Area was not included in factor analysis because too few cases had scores in this skill area.

Note. Results for Parent/Primary Caregiver sample do not include ages 0:0–0:11 because adaptive domain and GAC scores for this age group include fewer skill areas.

Correlations With Other Variables

A test's validity is traditionally evaluated, in part, by evidence that examines relationships between the test and other variables such as additional test scores or other types of information. *Concurrent validity* refers to the relationship between two sets of data obtained at or about the same time. *Predictive validity* indicates the accuracy of test data to predict performance some time in the future. Information on the ABAS–II's concurrent validity included in this manual provides evidence important to understanding the test's convergent and discriminant validity. Evidence of a test's convergent and discriminant validity is found in the degree to which it shows higher correlations with qualities thought to be more related to it and lower correlations with qualities thought to be less related to it. The predictive validity of ABAS–II will be determined based on results of forthcoming studies that will provide evidence for the various ways in which the test is likely to be used.

Note. All correlations reported in the following validity studies are *corrected* correlations, unless otherwise noted in table or text.

Correlations With Measures of Adaptive Behavior and Other Types of Behavior Rating Scales

Validity data concerning the ABAS–II and other behavior rating scales is described below. Relationships between the ABAS–II and comprehensive adaptive behavior scales, as well as brief scales of adaptive behavior and problem behavior scales, were examined.

Correlations With the Vineland Adaptive Behavior Scale

Relationships between the ABAS–II Teacher/Daycare Provider Form and the VABS–*Classroom Edition* (VABS–CE) were examined with a nonclinical sample of 44 students ages 3 years 3 months–5 years 11 months, with a mean age of 4 years 7 months. The sample had the following composition: 59% female and 41% male; 57% White, 7% African American, 32% Hispanic, and 4% of other racial/ethnic origin. Table 5.25 reports the mean scores and correlations between the two measures.

The adaptive skills of the sample generally fell within the average range; means and standard deviations were 103 and 11 on the GAC and 100 and 12 on the VABS–CE Adaptive Behavior Composite. The correlation between these overall composite scores was .75. The adaptive domains of the ABAS–II correlated from .58–.73 with the VABS–CE Adaptive Behavior Composite. The ABAS–II Motor Skill Area correlated .61 with the VABS–CE Motor Skills Domain. The correlations between these two comprehensive measures of adaptive behavior are substantial and add support to ABAS–II validity.

Further relationships between the ABAS–II Teacher Form and the VABS–CE were examined with a nonclinical sample of 57 students ages 5–12 years, with a mean age of 8 years 7 months. The sample had the following composition: 42% female and 58% male; 90% White, 5% African American, 3% Hispanic, and 2% of other racial/ethnic origin. The sample was rated by teachers using both the ABAS–II Teacher Form and the VABS–CE. Table 5.25 reports the mean scores and correlations between the two measures.

The adaptive skills of this sample generally fell within the average range; means and standard deviations of overall composite scores were 102 and 14 on the ABAS–II and 100 and 13 on the VABS–CE. The correlation between the GAC and the VABS–CE Adaptive Behavior Composite was .84. Furthermore, scores from all three ABAS–II adaptive domains correlated significantly (.53–.82) with the three VABS–CE domains and Adaptive Behavior Composite. Data from the ABAS–II Work Skill Area and the VABS–CE measure of Motor Skills are not reported because the skills are not common to both measures. The ABAS–II skill areas generally correlated significantly with the VABS–CE domains and Adaptive Behavior Composite. As with the previous sample of children ages 3–5 years, the correlations between the school-age measures are substantial and add additional support to ABAS–II validity.

Table 5.25 Correlation Between the ABAS–II and the VABS–CE

Teacher/Daycare Provider Form (*n* = 44) (Non-Clinical Sample)

	Vineland Scores					ABAS–II	
	Communication Domain	Daily Living Skills Domain	Socialization Domain	Motor Skills Domain	Adaptive Behavior Composite	Mean	*SD*
ABAS–II							
Communication	.49	.27	.39	.50	.53	11.0	2.8
Functional Pre-Academics	.50	.69	.55	.41	.63	10.2	2.5
School Living	.38	.37	.49	.56	.54	10.9	2.2
Health and Safety	.30	.26	.50	.47	.47	11.0	2.4
Leisure	.39	.43	.60	.51	.58	10.3	2.2
Self-Care	.29	.26	.24	.54	.44	11.1	2.6
Self-Direction	.27	.17	.41	.31	.35	10.8	2.4
Social	.44	.29	.58	.61	.60	10.9	1.7
Motor	.51	.40	.45	.61	.61	10.7	2.6
Conceptual Domain	.63	.58	.65	.61	.73	103.0	11.6
Social Domain	.45	.40	.62	.59	.62	102.3	10.0
Practical Domain	.38	.35	.52	.63	.58	104.6	11.8
GAC	.59	.54	.67	.71	.75	103.3	11.0
Vineland							
Mean	96.6	98.7	99.1	108.1	100.3		
SD	13.8	10.2	9.5	16.6	11.9		

Table 5.25 Correlation Between the ABAS–II and the VABS–CE *(continued)*

Teacher Form (*n* = 57) (Non-Clinical Sample)

	Vineland Scores				ABAS–II	
	Communication Domain	Daily Living Skills Domain	Socialization Domain	Adaptive Behavior Composite	Mean	*SD*
ABAS–II						
Communication	.75	.68	.55	.74	9.2	3.1
Community Use	.64	.64	.49	.69	9.4	3.1
Functional Academics	.72	.71	.45	.74	9.2	3.2
School Living	.59	.79	.70	.80	10.2	2.1
Health and Safety	.38	.51	.48	.52	10.2	2.1
Leisure	.71	.75	.67	.72	9.7	2.5
Self-Care	.75	.79	.79	.79	10.4	1.3
Self-Direction	.75	.76	.61	.76	9.4	3.0
Social	.65	.77	.60	.72	10.1	2.2
Conceptual Domain	.76	.75	.53	.77	99.9	17.1
Social Domain	.71	.82	.71	.77	100.4	11.9
Practical Domain	.59	.77	.69	.81	103.0	11.9
GAC	.73	.83	.69	.84	102.3	13.8
Vineland						
Mean	95.7	102.6	99.2	99.8		
SD	16.0	13.3	12.4	13.4		

Relationships between the ABAS–II Parent/Primary Caregiver Form and the VABS–*Interview Edition* (VABS–IE) were examined with a nonclinical sample of 45 children ages 1 month–5 years 9 months with a mean age of 2 years 10 months. The sample had the following composition: 49% female and 51% male; 73% White, 7% African American, 18% Hispanic, and 2% of other racial/ethnic origin. Table 5.26 reports the mean scores and correlations between the two measures.

The adaptive skills of the sample ranged from average to above average; means and standard deviations of overall composite scores were 104 and 16 on the ABAS–II and 112 and 19 on the VABS–IE. The correlation between the GAC and the VABS–IE Adaptive Behavior Composite was .70. Scores from three ABAS–II adaptive domains correlated .49–74 with the four VABS–IE domains. The ABAS–II skill areas in general showed moderate correlations with the VABS–IE domains and Adaptive Behavior Composite. The correlation between the ABAS–II Motor Skill Area and the VABS–IE Motor Skills Domain was .62. As with the teacher forms, the correlations between the ABAS–II and Vineland parent measures are substantial and add further support to ABAS–II validity.

Table 5.26 Correlation Between the ABAS–II and the VABS–IE

Parent/Primary Caregiver Form (*n* = 45) (Non-Clinical Sample)

	Vineland Scores					ABAS–II	
	Communication Domain	Daily Living Skills Domain	Socialization Domain	Motor Skills Domain	Adaptive Behavior Composite	Mean	*SD*
ABAS–II							
Communication	.64	.38	.45	.36	.54	10.8	2.8
Community Use[a]	.64	.47	.47	.54	.63	11.0	2.7
Functional Pre-Academics[a]	.50	.48	.40	.49	.53	10.0	2.4
Home Living[a]	.45	.54	.54	.70	.65	11.3	2.8
Health and Safety	.51	.44	.39	.49	.53	10.8	3.2
Leisure	.68	.57	.63	.47	.68	10.5	2.9
Self-Care	.30	.39	.34	.43	.41	11.0	2.8
Self-Direction	.50	.57	.57	.56	.65	10.9	3.3
Social	.53	.64	.63	.59	.69	11.2	2.5
Motor	.47	.51	.40	.62	.57	10.8	2.6
Conceptual Domain	.61	.55	.57	.50	.66	102.5	15.5
Social Domain	.66	.65	.68	.56	.74	103.6	14.2
Practical Domain	.52	.49	.49	.58	.61	104.4	16.4
GAC	.61	.58	.58	.61	.70	103.9	15.8
Vineland							
Mean	103.5	114.3	112.0	108.2	111.7		
SD	15.3	19.7	20.0	14.6	18.5		

[a]Based on 36 observations.

Correlations With the Scales of Independent Behavior–Revised

Relationships between the ABAS–II and two forms of the SIB–R (*Early Development Form* and *Short Form*) were investigated. The ABAS–II is a comprehensive, diagnostic measure of adaptive behavior designed to measure the skill areas and domains specified by the AAMR (2002b) and *DSM–IV–TR*. It is not a brief form or screener. In contrast, the SIB–R forms used in the study are brief versions, have only 40 items each, and are more limited in the number and type of scores that they provide. The validity studies between the ABAS–II and SIB–R forms described below provide general information about how a more limited assessment, such as an SIB–R brief form, may relate to the comprehensive, detailed assessment provided by the ABAS–II. The SIB–R brief forms used in the present studies had low correlations with the ABAS–II, compared to the higher correlations between the ABAS–II and the Vineland, a comprehensive measure of adaptive behavior.

Relationships between the ABAS–II Parent/Primary Caregiver Form and the SIB–R: *Early Development Form* were evaluated with a nonclinical sample of 34 children ages 2 months–1 year 11 months, with a mean age of 1 year 2 months. The sample had the following composition: 56% female and 44% male; 50% White, 23% African American, 21% Hispanic, and 6% of other racial/ethnic origin. Table 5.27 reports the mean scores and correlations between the two measures.

The adaptive skills of the sample generally fell within the average range; the mean and standard deviation of the GAC were 102 and 14, and the mean and standard deviation of the SIB–R: *Early Development Form* Broad Independence Scale were 110 and 12. The SIB–R: *Early Development Form* Broad Independence standard score correlated .18 with the GAC, and also had low correlations with the adaptive domains and skill areas.

Table 5.27 Correlation Between the ABAS–II and the SIB–R

Parent/Primary Caregiver Form and SIB–R: *Early Development Form* (*n* = 34) (Non-Clinical Sample)

	SIB–R	ABAS–II	
	Broad Independence Score	**Mean**	***SD***
ABAS–II			
Communication	.41	10.4	2.6
Community Use[a]	-.04	10.5	2.9
Functional Pre-Academics[a]	.16	10.7	3.2
Home Living[a]	.07	10.7	2.6
Health and Safety	.16	9.8	3.2
Leisure	.15	10.6	2.6
Self-Care	.04	10.5	2.2
Self-Direction	.00	10.6	2.5
Social	.23	10.6	2.1
Motor	.21	10.5	2.0
Conceptual Domain	.25	102.2	13.9
Social Domain	.20	101.9	12.1
Practical Domain	.10	100.4	14.4
GAC	.18	101.8	13.8
SIB–R			
Mean	109.9		
SD	12.1		

Teacher/Daycare Provider Form and SIB–R: *Short Form* (*n* = 35) (Non-Clinical Sample)

	SIB–R	ABAS–II	
	Broad Independence Score	**Mean**	***SD***
ABAS–II			
Communication	.50	10.4	3.5
Functional Pre-Academics	.32	10.1	2.8
School Living	.55	11.3	2.3
Health and Safety	.51	10.6	2.7
Leisure	.36	10.6	2.7
Self-Care	.67	11.1	2.2
Self-Direction	.45	10.7	3.1
Social	.36	10.5	3.1
Motor	.14	11.5	2.4
Conceptual Domain	.56	101.3	15.2
Social Domain	.40	102.1	14.6
Practical Domain	.63	104.5	12.2
GAC	.59	103.5	13.5
SIB–R			
Mean	111.6		
SD	13.6		

[a]Based on 20 observations.

Further relationships between the ABAS–II Teacher/Daycare Provider Form and the SIB–R: *Short Form* were evaluated with a nonclinical sample of 35 children ages 2 years 0 months–5 years 11 months with a mean age of 4 years 0 months. The sample had the following composition: 47% female and 53% male; 31% White, 36% African American, 28% Hispanic, and 5% of other racial/ethnic origin. Table 5.27 reports the mean scores and correlations between the two measures.

The adaptive skills of the sample generally fell within the average to above average range; the mean and standard deviation of the GAC were 104 and 14, and the mean and standard deviation of the SIB–R Broad Independence Scale were 112 and 14. The correlation between the GAC and the SIB–R Broad Independence standard score is .59.

Correlation With the Behavior Assessment Scale for Children

The BASC is a behavior rating scale that measures primarily negative (clinical) dimensions of behavior and personality. It is designed for the differential diagnosis and educational classification of a variety of children's emotional and behavioral disorders. Adaptive behavior, as measured by the ABAS–II, may be inversely related to negative behaviors, as measured by the BASC, especially for children diagnosed with emotional or behavior disorders, or with co-morbidity of mental retardation and emotional or behavior disorders. For this reason, a study examining correlations between the Teacher/Daycare Provider Form and the BASC Teacher Rating Scale was conducted with a nonclinical sample of 37 children ranging in age from 4 years 0 months–5 years 10 months with a mean age of 4 years 11 months. The sample had the following composition: 49% female and 51% male; 49% White, 32% African American, 16% Hispanic, and 3% of other racial/ethnic origin. Table 5.28 reports the mean scores and correlations between the two measures.

The scores for the sample generally fell within the average range. The mean GAC was 107, and the mean *T* scores of the BASC problem behavior composites ranged from 45–46. The correlations between the GAC and BASC Externalizing Problems, Internalizing Problems, and Behavior Symptoms Index composites were –.49, –.39, and –.66 respectively.

Although the primary emphasis of the BASC is on negative dimensions of personality and behavior, it also includes a few specific scales of positive behaviors (i.e., adaptability and social skills) as well as an adaptive skill composite. However, the BASC scales do not measure the comprehensive adaptive behavior and adaptive skill areas assessed by the ABAS–II and required by the AAMR (2002b), *DSM–IV–TR* and IDEA (1999) for the diagnosis of mental retardation. The positive behavior scales of the BASC are intended to assist in the interpretation of its problem behavior scales. The correlation between the GAC and the BASC Adaptive Skills Composite was .80.

Correlations With Measures of Intelligence and Achievement

Although instruments that assess adaptive skills and instruments that measure intelligence or achievement (cognitive measures) are often used together in clinical assessment, the two general types of instruments are quite different and serve separate assessment purposes. Adaptive behavior assessment generally involves the use of behavior rating scales and focuses on typical, everyday activities. Measures of intelligence and achievement emphasize internal cognitive processes, are directly administered to examinees through ability test items, and focus on correct or incorrect answers in a testing situation. As summarized by Boan and Harrison (1997), previous research has found generally moderate correlations between adaptive skill scales and intelligence tests. Keith, Fehrmann, Harrison, and Pottebaum (1987) explored several models to explain the relationship between adaptive skill and intelligence and found the most support for the model explaining that adaptive skill and intelligence are separate but related constructs. The results described in the next section correlating the ABAS–II and cognitive assessments are consistent with this model.

Table 5.28 Correlation Between the ABAS–II and the BASC

Teacher/Daycare Provider Form (*n* = 37) (Non-Clinical Sample)

	BASC Behavior Scales										BASC Composite Scores				ABAS–II	
	Hyperactivity	Aggression	Anxiety	Depression	Somatization	Atypicality	Withdrawal	Attention Problems	Adaptability	Social Skills	Externalizing Problems Composite	Internalizing Problems Composite	Adaptive Skills Composite	Behavioral Symptoms Index	Mean	*SD*
ABAS–II																
Communication	–.23	–.15	–.17	–.28	–.29	–.47	–.40	–.36	.42	.29	–.18	–.28	.39	–.36	11.6	3.1
Functional Pre-Academics	–.06	.00	–.22	–.26	.12	–.20	–.52	–.40	.40	.52	–.02	–.11	.51	–.26	10.4	2.7
School Living	–.62	–.58	–.60	–.73	–.23	–.64	–.46	–.80	.70	.64	–.63	–.56	.72	–.80	11.6	1.8
Health and Safety	–.25	–.59	–.01	–.45	.00	.04	–.29	–.28	.67	.55	–.48	–.13	.65	–.31	11.5	2.0
Leisure	–.39	–.43	–.24	–.50	–.09	–.41	–.54	–.56	.66	.71	–.43	–.27	.74	–.54	10.9	2.4
Self-Care	.07	.10	–.20	–.29	.03	.04	–.11	–.23	.14	.07	.07	–.16	.13	–.13	11.6	2.1
Self-Direction	–.55	–.59	–.08	–.38	.03	–.33	–.28	–.74	.74	.65	–.60	–.12	.74	–.58	11.5	2.3
Social	–.51	–.37	–.32	–.63	–.19	–.73	–.49	–.72	.58	.61	–.46	–.40	.64	–.70	11.5	2.0
Motor	–.24	–.35	–.30	–.42	–.27	–.42	–.33	–.40	.52	.40	–.31	–.36	.50	–.45	11.3	2.6
Conceptual Domain	–.36	–.30	–.23	–.43	–.11	–.47	–.57	–.65	.70	.63	–.35	–.26	.73	–.53	106.2	12.7
Social Domain	–.46	–.43	–.29	–.60	–.15	–.60	–.54	–.67	.66	.69	–.46	–.35	.72	–.66	105.8	11.1
Practical Domain	–.43	–.57	–.43	–.72	–.08	–.28	–.46	–.64	.73	.64	–.54	–.43	.73	–.63	107.8	7.8
GAC	–.44	–.49	–.36	–.63	–.15	–.51	–.59	–.70	.77	.73	–.49	–.39	.80	–.66	107.2	10.6
BASC																
Mean	45.4	45.3	48.5	42.5	49.4	46.7	45.0	48.6	51.9	52.4	45.1	45.9	52.4	45.0		
SD	6.5	7.0	9.4	5.5	9.8	8.5	8.4	11.6	9.3	9.9	6.8	9.0	9.8	8.1		

Note. BASC means and standard deviations based on *T* scores. Higher problem behavior scale *T* scores indicate a greater frequency of the problem behaviors included in the scale; higher positive behavior scale *T* scores indicate a greater frequency of the positive behaviors included in the scale.

Correlations With the Wechsler Preschool and Primary Scale of Intelligence–Third Edition

Correlations between the ABAS–II and the WPPSI–III were investigated using two samples. Each sample was administered the WPPSI–III and rated on the Teacher/Daycare Provider Form (sample 1) or Parent/Primary Caregiver Form (sample 2).

Table 5.29 Correlation Between the ABAS–II and the WPPSI–III

Sample 1

Teacher/Daycare Provider Form		**WPPSI–III Scores**					**ABAS–II**	
(Non-Clinical Sample)	***n***	**VIQ**	**PIQ**	**PSQ**	**FSIQ**	**GLC**	**Mean**	***SD***
ABAS–II								
Communication	229	.58	.41	.40	.53	.51	8.2	3.8
Functional Pre-Academics	229	.57	.53	.54	.60	.58	8.6	3.6
School Living	229	.52	.46	.41	.51	.47	9.0	3.4
Health and Safety	229	.60	.47	.46	.58	.57	8.7	3.5
Leisure	229	.52	.44	.45	.51	.50	9.1	3.3
Self-Care	229	.57	.49	.41	.56	.52	8.9	3.2
Self-Direction	229	.58	.46	.45	.57	.52	9.1	3.4
Social	229	.51	.40	.42	.50	.45	8.5	3.6
Motor	229	.50	.45	.35	.51	.45	8.9	3.4
Conceptual Domain	229	.65	.51	.50	.63	.59	90.5	19.4
Social Domain	229	.53	.41	.44	.51	.48	92.1	18.6
Practical Domain	229	.60	.50	.45	.59	.56	91.5	18.7
GAC	229	.62	.50	.47	.61	.57	90.7	19.3
WPPSI–III								
n		225	223	152	218	229		
Mean		92.5	93.2	92.5	92.3	94.0		
SD		19.0	18.2	18.3	19.4	18.0		

Sample 2

Parent/Primary Caregiver Form		**WPPSI–III Scores**					**ABAS–II**	
(Non-Clinical Sample)	***n***	**VIQ**	**PIQ**	**PSQ**	**FSIQ**	**GLC**	**Mean**	***SD***
ABAS–II								
Communication	306	.56	.47	.46	.54	.54	9.0	3.7
Community Use	306	.54	.46	.45	.53	.50	9.0	3.4
Functional Pre-Academics	306	.56	.58	.59	.62	.58	9.1	3.3
Home Living	306	.31	.32	.46	.34	.31	9.3	3.0
Health and Safety	306	.40	.40	.43	.42	.36	9.3	3.6
Leisure	306	.49	.49	.51	.53	.45	9.3	3.6
Self-Care	306	.44	.42	.46	.46	.41	9.4	3.3
Self-Direction	306	.47	.44	.49	.49	.46	9.4	3.3
Social	306	.43	.41	.44	.44	.42	9.3	3.4
Motor	306	.42	.46	.50	.47	.40	9.2	3.3
Conceptual Domain	306	.58	.53	.55	.60	.57	93.0	19.0
Social Domain	306	.46	.44	.48	.49	.43	94.2	19.4
Practical Domain	306	.47	.43	.48	.48	.42	93.7	18.3
GAC	306	.51	.48	.52	.54	.47	92.9	19.6
WPPSI–III								
n		306	303	185	297	312		
Mean		94.2	94.4	93.6	94.1	95.1		
SD		18.8	18.5	19.0	19.3	18.2		

Note. **VIQ** = Verbal IQ; **PIQ** = Performance IQ; **PSQ** = Processing Speed Quotient; **FSIQ** = Full Scale IQ; **GLC** = General Language Composite.

Sample 1 consisted of 229 children ages 2 years 6 month–5 years 11 months, with a mean age of 4 years 6 months, with no reported disabilities. The sample had the following composition: 40% female and 60% male; 67% White, 18% African American, 9% Hispanic, and 6% of other racial/ethnic origin.

Sample 2 consisted of 306 children ages 2 years 6 months–5 years 11 months, with a mean age of 4 years 4 months, with no reported disabilities. The sample had the following composition: 40% female and 60% male; 68% White, 18% African American, 8% Hispanic, and 6% of other racial/ethnic origin. Table 5.29 reports the mean scores and correlations between the measures.

The results for Sample 1 show that the mean of the Teacher/Daycare Provider Form GAC was 91, and the mean of the WPPSI–III Full Scale IQ (FSIQ) was 92. The GAC correlated .61 with the WPPSI–III FSIQ. Correlations between the GAC and the WPPSI–III Verbal IQ (VIQ), Performance IQ (PIQ) and General Language Composite (GLC) were .62, .50 and .57, respectively. The FSIQ scores of the WPPSI–III showed the highest correlations with the Conceptual Adaptive Domain (.63) and the Functional Pre-Academics Skill Area (.60). In addition, the WPPSI–III VIQ correlated .65 with the Conceptual Adaptive Domain.

For Sample 2, the mean of the GAC on the Parent/Primary Caregiver Form was 93, and the mean of the WPPSI–III FSIQ was 94. The GAC correlated .54 with the WPPSI–III FSIQ. Correlations between the GAC and WPPSI –III scores were .51, .48 and .47 for VIQ, PIQ, and GLC, respectively. As found in Sample 1, the FSIQ scores of the WPPSI–III showed the highest correlations with the Conceptual Adaptive Domain (.60) and the Functional Pre-Academics Skill Area (.62). Also similar to Sample 1, the WPPSI–III VIQ correlated .58 with the Conceptual Adaptive Domain. Overall, the correlations between the WPPSI–III and parent ratings are moderate, and slightly lower than those of the teacher ratings.

Results from both samples suggest generally moderate levels of correlation between ABAS–II and WPPSI–III IQ scores. Among the skill areas, Functional Pre-Academics generally displayed the highest correlation with WPPSI–III FSIQ. Among the adaptive domains, Conceptual displayed the highest correlation with the WPPSI–III FSIQ. Correlations generally were in the .50s and .60s, suggesting that for preschool ages, adaptive skills, as measured by the ABAS–II, are related to intelligence, as measured by the WPPSI–III, though the two constructs are somewhat distinct. These results are expected when comparing an adaptive behavior assessment that requires a parent or teacher to rate the degree to which a child independently uses adaptive skills in daily life, and a cognitive assessment that requires a child to answer questions and solve problem in a structured testing situation.

Correlations With the Wechsler Intelligence Scale for Children–Third Edition

Correlations between the ABAS–II and the WISC–III were investigated using three samples. Each sample was administered the WISC–III and rated on the Parent Form (sample 1) or Teacher Form (samples 2 and 3).

Sample 1 consisted of 49 children ages 7–17 years, with a mean age of 12 years, with no reported disabilities. The sample had the following composition: 46% female and 54% male; 75% White, 4% African American, 18% Hispanic, and 3% of other racial/ethnic origin.

Sample 2 was a mixed-clinical sample that included 116 children with different clinical diagnoses. Most (46%) were classified as exhibiting mild mental retardation; other classifications included moderate mental retardation (23%), speech/language impairment (11%), as well as ADHD , emotional disturbance, learning disabilities, and severe mental retardation (categories that constituted the remaining 20%). The children's ages ranged from 6–16 years, with a mean age of 11 years. The sample had the following composition: 40% female and 60% male; 67% White, 6% African American, 17% Hispanic, and 10% of other racial/ethnic origin.

Sample 3 included 21 children ages 7–16 years, with a mean age of 11 years, with no reported disabilities. The sample had the following composition: 42% female and 58% male; 75% White, 17% Hispanic, and 8% of other racial/ethnic origin. Table 5.30 reports the mean scores and correlations between the measures.

Table 5.30 Correlation Between the ABAS–II and the WISC–III

Sample 1 (*n* = 49)

Parent Form	**WISC–III Scores**			**ABAS–II**	
(Non-Clinical Sample)	**VIQ**	**PIQ**	**FSIQ**	**Mean**	***SD***
ABAS–II					
Communication	.34	.31	.36	10.4	2.3
Community Use	.46	.47	.52	10.4	2.3
Functional Academics	.55	.56	.61	10.2	2.6
Home Living	.22	.29	.29	9.7	3.4
Health and Safety	.37	.42	.45	10.3	2.8
Leisure	.27	.35	.33	9.9	2.4
Self-Care	.12	.05	.11	10.4	2.2
Self-Direction	.23	.26	.27	10.1	2.8
Social	.25	.24	.28	9.5	3.0
Conceptual Domain	.44	.46	.50	102.0	12.1
Social Domain	.31	.31	.34	98.6	12.6
Practical Domain	.41	.43	.48	101.8	12.3
GAC	.42	.45	.48	101.5	13.3
WISC–III					
Mean	106.6	104.4	106.0		
SD	12.6	12.4	12.4		

Sample 2

Teacher Form		**WISC–III Scores**			**ABAS–II**	
(Clinical Sample)	***n***	**VIQ**	**PIQ**	**FSIQ**	**Mean**	***SD***
ABAS–II						
Communication	116	.47	.34	.43	4.4	3.6
Community Use	114	.41	.32	.43	4.5	3.6
Functional Academics	115	.50	.46	.54	3.9	3.3
Home Living	115	.13	.16	.20	6.2	3.9
Health and Safety	115	.28	.31	.34	5.4	3.6
Leisure	115	.38	.30	.38	6.5	3.2
Self-Care	116	.23	.34	.32	5.9	4.2
Self-Direction	116	.22	.17	.26	4.8	3.5
Social	116	.25	.19	.25	6.4	3.8
Conceptual Domain	115	.41	.32	.43	72.7	18.8
Social Domain	115	.36	.29	.36	82.9	17.0
Practical Domain	114	.29	.34	.38	75.4	20.6
GAC	114	.35	.35	.40	72.6	19.7
WISC–III						
n		107	107	116		
Mean		69.6	70.9	66.8		
SD		14.4	16.0	15.8		

Note. **VIQ** = Verbal IQ; **PIQ** = Performance IQ; **FSIQ** = Full Scale IQ.

Table 5.30 Correlation Between the ABAS–II and the WISC–III *(continued)*

Sample 3 (*n* = 21)

Teacher Form	WISC–III Scores			ABAS–II	
(Non-Clinical Sample)	**VIQ**	**PIQ**	**FSIQ**	**Mean**	***SD***
ABAS–II					
Communication	.35	.39	.40	9.5	2.7
Community Use	.37	.51	.48	10.5	2.2
Functional Academics	.49	.53	.56	10.5	2.3
School Living	.73	.77	.81	10.6	2.0
Health and Safety	.55	.44	.55	10.6	1.5
Leisure	.54	.63	.61	11.0	1.3
Self-Care	.44	.51	.51	10.3	1.6
Self-Direction	.79	.76	.83	10.5	1.6
Social	.56	.44	.56	10.7	2.2
Conceptual Domain	.47	.55	.56	106.8	11.2
Social Domain	.46	.48	.52	106.6	11.2
Practical Domain	.61	.67	.69	106.3	10.8
GAC	.60	.63	.67	106.8	10.9
WISC–III					
Mean	104.4	103.5	104.3		
SD	14.0	13.8	13.8		

Note. **VIQ** = Verbal IQ; **PIQ** = Performance IQ; **FSIQ** = Full Scale IQ.

The results for Sample 1 show that the mean of the Parent Form GAC and the WISC–III FSIQ were 102 and 106, respectively. The GAC correlated .48 with the WISC–III FSIQ. Its correlations with the VIQ and PIQ were .42 and .45 respectively. As expected, FSIQ scores of the WISC–III correlated most highly with the Conceptual Adaptive Domain (.50) and the Functional Academics Skill Area (.61).

For Sample 2, the mean scores were 73 for the Teacher Form GAC and 67 for the WISC–III FSIQ. The GAC correlated .40 with the WISC–III FSIQ. The WISC–III VIQ and PIQ both correlated .35 with the GAC. The Conceptual Adaptive Domain and the Functional Academics Skill Area displayed the highest correlations with the WISC–III FSIQ (.43 and .54 respectively).

The results for Sample 3 show that the mean of the Teacher Form GAC and the WISC–III FSIQ were 107 and 104, respectively. The GAC correlated .67 with the WISC–III FSIQ. Correlations with the WISC–III VIQ and PIQ were .60 and .63, respectively. The FSIQ of the WISC–III showed the highest correlation with the School Living (.81) and Self-Direction (.83) Skill Areas. Interestingly, among the adaptive domains, the Practical Domain displayed the highest correlation with the WISC–III FSIQ (.69).

The results are similar to those found in the WPPSI–III study and suggest generally moderate levels of correlation between the GAC and the WISC–III IQ scores. Out of the three adaptive domains, the Conceptual Domain generally correlated most highly with the WISC–III FSIQ, and among the skill areas, Functional Academics generally correlated most highly with the WISC–III FSIQ. The Teacher Form correlated more highly with the WISC–III than did the Parent Form. The non-clinical sample rated by teachers showed the highest correlations, which were typically in the .60s. Correlations on the other two samples generally were in the .30s and .40s, suggesting that adaptive skills, as measured by the ABAS–II, and intelligence, as measured by the WISC–III, are relatively distinct but related constructs.

Correlations With the Wechsler Intelligence Scale for Children–Fourth Edition

Correlations between the ABAS–II and the WISC–IV were investigated using two samples. Each sample was administered the WISC–IV and rated on the Parent Form (sample 1) or Teacher Form (sample 2).

Sample 1 consisted of 122 children ages 6–16 years, with a mean age of 11 years, with no reported disabilities. The sample had the following composition: 52% female and 48% male; 54% White, 32% African American, 8% Hispanic, and 6% of other racial/ethnic origin.

Sample 2 included 145 children ages 6–16 years, with a mean age of 10 years, with no reported disabilities. The sample had the following composition: 56% female and 44% male; 57% White, 30% African American, 6% Hispanic, and 7% of other racial/ethnic origin. Table 5.31 reports the mean scores and correlations between the measures.

Table 5.31 Correlation Between the ABAS–II and the WISC–IV

Sample 1

Parent Form		**WISC–IV Scores**					**ABAS–II**	
(Non-Clinical sample)	***n***	**VCI**	**PRI**	**WMI**	**PSI**	**FSIQ**	**Mean**	***SD***
ABAS–II								
Communication	122	.47	.42	.48	.25	.54	10.4	3.1
Community Use	122	.29	.11	.31	.12	.28	10.1	3.3
Functional Academics	122	.43	.29	.44	.13	.43	10.1	3.2
Home Living	122	.15	.11	.19	.21	.22	9.1	3.8
Health and Safety	122	.30	.20	.20	.08	.27	10.3	2.7
Leisure	122	.46	.36	.45	.27	.48	9.9	3.1
Self-Care	122	.12	.19	.14	.21	.16	9.4	2.8
Self-Direction	122	.30	.28	.26	.27	.35	9.8	3.4
Social	122	.23	.20	.22	.11	.20	9.3	3.6
Conceptual Domain	122	.45	.37	.45	.25	.49	101.1	15.7
Social Domain	122	.36	.27	.35	.18	.35	98.3	15.8
Practical Domain	122	.25	.16	.25	.18	.28	99.3	15.5
GAC	122	.39	.30	.38	.23	.41	99.4	16.9
WISC–IV								
n		120	121	118	119	112		
Mean		99.7	100.2	100.4	98.5	99.7		
SD		14.3	13.7	14.1	12.5	13.3		

Sample 2

Teacher Form		**WISC–IV Scores**					**ABAS–II**	
(Non-Clinical sample)	***n***	**VCI**	**PRI**	**WMI**	**PSI**	**FSIQ**	**Mean**	***SD***
ABAS–II								
Communication	145	.37	.37	.20	.30	.50	9.9	2.4
Community Use	145	.36	.26	.27	.30	.47	10.2	2.4
Functional Academics	145	.36	.39	.39	.40	.57	10.2	2.5
School Living	145	.28	.26	.38	.27	.47	10.1	2.9
Health and Safety	145	.37	.31	.34	.27	.52	9.9	2.5
Leisure	145	.24	.19	.24	.22	.37	10.5	2.3
Self-Care	145	.39	.34	.22	.16	.46	10.0	2.5
Self-Direction	144	.39	.41	.30	.34	.57	10.0	2.6
Social	145	.27	.28	.24	.25	.43	10.5	2.4
Conceptual Domain	144	.44	.45	.34	.39	.63	104.9	12.7
Social Domain	145	.29	.26	.26	.26	.43	104.8	13.7
Practical Domain	145	.41	.35	.32	.27	.53	103.4	14.0
GAC	144	.42	.39	.35	.34	.58	104.8	14.2
WISC–IV								
n		142	145	141	145	139		
Mean		100.6	99.3	101.0	99.3	100.5		
SD		11.0	11.8	13.4	13.8	11.1		

Note. **VCI** = Verbal Comprehension Index; **PRI** =Perceptual Reasoning Index; **WMI** = Working Memory Index; **PSI** = Processing Speed Index; **FSIQ** = Full Scale IQ.

The results for Sample 1 show that the mean of the Parent Form GAC and the WISC–IV FSIQ were 99 and 100, respectively. The GAC correlated .41 with the WISC–IV FSIQ. Its correlations with the VCI and PRI were .39 and .30 respectively. The FSIQ scores of the WISC–IV correlated most highly with the Conceptual Adaptive Domain (.49) and the Communication Skill Area (.54).

For Sample 2, the mean scores were 105 for the Teacher Form GAC and 101 for the WISC–IV FSIQ. The WISC–IV FSIQ correlated .58 with the GAC. Correlations between the GAC and the WISC–IV VCI and PRI were .42 and .39, respectively. As expected, the Conceptual Adaptive Domain and the Functional Academics Skill Area displayed the highest correlations with the WISC–IV FSIQ, correlating .63 and .57 respectively.

Overall results suggest moderate levels of correlation between the GAC and the WISC–IV scores. Out of the three adaptive domains, the Conceptual Domain generally correlated most highly with the WISC–IV FSIQ. Correlations generally were in the .40s and .50s, suggesting that adaptive skills as measured by the ABAS–II, and intelligence as measured by the WISC–IV, are related but certainly distinct. As in WPPSI–III and WISC–III studies, teacher ratings correlated more highly with the WISC–IV scores than did parent ratings.

Correlations With the Wechsler Adult Intelligence Scale–Third Edition

Relationships between the ABAS–II and the WAIS–III were evaluated with a nonclinical sample of 37 adults ages 16–71 years, with a mean age of 33 years. The sample had the following composition: 70% female and 30% male; 91% White, 3% African American, 3% Hispanic, and 3% of other racial/ethnic origin. The sample was administered the WAIS–III and asked to rate themselves using the Adult Form. The mean scores and correlations between the measures are reported in Table 5.32.

Table 5.32 Correlation Between the ABAS–II and the WAIS–III

Adult Form, Self Report (*n* = 37)	**WAIS–III Scores**			**ABAS–II**	
(Non-Clinical Sample)	**VIQ**	**PIQ**	**FSIQ**	**Mean**	***SD***
ABAS–II					
Communication	.41	.41	.45	11.9	2.0
Community Use	.45	.38	.46	11.7	2.4
Functional Academics	.38	.45	.46	11.9	2.3
Home Living	.36	.39	.41	11.4	2.3
Health and Safety	.19	.28	.24	11.5	1.7
Leisure	.45	.31	.43	11.1	2.5
Self-Care	.63	.52	.65	11.2	1.5
Self-Direction	.45	.38	.47	11.4	2.2
Social	.59	.60	.63	11.6	1.7
Work[a]	.49	.11	.38	12.3	1.1
Conceptual Domain	.46	.41	.48	109.8	11.6
Social Domain	.54	.44	.54	106.7	11.0
Practical Domain (Without Work)	.47	.35	.47	108.4	11.3
Practical Domain (With Work)[a]	.57	.33	.52	109.6	10.2
GAC (Without Work)	.55	.50	.58	108.5	10.3
GAC (With Work)[a]	.72	.50	.67	109.4	9.0
WAIS–III					
Mean	111.4	110.6	111.4		
SD	11.9	10.6	11.0		

Note. **VIQ** = Verbal IQ; **PIQ** = Performance IQ; **FSIQ** = Full Scale IQ.

[a]Based on 34 observations.

The mean GAC was 109 and the mean WAIS–III FSIQ was 111. The GAC correlated .67 with the WAIS–III FSIQ. The WAIS–III VIQ and PIQ correlated .72 and .50, respectively, with the GAC. Correlations between the WAIS–III FSIQ and the adaptive domains generally were in the .40s and .50s. Correlations between the WAIS–III FSIQ and the skill areas generally were in the .40s.

Correlations With the Wechsler Abbreviated Scale of Intelligence

Relationships between the ABAS–II and the WASI were evaluated with a sample of 72 individuals ages 7–21 years, with a mean age of 12 years, with no reported disabilities. The sample had the following composition: 51% female and 49% male; 75% White, 17% African American, 3% Hispanic, and 5% of other racial/ethnic origin. The sample was administered the WASI and rated using the Parent Form. The mean scores and correlations between the measures are reported in Table 5.33.

Table 5.33 Correlation Between the ABAS–II and the WASI

Parent Form (*n* = 72) (Non-Clinical Sample)	**WASI Scores**				**ABAS–II**	
	VIQ	**PIQ**	**FSIQ (2 Subtests)**	**FSIQ (4 Subtests)**	**Mean**	***SD***
ABAS–II						
Communication	.39	.40	.40	.44	10.0	2.4
Community Use	.32	.34	.31	.36	10.6	2.6
Functional Academics	.29	.40	.36	.38	10.4	2.7
Home Living	.13	.16	.21	.15	9.8	3.3
Health and Safety	.33	.39	.35	.39	10.3	2.9
Leisure	.33	.40	.35	.40	10.0	2.8
Self-Care	.23	.34	.30	.31	10.3	2.8
Self-Direction	.22	.39	.29	.34	9.7	3.3
Social	.31	.42	.38	.41	9.4	3.4
GAC	.32	.43	.39	.42	100.4	15.1
WASI						
Mean	99.0	99.5	98.7	99.4		
SD	10.6	11.5	11.4	10.9		

Note. Adaptive Domain correlations not available for WASI data.

Note. **VIQ** = Verbal IQ; **PIQ** = Performance IQ; **FSIQ** = Full Scale IQ.

Mean scores were 99 for the WASI 4-subtest FSIQ and 100 for the GAC. The GAC correlated .42 with the WASI 4-subtest FSIQ, and correlated .32, .43, and .39 with the WASI VIQ, PIQ, and 2-subtest FSIQ, respectively. These results suggest a moderate relationship between the ABAS–II and the WASI.

Correlations With The Stanford Binet Intelligence Scale–Fourth Edition

Correlations between the ABAS–II and the SB–IV were evaluated with a mixed clinical sample of 19 individuals who had diagnoses of Autistic Disorder (15%) and mental retardation (85%). The sample ranged in age from 6–21 years, with a mean age of 11 years, and had the following composition: 42% female and 58% male; 68% White, 21% African American, and 11% Hispanic. The sample was administered the SB–IV and rated using the Teacher Form. The mean scores and correlations between the two measures are reported in Table 5.34.

As expected, the performance of the sample on both measures is low. Mean scores were 51 on the SB–IV Standard Age Score (SAS) and 61 on the GAC. The correlation between the GAC and the SB–IV SAS is .39. The Social Domain showed the highest correlation (.73) with the SB–IV SAS. This pattern of correlation was to be expected with this sample because it consisted primarily of individuals with mental retardation whose scores on the Conceptual Domain were significantly more restricted than their scores on the Social Domain.

Table 5.34 Correlation Between the ABAS–II and the SB–IV

Teacher Form (*n* = 19) (Clinical Sample)	SB–IV Composite SAS	ABAS–II Mean	ABAS–II *SD*
ABAS–II			
Communication	.43	2.7	2.3
Community Use	.34	2.7	3.0
Functional Academics	.48	2.3	2.3
School Living	.40	5.0	3.9
Health and Safety	.31	4.0	3.5
Leisure	.67	4.9	3.3
Self-Care	.10	4.1	3.7
Self-Direction	.34	3.6	3.0
Social	.56	4.4	3.3
Conceptual Domain	.44	62.4	15.0
Social Domain	.73	73.4	15.1
Practical Domain	.34	64.0	19.9
GAC	.39	61.2	18.1
SB–IV			
Mean	50.8		
SD	*12.3*		

Note. **SAS** = Standard Age Score.

Correlations With the Wechsler Individual Achievement Test

Correlations between the ABAS–II and the WIAT were examined with a mixed clinical sample of 44 children diagnosed with mental retardation (68%), learning disabilities (18%), ADHD (9%), and speech/language impairments (5%), ages 7–15 years, with a mean age of 13 years. The sample had the following composition: 32% female and 68% male; 86% White, 9% African American, and 5% of other racial/ethnic origin. The sample was administered the WIAT and rated using the Teacher Form. The mean scores and correlations between the measures are reported in Table 5.35.

Table 5.35 Correlation Between the ABAS–II and the WIAT

Teacher Form (*n* = 44) (Clinical Sample)	WIAT Scores: Basic Reading	WIAT Scores: Math Reasoning	WIAT Scores: Reading Comprehension[a]	WIAT Scores: Numerical Operations[b]	ABAS–II Mean	ABAS–II *SD*
ABAS–II						
Communication	.51	.60	.55	.63	4.6	4.1
Community Use[a]	.53	.58	.53	.63	4.8	3.7
Functional Academics	.45	.60	.56	.70	5.0	4.2
School Living	.40	.54	.45	.65	5.3	3.9
Health and Safety[a]	.35	.48	.48	.49	4.7	3.9
Leisure	.52	.63	.62	.72	6.7	3.5
Self-Care	.44	.48	.39	.52	4.9	4.3
Self-Direction	.34	.47	.39	.56	5.3	4.0
Social	.41	.52	.45	.58	6.2	4.2
Conceptual Domain	.41	.54	.49	.67	75.2	24.1
Social Domain	.44	.57	.53	.68	83.8	21.1
Practical Domain[a]	.39	.53	.44	.67	74.1	21.5
GAC[a]	.39	.52	.46	.63	71.4	24.1
WIAT						
Mean	74.6	74.0	76.1	73.0		
SD	16.2	13.3	15.2	15.7		

[a]Based on 43 observations.

[b]Based on 40 observations.

Complete WIAT data were available on four composites: Basic Reading ($n = 44$), Reading Comprehension ($n = 43$), Numerical Operations ($n = 40$), and Math Reasoning ($n = 44$). Correlations between the GAC and the four WIAT composites follow: Numerical Operations .63; Math Reasoning, .52; Reading Comprehension .46; and Basic Reading .39. The Conceptual, Social, and Practical Adaptive Domains correlated most highly with Numerical Operations (.67, .68, and .67 respectively). Overall correlations between the ABAS–II and the WIAT are moderate for this mixed clinical sample.

Summary of Comparison Studies

Evidence of convergent validity is found in relationships between the ABAS–II and the VABS, which are both comprehensive measures of adaptive behavior. In contrast with its generally high correlations with the VABS, the ABAS–II displays lower correlations with brief behavior rating scales (generally in the .50s and lower), measures of problem behavior (ranging from the –.30s to the –.60s), measures of intelligence (generally in the .40s and .50s.), and measures of achievement (generally in the .60s).

Clinical Validity Studies

In addition to correlations with other measures, important evidence of the convergent and discriminant validity of the ABAS–II is found in its ability to distinguish between individuals with and without disabilities. The ABAS–II is designed to be used in diagnostic assessment, intervention planning and treatment programs for individuals with various disabilities and mental and physical disorders. Data were collected for individuals diagnosed with biological risk factors, motor impairments, language disorders, developmental delays, pervasive developmental disorders, mental retardation, Attention-Deficit/Hyperactivity Disorder, behavior disorders, emotional disturbances, hearing impairments, physical impairments, learning disabilities, Alzheimer's disease, and neuropsychological disorders. For each of the clinical samples a matched control group was selected from the related standardization sample. Each member of the control group was matched with one member of the clinical group in reference to the following demographic variables: age, sex, education (parent or self), race/ethnicity, and geographic region. Mean scores of clinical samples were compared to mean scores of their matched control group; a conservative alpha level of .01 was used to identify significant differences between clinical samples and control groups.

Independent researchers collected data, and potential participants were drawn from a variety of clinical settings. However, it is important to note the limitations of these studies. The samples were not randomly selected but were selected by convenience. Therefore, these samples may not be statistically representative. Because data in each clinical sample were collected in a variety of clinical settings, the diagnoses of different cases might be made on the basis of different criteria and procedures. The sample sizes for some studies were relatively small. Only group performance was reported. For these reasons the performance data from these samples are presented as examples and are not intended to be definitive representations of the diagnostic groups. The purpose of these clinical studies is to demonstrate that the ABAS–II can provide a valid assessment of adaptive skills for individuals in these special groups. All clinical validity tables summarize the performance of the clinical groups and matched control groups. These tables provide means and *SD*s of both groups, difference scores between the two groups, t values, p values, Cohen's d, and percentages of the sample that obtained various scores equal to or less than 2 *SD*s below the mean. The demographic data for the clinical samples are reported in Tables 5.36–5.38.

Table 5.36 Demographic Data of the Clinical Samples: Teacher/Daycare Provider and Parent/Primary Caregiver Forms

Teacher/Daycare Provider Form

	Mild Mental Retardation	Moderate Mental Retardation	Developmental Delay	Biological Risk Factors	Motor Impairments	Language Disorders	PDD-NOS	Autistic Disorder
n	31	19	48	22	32	52	19	35
Age								
Mean	53.7	53.1	52.6	32.5	50.0	52.4	50.8	53.4
SD	10.7	13.7	10.5	2.6	12.3	11.8	10.8	10.5
Sex								
Female	32.3	52.6	31.3	54.6	21.9	32.7	15.8	8.6
Male	67.7	47.4	68.8	45.5	78.1	67.3	84.2	91.4
Race/Ethnicity								
White	64.5	52.6	79.2	68.2	65.6	73.1	79.0	85.7
African American	19.4	26.3	12.5	13.6	21.9	19.2	5.3	2.9
Hispanic	16.1	21.1	4.2	18.2	12.5	7.7	10.5	8.6
Other	–	–	4.2	–	–	–	5.3	2.9
Education								
≤8	3.2	–	–	–	–	1.9	–	–
9–11	9.7	15.8	4.2	4.6	3.1	9.6	–	–
12	35.5	42.1	33.3	13.6	37.5	28.9	10.5	31.4
13–15	32.3	15.8	47.9	36.4	34.4	25.0	42.1	25.7
≥16	19.4	26.3	14.6	45.5	25.0	34.6	47.4	42.9

Parent/Primary Caregiver Form

	Mild Mental Retardation	Moderate Mental Retardation	Developmental Delay	Biological Risk Factors	Motor Impairments	Language Disorders	PDD-NOS	Autistic Disorder
n	27	22	78	57	50	52	18	34
Age								
Mean	53.9	52.6	47.4	20.3	35.1	51.8	49.0	54.4
SD	11.7	13.3	17.2	9.7	17.2	12.5	10.3	11.0
Sex								
Female	29.6	50.0	37.2	57.9	42.0	30.8	11.1	8.8
Male	70.4	50.0	62.8	42.1	58.0	69.2	88.9	91.2
Race/Ethnicity								
White	74.1	59.1	79.5	80.7	78.0	76.9	83.3	88.2
African American	11.1	18.2	12.8	15.8	12.0	19.2	–	–
Hispanic	14.8	18.2	5.1	1.8	8.0	3.9	11.1	8.8
Other	–	4.6	2.6	1.8	2.0	–	5.6	2.9
Education								
≤8	–	–	1.3	–	–	–	–	–
9–11	7.4	9.1	5.1	1.8	4.0	9.6	–	2.9
12	40.7	45.5	38.5	24.6	26.0	25.0	11.1	26.5
13–15	29.6	22.7	32.1	36.8	36.0	26.9	44.4	23.5
≥16	22.2	22.7	23.1	36.8	34.0	38.5	44.4	47.1

Note. Except for sample size (*n*) and age, data are reported as percentages. Sums of percentages in each category may not equal 100% due to rounding. Means and standard deviations of age are reported in months.

Table 5.37 Demographic Data of the Clinical Samples: Teacher Form

	Mental Retardation Groups										
	Down Syndrome	Mental Retardation Unspecified	Mild Mental Retardation	Moderate Mental Retardation	ADHD	Behavior Disorder	Emotional Disturbance	Deaf and Hard of Hearing	Physical Impairment	Learning Disability	Autistic Disorder
n	21	84	66	27	30	56	73	19	52	248	32
Age											
Mean	11.3	11.8	10.9	13.9	10.0	13.6	11.3	11.0	10.9	11.6	9.8
SD	4.2	3.9	3.1	5.1	3.1	3.3	3.2	3.9	4.7	3.3	4.1
Sex											
Female	43.5	40.4	38.2	39.3	16.4	30.4	35.6	52.6	42.3	40.3	21.9
Male	56.5	59.6	61.8	60.7	83.6	69.6	64.4	47.4	57.7	59.7	78.1
Race/Ethnicity											
White	65.2	61.7	60.5	32.1	65.6	82.1	58.9	63.2	55.8	55.2	81.3
African American	8.7	6.4	13.2	3.6	14.8	7.1	8.2	5.3	7.7	11.3	6.3
Hispanic	17.4	20.2	18.4	57.1	14.8	8.9	27.4	15.8	15.4	22.2	6.3
Other	8.7	11.7	7.9	7.1	4.9	1.8	5.5	15.8	21.2	11.3	6.3
Education											
≤8	8.7	18.1	14.5	7.1	9.8	1.8	6.9	15.8	5.8	9.3	–
9–11	8.7	11.7	21.1	14.3	14.8	17.9	21.9	15.8	11.5	17.3	44.3
12	17.4	54.3	50.0	57.1	44.3	57.1	53.4	31.6	44.2	49.6	46.9
13–15	26.1	5.3	5.3	14.3	13.1	7.1	11.0	10.5	7.7	14.9	15.6
≥16	39.1	10.6	9.2	7.1	18.0	16.1	6.9	26.3	30.8	8.9	31.3

Note. Except for sample size (*n*) and age, data are reported as percentages. Sums of percentages in each category may not equal 100% due to rounding.

Table 5.38 Demographic Data of the Clinical Samples: Parent and Adult Forms

	Parent Form			Adult Form, Rated by Others			Adult Form, Self Report
	Mental Retardation Unspecified	ADHD	Learning Disability	Mental Retardation Unspecified	Alzheimer's Disease	Neuropsychological Disorders	Neuropsychological Disorders
n	41	49	26	30	25	20	18
Age							
Mean	11.2	11.9	13.3	37.3	77.2	62.8	45.2
SD	4.5	3.7	4.4	17.5	8.8	20.1	21.0
Sex							
Female	43.9	24.5	26.9	46.7	52.0	35.0	55.6
Male	56.1	75.5	73.1	53.3	48.0	65.0	44.4
Race/Ethnicity							
White	34.2	87.8	65.4	80.0	84.0	90.0	83.3
African American	7.3	4.1	3.9	6.7	4.0	–	11.1
Hispanic	53.7	6.1	19.2	13.3	12.0	10.0	–
Other	4.9	2.0	11.5	–	–	–	5.6
Education							
≤8	17.1	2.0	3.9	33.3	20.0	15.0	–
9–11	4.9	4.1	19.2	13.3	8.0	5.0	5.6
12	34.2	30.6	26.9	33.3	40.0	55.0	55.6
13–15	12.2	22.5	26.9	–	12.0	15.0	22.2
≥16	31.7	40.8	23.1	20.0	20.0	10.0	16.7

Note. Except for sample size (*n*) and age, data are reported as percentages. Sums of percentages in each category may not equal 100% due to rounding.

Individuals With Mental Retardation

According to the AAMR (2002b), the *DSM–IV–TR,* and the IDEA (1999), mental retardation is defined by deficits in both intelligence and adaptive behavior. The diagnosis and classification of mental retardation is an important use of a comprehensive measure of adaptive behavior such as the ABAS–II. Therefore, the performance on the ABAS–II of individuals diagnosed with mental retardation provides important evidence of the measure's validity. Means and standard deviation for the GAC, adaptive domains and skill areas, and the percentage in the samples that scored at least two *SD*s below the mean are reported to provide an indication of performance of the samples across all areas. It was expected that most individuals diagnosed with mental retardation would score significantly below the mean in most skill areas, on one or more adaptive domains, and on the GAC. AAMR (2002b, 1992) recognizes that individuals diagnosed with mental retardation can exhibit strengths as well as weaknesses in adaptive functioning. It was therefore anticipated that the samples would exhibit varying scores in different domains and skill areas, and that not all individuals in the samples would score at least 2 *SD*s below the mean on the GAC or on all domains and skill areas.

In addition to means, standard deviations, and percentages of the sample that scored two or more *SD*s below the normative mean on each skill area scaled score, adaptive domain composite score, and the GAC, the tables for clinical validity studies also provide percentages of each sample that correspond to criteria regarding adaptive behavior deficits specified by AAMR (2002b), *DSM–IV–TR*, and IDEA (1999). AAMR (2002b) specifies that adaptive behavior deficits required for a diagnosis of mental retardation are defined by a score at least two *SD*s below the mean on one or more adaptive domains or on an overall score such as the GAC. *DSM–IV–TR* specifies that deficits in at least two adaptive skill areas are necessary for a diagnosis of mental retardation. IDEA (1999) simply specifies deficits in adaptive behavior for a classification of mental retardation. Thus, the following data are reported for each of the clinical validity samples:

- Percentage of the sample obtaining a composite score that is at least two *SD*s below the mean in one or more of the adaptive domains.

- Percentage of the sample obtaining a composite score that is at least two *SD*s below the mean in one or more of the adaptive domains or in the GAC.
- Percentage of the sample obtaining scaled scores that are at least two *SD*s below the mean in two or more skill areas.

The clinical validity tables report the above data based on the definition of a deficit as a score that is at least two *SD*s below the mean. AAMR (2002b) uses a similar definition for a deficit, but *DSM–IV–TR*, and IDEA do not include a specific cut score for adaptive behavior deficits in their definitions for mental retardation. Thus, it was expected that most, but not all, individuals in the samples diagnosed with mental retardation would exhibit deficits of this magnitude on the GAC, at least one of three adaptive domains *or* the GAC, or on at least two skill areas.

The performance of individuals with mental retardation and matched control groups is reported in Table 5.39 by rating forms and groups. 10 groups of individuals with mental retardation were rated. Two groups rated on the Teacher/Daycare Provider Form were composed of children with mild ($n = 31$) and moderate ($n = 19$) mental retardation; Two groups rated on the Parent/Primary Caregiver Form were composed of children with mild ($n = 23$) and moderate ($n = 22$) mental retardation; Four groups rated on the Teacher Form included individuals with Down Syndrome ($n = 21$), mental retardation unspecified ($n = 84$), mild mental retardation ($n = 66$), and moderate mental retardation ($n = 27$). The Parent Form ($n = 41$) and Adult Form, Rated by Others ($n = 30$) each had one group of individuals whose level of mental retardation was unspecified.

The results across the four infant-preschool samples of children diagnosed with mental retardation are very consistent. The mean GAC scores of the clinical samples with mental retardation ranged from 63–67, which was significantly lower than those of the matched control groups, which ranged from 98–101 points. The mean scores of the adaptive domains for children with mental retardation ranged from 63–71 points, and were also significantly lower than those of the control group, which ranged from 97–104. The mean scaled scores for the skill areas were very low and much lower than those of the control group. Furthermore, 58% –73% of the samples of individuals diagnosed with mental retardation scored at least two *SD*s below the mean on the GAC. Of the four samples, 77%–86% scored at least two *SD*s below the mean on one or more adaptive domains or the GAC, and 84%–94% scored at least two *SD*s below the mean on at least two of the skill areas. For the matched control groups, the percentages scoring at least two *SD*s below the mean on the GAC were 0%–5%, the percentages scoring at least two *SD*s below the mean on one or more adaptive domains or the GAC were 3%–19%, and the percentages scoring at least two *SD*s below the mean on at least two of the skill areas were 10%–30%.

Among the adaptive domains, individuals with mental retardation displayed the greatest deficits in the Conceptual Domain, although all three domains showed significantly low scores. Infant-preschool samples of children with mental retardation showed significant deficits in all skill areas when compared to matched controls.

The results across the five school-age samples and one adult sample of individuals diagnosed with mental retardation were also very consistent. The mean GAC scores of the clinical samples with mental retardation ranged from 56–73, which was significantly lower than those of the matched control groups, which ranged from 93–101. The mean scores of the adaptive domains ranged from 56–82, and were significantly lower than those of the control groups. The mean scaled scores for the skill areas were very low and much lower than those of the control groups. Furthermore, 50%–87% of the samples of individuals diagnosed with mental retardation scored at least two *SD*s below the mean on the GAC. Of the six samples, 62%–100% scored at least two *SD*s below the mean on one or more adaptive domains or the GAC, and 76%–100% scored at least two *SD*s below the mean on two or more skill areas. For the matched control groups, the percentages scoring at least two *SD*s below the mean on the GAC were 0%–17%, the percentages scoring at least two *SD*s below the mean on one or more adaptive domains or the GAC were 5%–19%, and the percentages scoring at least two *SD*s below the mean on two or more skill areas were 5%–32%. In addition, significant differences were displayed between the mean GAC scores of the mild and moderate mental retardation samples, indicating that the ABAS–II has good specificity in differentiating school-age and older individuals who display different levels of mental retardation.

Table 5.39 Mean Performance of Individuals With Mental Retardation and Matched Control Groups

Teacher/Daycare Provider Form

Ages 2:6–5:10 (*n* = 31)	Individuals With Mild Mental Retardation			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	4.0	2.1	58.06	10.9	2.6	.00	6.94	10.88	<.01	2.94
Functional Pre-Academics	4.6	2.7	64.52	9.6	2.8	6.45	5.03	7.18	<.01	1.83
School Living	6.2	3.0	25.81	10.0	2.5	.00	3.84	5.53	<.01	1.39
Health and Safety	5.0	2.8	41.94	10.4	2.7	.00	5.39	8.10	<.01	1.96
Leisure	5.6	2.0	22.58	10.7	2.8	.00	5.13	8.01	<.01	2.11
Self-Care	5.4	2.7	41.94	9.6	2.8	3.23	4.23	6.15	<.01	1.54
Self-Direction	6.0	2.6	25.81	10.8	2.8	.00	4.74	6.63	<.01	1.75
Social	4.7	2.9	48.39	11.0	2.6	.00	6.23	8.64	<.01	2.26
Motor	5.0	2.4	48.39	10.2	2.8	.00	5.19	8.14	<.01	1.99
Conceptual Domain	67.3	12.1	64.52	101.2	13.5	.00	33.90	10.04	<.01	2.64
Social Domain	71.1	13.1	58.06	103.7	13.6	.00	32.58	9.61	<.01	2.44
Practical Domain	70.5	16.5	51.61	98.7	12.8	3.23	28.26	7.77	<.01	1.91
GAC	67.1	13.4	58.06	100.8	13.4	.00	33.71	10.01	<.01	2.52
Cases with ≥ 2 skill areas – 2*SD*			93.55			9.68				
Cases with ≥ 1 adaptive domain – 2*SD*			77.42			3.23				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			77.42			3.23				

Ages 2:7–5:11 (*n* = 19)	Individuals With Moderate Mental Retardation			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	3.5	2.2	68.42	9.6	3.3	5.26	6.05	5.84	<.01	2.16
Functional Pre-Academics	4.4	3.1	57.89	10.5	2.9	5.26	6.11	6.82	<.01	2.04
School Living	5.4	3.3	47.37	10.0	2.9	.00	4.58	3.77	<.01	1.47
Health and Safety	4.6	2.4	52.63	10.8	2.8	.00	6.21	6.03	<.01	2.38
Leisure	4.5	2.5	52.63	9.4	2.5	.00	4.84	5.49	<.01	1.94
Self-Care	5.5	2.6	42.11	10.3	2.6	.00	4.84	5.07	<.01	1.86
Self-Direction	5.8	3.0	26.32	10.2	2.5	.00	4.32	4.37	<.01	1.56
Social	4.6	2.7	47.37	10.1	2.4	.00	5.47	6.22	<.01	2.14
Motor	5.2	2.9	42.11	9.7	3.5	5.26	4.58	4.79	<.01	1.43
Conceptual Domain	65.8	14.7	73.68	99.0	14.9	5.26	33.16	6.28	<.01	2.24
Social Domain	67.7	13.3	63.16	97.7	12.7	.00	29.95	6.54	<.01	2.30
Practical Domain	68.4	17.1	68.42	101.5	10.1	.00	33.11	6.08	<.01	2.36
GAC	64.6	15.2	63.16	98.9	13.2	.00	34.26	6.49	<.01	2.41
Cases with ≥ 2 skill areas – 2*SD*			84.21			10.53				
Cases with ≥ 1 adaptive domain – 2*SD*			84.21			5.26				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			84.21			5.26				

Note. –2 *SD* = 2 or more *SD*s below the mean.

Table 5.39 Mean Performance of Individuals With Mental Retardation and Matched Control Groups *(continued)*

Parent/Primary Caregiver Form

Ages 2:6–5:10 (*n* =27)	Individuals With Mild Mental Retardation			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	4.8	2.6	47.83	11.0	3.3	0.00	6.22	9.52	<.01	2.09
Community Use	4.7	2.9	65.22	10.4	2.4	0.00	5.70	8.06	<.01	2.14
Functional Pre-Academics	5.1	2.8	39.13	10.0	2.3	4.35	4.87	6.43	<.01	1.90
Home Living	6.7	2.9	21.74	9.4	2.7	4.35	2.65	3.46	<.01	.95
Health and Safety	5.3	2.6	34.78	10.0	3.1	4.35	4.70	5.74	<.01	1.64
Leisure	4.8	2.6	39.13	10.4	3.5	7.41	5.87	8.15	<.01	1.90
Self-Care	6.2	3.6	30.43	10.6	2.4	0.00	4.43	5.51	<.01	1.45
Self-Direction	6.0	2.6	30.43	9.7	3.4	0.00	3.78	4.80	<.01	1.25
Social	5.9	3.0	39.13	10.4	3.1	0.00	4.43	5.11	<.01	1.45
Motor	5.2	3.1	34.78	10.8	2.9	0.00	5.61	7.96	<.01	1.87
Conceptual Domain	68.0	12.8	69.57	99.7	16.5	0.00	31.78	8.77	<.01	2.15
Social Domain	70.5	12.0	52.17	101.4	17.2	4.35	30.96	8.22	<.01	2.09
Practical Domain	70.9	15.4	43.48	99.0	13.9	0.00	28.17	7.74	<.01	1.92
GAC	66.0	13.2	69.57	100.3	15.9	0.00	34.26	9.80	<.01	2.34
Cases with ≥ 2 skill areas – 2*SD*			92.59			29.63				
Cases with ≥ 1 adaptive domain – 2*SD*			77.78			18.52				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			77.78			18.52				

Ages 2:6–5:11 (*n* =22)	Individuals With Moderate Mental Retardation			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	2.7	1.6	81.82	9.6	2.9	9.09	6.91	10.16	<.01	2.95
Community Use	4.1	2.5	68.18	10.2	2.3	0.00	6.05	8.30	<.01	2.52
Functional Pre-Academics	4.2	2.8	68.18	9.8	2.5	0.00	5.59	7.32	<.01	2.11
Home Living	6.6	4.5	36.36	9.6	2.7	0.00	3.09	2.74	.01	.83
Health and Safety	4.4	3.4	59.09	10.0	2.8	0.00	5.64	6.48	<.01	1.81
Leisure	5.1	3.4	45.45	9.6	2.8	0.00	4.50	5.61	<.01	1.44
Self-Care	5.5	2.9	40.91	9.4	3.6	9.09	3.86	3.80	<.01	1.18
Self-Direction	5.8	3.1	45.45	10.4	2.6	0.00	4.59	5.05	<.01	1.60
Social	4.6	3.1	54.55	9.9	2.9	4.55	5.32	6.02	<.01	1.77
Motor	5.1	3.4	45.45	10.2	2.8	4.55	5.18	6.03	<.01	1.66
Conceptual Domain	62.5	13.0	72.73	98.0	14.2	4.55	35.55	8.84	<.01	2.61
Social Domain	68.5	18.0	54.55	97.2	15.1	4.55	28.68	6.37	<.01	1.73
Practical Domain	67.7	17.8	59.09	97.4	14.3	4.55	29.68	5.80	<.01	1.84
GAC	62.8	16.4	72.73	97.6	14.1	4.55	34.77	7.70	<.01	2.27
Cases with ≥ 2 skill areas – 2*SD*			90.91			13.64				
Cases with ≥ 1 adaptive domain – 2*SD*			86.36			4.55				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			86.36			4.55				

Note. –2 *SD* = 2 or more *SD*s below the mean.

Table 5.39 Mean Performance of Individuals With Mental Retardation and Matched Control Groups *(continued)*

Teacher Form

Ages 5–21 (*n* =21)	Individuals With Down Syndrome			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	1.9	1.7	90.48	8.3	3.4	23.81	6.43	7.72	<.01	2.39
Community Use	2.1	2.3	85.71	8.5	3.0	14.29	6.38	7.69	<.01	2.39
Functional Academics	1.7	1.4	95.24	9.0	3.6	14.29	7.33	7.85	<.01	2.68
School Living	3.9	3.4	66.67	9.0	3.2	14.29	5.10	4.82	<.01	1.54
Health and Safety	2.4	2.0	85.71	8.7	3.8	19.05	6.29	6.92	<.01	2.07
Leisure	4.1	2.9	61.90	8.8	3.0	9.52	4.76	5.77	<.01	1.61
Self-Care	2.6	3.1	85.71	9.5	3.2	9.52	6.90	7.70	<.01	2.19
Self-Direction	2.9	2.7	85.71	8.5	3.3	23.81	5.57	7.07	<.01	1.85
Social	4.1	2.8	52.38	9.4	3.1	14.29	5.33	5.87	<.01	1.80
Conceptual Domain	57.8	9.6	90.48	96.8	17.7	9.52	39.00	9.34	<.01	2.74
Social Domain	70.4	13.2	52.38	96.8	16.0	9.52	26.33	6.22	<.01	1.80
Practical Domain	56.4	17.0	80.95	96.3	15.7	9.52	39.86	7.82	<.01	2.44
GAC	56.1	14.9	80.95	96.6	16.5	4.76	40.57	8.55	<.01	2.58
Cases with ≥ 2 skill areas – 2*SD*			100.00			28.57				
Cases with ≥ 1 adaptive domain – 2*SD*			90.48			19.05				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			90.48			19.05				

Ages 5–21 (*n* =84)	Individuals With Mental Retardation (Unspecified)			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	2.5	2.1	86.90	9.0	3.2	15.48	6.55	16.58	<.01	2.42
Community Use	2.5	2.0	85.71	9.4	2.6	10.71	6.92	20.86	<.01	2.98
Functional Academics	2.1	1.8	90.48	9.5	2.8	7.14	7.36	20.39	<.01	3.13
School Living	5.1	3.7	54.76	9.9	2.8	8.33	4.80	10.77	<.01	1.46
Health and Safety	3.9	3.1	71.43	9.7	2.8	8.33	5.81	13.29	<.01	1.97
Leisure	4.7	2.9	55.95	10.2	2.6	3.57	5.49	13.35	<.01	1.99
Self-Care	4.6	3.8	64.29	9.8	2.9	11.90	5.20	10.48	<.01	1.54
Self-Direction	3.6	2.9	70.24	9.1	2.9	11.90	5.50	12.78	<.01	1.90
Social	4.7	3.3	59.52	10.0	2.8	9.52	5.25	11.37	<.01	1.72
Conceptual Domain	61.8	11.3	83.33	100.1	14.8	7.14	38.29	20.20	<.01	2.91
Social Domain	73.7	14.3	53.57	102.7	14.7	4.76	28.98	13.17	<.01	2.00
Practical Domain	65.4	16.7	64.29	101.4	15.4	5.95	35.99	16.16	<.01	2.24
GAC	61.9	15.1	70.24	101.3	15.7	7.14	39.43	18.23	<.01	2.56
Cases with ≥ 2 skill areas – 2*SD*			97.62			20.24				
Cases with ≥ 1 adaptive domain – 2*SD*			90.48			9.52				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			90.48			9.52				

Note. –2 *SD* = 2 or more *SD*s below the mean.

Table 5.39 Mean Performance of Individuals With Mental Retardation and Matched Control Groups *(continued)*

Teacher Form

Ages 5–21 (*n* =66)	Individuals With Mild Mental Retardation			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	4.1	3.2	65.15	8.2	3.9	28.79	4.17	6.07	<.01	1.17
Community Use	4.4	3.0	63.64	8.6	3.4	18.18	4.21	7.27	<.01	1.31
Functional Academics	3.5	2.4	75.76	9.0	3.1	9.09	5.50	11.35	<.01	1.98
School Living	6.5	3.7	40.91	9.3	3.6	16.67	2.82	4.42	<.01	.77
Health and Safety	6.3	3.4	37.88	8.6	3.7	24.24	2.32	3.57	<.01	.65
Leisure	6.4	2.9	28.79	9.3	3.3	15.15	2.89	4.91	<.01	.93
Self-Care	5.6	4.2	51.52	9.4	3.3	13.64	3.74	5.73	<.01	.99
Self-Direction	5.3	3.8	54.55	8.4	3.6	22.73	3.14	4.93	<.01	.85
Social	6.3	3.3	40.91	8.9	3.6	16.67	2.68	4.41	<.01	.78
Conceptual Domain	72.1	15.9	54.55	96.9	17.7	10.61	24.82	8.15	<.01	1.48
Social Domain	81.6	13.6	30.30	97.2	18.2	12.12	15.52	5.27	<.01	.97
Practical Domain	76.5	19.2	43.94	96.8	18.8	13.64	20.29	5.87	<.01	1.07
GAC	72.9	17.6	50.00	96.6	20.1	13.64	23.64	6.79	<.01	1.25
Cases with ≥ 2 skill areas – 2*SD*			75.76			31.82				
Cases with ≥ 1 adaptive domain – 2*SD*			60.61			15.15				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			62.12			15.15				

Ages 5–21 (*n* =27)	Individuals With Moderate Mental Retardation			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	1.6	0.8	100.00	8.6	3.4	14.81	7.07	9.88	<.01	2.86
Community Use	2.0	1.7	92.59	8.6	3.0	14.81	6.56	9.28	<.01	2.69
Functional Academics	1.5	0.8	100.00	9.2	2.9	7.41	7.70	13.02	<.01	3.62
School Living	4.7	3.4	59.26	9.0	3.2	22.22	4.33	4.38	<.01	1.31
Health and Safety	3.8	3.3	66.67	9.3	2.7	14.81	5.48	6.09	<.01	1.82
Leisure	4.1	3.0	59.26	9.1	3.1	7.41	5.00	5.20	<.01	1.64
Self-Care	3.5	2.8	66.67	9.7	2.7	11.11	6.26	9.28	<.01	2.28
Self-Direction	3.6	3.2	74.07	8.9	3.3	22.22	5.30	6.57	<.01	1.63
Social	4.7	3.5	51.85	9.4	3.0	7.41	4.70	5.35	<.01	1.44
Conceptual Domain	57.6	7.5	96.30	99.0	17.3	11.11	41.33	11.00	<.01	3.10
Social Domain	72.0	13.3	48.15	98.3	16.5	3.70	26.33	5.73	<.01	1.76
Practical Domain	62.6	17.4	59.26	97.4	13.9	3.70	34.81	7.03	<.01	2.21
GAC	59.3	14.7	70.37	98.0	15.5	3.70	38.74	8.33	<.01	2.56
Cases with ≥ 2 skill areas – 2*SD*			100.00			29.63				
Cases with ≥ 1 adaptive domain – 2*SD*			96.30			14.81				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			100.00			14.81				

Note. –2 *SD* = 2 or more *SD*s below the mean.

Table 5.39 Mean Performance of Individuals With Mental Retardation and Matched Control Groups *(continued)*

Parent Form

Ages 5–21 (*n* =41)	Individuals With Mental Retardation (Unspecified)			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	3.7	3.3	65.85	10.0	2.5	0.00	6.27	8.99	<.01	2.14
Community Use	4.1	3.4	65.85	9.7	2.5	2.44	5.56	8.29	<.01	1.86
Functional Academics	2.7	2.3	80.49	9.9	2.6	2.44	7.20	13.82	<.01	2.93
Home Living	5.5	4.3	51.22	9.3	3.8	14.63	3.76	4.43	<.01	.93
Health and Safety	4.2	3.6	60.98	9.6	2.7	4.88	5.44	7.89	<.01	1.71
Leisure	4.8	3.5	53.66	9.9	2.8	2.44	5.05	7.29	<.01	1.59
Self-Care	4.7	3.7	58.54	10.6	2.7	0.00	5.90	7.99	<.01	1.82
Self-Direction	4.3	3.4	60.98	10.1	2.8	2.44	5.73	8.08	<.01	1.84
Social	4.8	4.2	63.41	9.8	3.0	7.32	5.00	5.73	<.01	1.37
Conceptual Domain	64.2	15.9	73.17	100.4	12.6	0.00	36.22	11.13	<.01	2.52
Social Domain	73.9	17.9	63.41	99.6	14.2	4.88	25.73	6.73	<.01	1.59
Practical Domain	65.7	21.9	60.98	99.2	11.9	0.00	33.56	8.67	<.01	1.90
GAC	63.7	19.8	70.73	99.4	13.4	0.00	35.71	9.48	<.01	2.11
Cases with ≥ 2 skill areas – 2*SD*			82.93			4.88				
Cases with ≥ 1 adaptive domain – 2*SD*			80.49			4.88				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			80.49			4.88				

Adult Form, Rated by Others

Ages 17–72 (*n* =30)	Individuals With Mental Retardation (Unspecified)			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	3.9	2.9	70.00	9.4	3.4	6.67	5.53	7.13	<.01	1.75
Community Use	2.6	2.4	83.33	9.0	3.0	6.67	6.40	10.40	<.01	2.36
Functional Academics	2.2	1.9	80.00	9.0	3.6	13.33	6.80	10.33	<.01	2.36
Home Living	4.9	2.6	53.33	9.6	2.7	3.33	4.70	7.54	<.01	1.77
Health and Safety	2.7	2.5	86.67	9.5	3.3	13.33	6.87	10.93	<.01	2.35
Leisure	4.4	2.5	50.00	8.7	3.0	3.33	4.33	6.79	<.01	1.57
Self-Care	4.3	3.3	56.67	9.3	2.9	6.67	4.97	6.74	<.01	1.60
Self-Direction	3.3	2.4	73.33	9.4	2.9	0.00	6.03	11.23	<.01	2.27
Social	3.9	3.0	66.67	9.3	2.9	6.67	5.43	9.26	<.01	1.84
Conceptual Domain	61.5	12.9	76.67	95.0	16.0	10.00	33.50	10.91	<.01	2.31
Social Domain	69.7	12.7	66.67	93.7	14.5	3.33	23.97	8.42	<.01	1.76
Practical Domain (without Work)	61.7	15.3	66.67	94.5	14.3	6.67	32.77	10.71	<.01	2.21
GAC (without Work)	57.8	14.1	86.67	92.5	17.0	16.67	34.67	11.09	<.01	2.22
Cases with ≥ 2 skill areas – 2*SD*			86.67			16.67				
Cases with ≥ 1 adaptive domain – 2*SD*			80.00			13.33				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			86.67			16.67				

Note. –2 *SD* = 2 or more *SD*s below the mean.

Among the adaptive domains, individuals with mental retardation showed the greatest deficits in Conceptual and Practical. Among the nine skill areas, the samples of individuals with mental retardation performed most poorly in Functional Academics and Communication. About 65%–100% of the samples with mental retardation scored at least two *SD*s below the mean on Functional Academics and Communication, while only 0%–29% of the matched control group did so.

In conclusion, the data indicate that all samples of individuals with mental retardation scored significantly lower on the ABAS–II than the matched control groups and demonstrated deficits in skill areas, adaptive domains, and overall adaptive functioning as described in the definitions of mental retardation by the AAMR (2002b), the *DSM–IV–TR*, and IDEA (1999).

Children Diagnosed With Developmental Delays

IDEA legislation identifies a child with a developmental delay as a child with a disability and establishes developmental delay as a special education eligibility category for infants, toddlers, and children ages 3–9 years. A child may be diagnosed and determined eligible for special education services in the category of developmental delay if he or she "is experiencing developmental delays, as defined by the State and as measured by appropriate diagnostic instruments and procedures, in one or more of the following areas: physical development, cognitive development, communication development, social or emotional development, or adaptive development." (IDEA, Final Regulations, 1999; Sec. 300.7). Some state regulations require identification of significant delays in at least two of the developmental areas mentioned above for a diagnosis of developmental delay. For children ages 3–9 years, IDEA allows states to determine if children may be classified as having a developmental delay or classified as having mental retardation, a learning disability, or another disability. The category of developmental delay for special education eligibility is used in some states where the classifications of mental retardation and learning disability is restricted to children of a specific, older age. In these states, the diagnosis of developmental delay may be used to help ensure that younger children in need of special education services can receive them before they have reached the age at which a classification of mental retardation or a learning disability is allowed. It was expected that children with developmental delays in the present studies would show significantly lower mean scores in one or more skill areas or adaptive domains, compared to a matched control group. The differences were not expected to be as large as those found between children with mild mental retardation and their matched control group, however.

The present samples of children diagnosed with developmental delays primarily comprise children with significant delays in two or more areas of development, or children with significant cognitive delays who were given the diagnosis of developmental delay, instead of mental retardation, according to the policies of their school district or agency setting. Additionally, children exhibiting only physical or language delays were placed in alternate clinical studies. IDEA criteria identify children younger than 3 years who experience developmental delays as "infants or toddlers with a disability", and children ages 3–9 years who experience developmental delays as "children with a disability" (IDEA, Final Regulations, 1999, Sec. 300.7). In our study, no significant differences were found when we examined the scores of these two age groups separately, so the groups were combined and reported together. The study includes two samples, one composed of 48 children ages 2 years 3 months–5 years 9 months rated on the Teacher/Daycare Provider Form, and one that included 78 children ages 8 months–5 years 11 months rated on the Parent/Primary Caregiver Form. Table 5.40 presents the means and standard deviations of the skill area, adaptive domain, and GAC scores for the samples of children with developmental delays and matched control groups.

Table 5.40 Mean Performance of Children With Developmental Delay and Matched Control Groups

Teacher/Daycare Provider Form

Ages 2:3–5:9 (*n* = 48)	Children With Developmental Delay			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	6.8	3.4	32.61	10.5	3.2	4.35	3.65	5.16	<.01	1.11
Functional Pre-Academics	7.4	2.7	15.22	10.2	3.0	4.35	2.83	4.54	<.01	.99
School Living	8.5	2.7	6.52	9.6	2.7	4.35	1.07	2.07	.04	.40
Health and Safety	7.3	3.0	19.57	9.7	3.3	8.70	2.39	3.61	<.01	.76
Leisure	8.1	2.8	12.50	9.8	2.9	2.17	1.76	2.59	.01	.62
Self-Care	8.1	3.2	13.04	9.8	2.9	2.17	1.70	2.58	.01	.56
Self-Direction	8.6	3.1	10.87	9.4	2.9	4.35	.85	1.30	.20	.28
Social	7.5	3.1	21.74	9.5	2.6	2.17	1.98	3.21	<.01	.69
Motor	7.5	3.1	17.39	9.5	2.9	6.52	2.04	3.14	<.01	.68
Conceptual Domain	83.9	14.8	26.09	99.1	14.4	4.35	15.28	4.76	<.01	1.05
Social Domain	86.3	15.2	17.39	97.1	14.1	2.17	10.83	3.24	<.01	.74
Practical Domain	86.0	15.9	19.57	96.5	15.9	8.70	10.43	3.28	<.01	.66
GAC	84.0	14.5	21.74	97.0	14.9	4.35	12.96	4.08	<.01	.88
Cases with ≥ 2 skill areas – 2*SD*			52.08			20.83				
Cases with ≥ 1 adaptive domain – 2*SD*			33.33			12.50				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			33.33			12.50				

Parent/Primary Caregiver Form

Ages 0:8–5:11 (*n* = 78)	Children With Developmental Delay			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	6.6	3.4	24.00	10.6	3.1	4.00	4.03	6.91	<.01	1.24
Community Use	7.5	3.1	14.86	10.6	3.1	2.70	3.03	5.63	<.01	.98
Functional Pre-Academics	7.1	3.0	18.92	10.5	3.0	2.70	3.43	6.99	<.01	1.14
Home Living	8.4	2.9	9.46	10.6	3.1	2.70	2.24	5.00	<.01	.75
Health and Safety	8.0	3.1	16.00	10.3	2.7	2.67	2.36	4.76	<.01	.81
Leisure	7.3	3.0	14.67	10.2	3.1	3.85	2.92	5.78	<.01	.96
Self-Care	8.0	3.4	12.00	9.9	3.5	10.67	1.92	3.50	<.01	.56
Self-Direction	8.2	3.2	13.33	10.6	3.1	4.00	2.41	4.40	<.01	.76
Social	7.7	3.0	9.33	10.2	3.1	4.00	2.43	4.47	<.01	.80
Motor	7.6	3.2	12.00	10.4	3.1	5.33	2.80	5.59	<.01	.89
Conceptual Domain	81.3	17.3	28.00	102.0	16.7	1.33	20.77	6.93	<.01	1.22
Social Domain	83.8	16.1	20.00	99.8	16.2	8.00	16.01	5.69	<.01	.99
Practical Domain	85.5	16.1	18.67	100.9	16.5	5.33	15.39	5.72	<.01	.94
GAC	82.1	17.1	25.33	101.2	16.6	4.00	19.07	6.70	<.01	1.13
Cases with ≥ 2 skill areas – 2*SD*			42.31			19.23				
Cases with ≥ 1 adaptive domain – 2*SD*			34.62			12.82				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			34.62			12.82				

Note. –2 *SD* = 2 or more *SD*s below the mean.

Children with developmental delays across both samples performed significantly lower than their matched control groups. The differences, as expected, were not as great as those between children with mental retardation and their matched controls. The mean GAC across samples ranged from 82–84 for the children with developmental delays, and from 97–101 for the matched control groups. Mean adaptive domain scores for the clinical groups ranged from 81–86, while those of controls ranged from 97–102. Skill area scaled scores were generally lower for the clinical groups, although some fell within normal range, and some skill areas in the sample rated by teachers did not show significant deficits when compared to matched control groups. Parent and teacher clinical samples both displayed the greatest deficits in the Communication Skill Area.

Furthermore, 22% –25% of the samples of children with developmental delays scored at least two *SD*s below the mean on the GAC, while 42%–52% scored at least two *SD*s below the mean on two or more of the skill areas. 33%–35% scored at least two *SD*s below the mean on one or more adaptive domains or the GAC. For the matched control groups, 4% scored at least two *SD*s below the mean on the GAC, while 19%–21% scored at least two *SD*s below the mean on two or more skill areas. 13% scored at least two *SD*s below the mean on or more adaptive domains or the GAC. Results from these samples indicate that children with developmental delays do show overall deficits in adaptive skills. However, children with developmental delays may show deficits in different skill areas.

Children With Known Biological Risk Factors

The IDEA (1999) defines infant and toddlers with disabilities as those birth through age two who need early intervention services because they are experiencing developmental delays, as established by appropriate diagnostic instruments and procedures. IDEA also defines infants and toddlers with disabilities as those children who "Have a diagnosed physical or mental condition that has a high probability of resulting in developmental delay," and "at a State's discretion…are at risk of having substantial developmental delays if early intervention services are not provided (IDEA, Final Regulations, 1999, Sec. 300.16). The IDEA identifies some of the known biological and environmental factors associated with developmental disabilities or disorders as low birth weight; respiratory distress as a newborn; chromosomal abnormalities; genetic or congenital disorders; brain hemorrhage; infection; nutritional deprivation; a history of abuse or neglect; congenital infections; disorders secondary to exposure to toxic substances, including fetal alcohol syndrome; inborn errors of metabolism; disorders reflecting disturbance of the development of the nervous system; and severe attachment disorders. Additional studies have found links between specific risk factors such as low birth weight and fetal alcohol syndrome and later deficits in adaptive behavior (Hack, Taylor, Klein, & Eiben, 1994; Niccols, 1994) and support IDEA's focus on infants and toddlers with various conditions that have strong associations with significant delays.

The present samples of children in this eligibility category included those who had experienced biological or physical conditions identified by IDEA (1999) such as low birth weight, perinatal respiratory distress, chromosomal abnormalities, fetal alcohol syndrome and prenatal drug exposure. Children diagnosed with Down Syndrome were also included in this sample due to the fact that they had a chromosomal abnormality associated with significant delays. They were not included in the validity samples of individuals with mental retardation because they had not been diagnosed as having mental retardation due to their age or agency policy. The study includes two samples, one of 22 children age 2 years 2 months–2 years 11 months who were rated on the Teacher/Daycare Provider Form, and one of 57 children ages birth–2 years 11 months who were rated on the Parent/Primary Caregiver Form. The two samples of infants and toddlers with known biological or physical conditions were expected to have significantly lower mean scores than a matched control group on the GAC and adaptive domains. Skill areas were not expected to display consistent deficits due to the variety of biological and physical factors included in the sample. Table 5.41 presents the means and standard deviations of skill area, adaptive domain, and GAC scores for the two samples of infants and toddlers with known biological or physical conditions and matched control groups.

Table 5.41 Mean Performance of Children With Biological Risk Factors and Matched Control Groups

Teacher/Daycare Provider Form

Ages 2:2–2:11 (*n* = 22)	Children With Biological Risk Factors			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	7.3	3.1	18.18	11.4	2.7	0.00	4.14	4.14	<.01	1.42
Functional Pre-Academics	7.4	3.3	18.18	10.7	3.6	4.55	3.36	2.84	<.01	.97
School Living	6.1	3.1	27.27	10.1	3.1	4.55	4.09	3.88	<.01	1.32
Health and Safety	6.3	3.3	27.27	11.5	2.7	0.00	5.23	5.89	<.01	1.73
Leisure	6.5	3.3	22.73	11.0	2.4	0.00	4.55	5.21	<.01	1.58
Self-Care	5.9	4.3	36.36	12.0	2.3	0.00	6.05	5.58	<.01	1.75
Self-Direction	6.6	3.2	31.82	10.8	2.8	0.00	4.18	3.97	<.01	1.39
Social	6.5	2.6	13.64	10.6	2.6	0.00	4.09	4.47	<.01	1.57
Motor	7.0	4.4	27.27	11.5	2.4	0.00	4.50	3.94	<.01	1.39
Conceptual Domain	80.9	17.6	31.82	105.2	16.2	0.00	24.27	3.89	<.01	1.43
Social Domain	78.8	16.3	22.73	103.5	11.7	0.00	24.68	5.19	<.01	1.74
Practical Domain	73.4	20.7	50.00	106.1	8.4	0.00	32.73	6.45	<.01	2.07
GAC	76.6	20.2	36.36	105.3	11.6	0.00	28.77	4.94	<.01	1.75
Cases with ≥ 2 skill areas – 2*SD*			36.36			0.00				
Cases with ≥ 1 adaptive domain – 2*SD*			59.09			0.00				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			59.09			0.00				

Parent/Primary Caregiver Form

Ages 0:0–2:11 (*n* = 57)	Children With Biological Risk Factors			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	7.8	3.0	12.28	10.7	2.8	0.00	2.89	5.92	<.01	1.00
Community Use[a]	7.3	2.7	16.67	10.6	3.0	0.00	3.38	5.19	<.01	1.18
Functional Pre-Academics[a]	7.7	2.9	14.29	11.0	2.9	0.00	3.26	5.69	<.01	1.12
Home Living[a]	6.6	2.9	26.19	10.8	2.7	2.38	4.24	7.85	<.01	1.52
Health and Safety	7.3	3.2	19.30	10.6	2.8	1.75	3.35	6.17	<.01	1.11
Leisure	8.5	2.4	5.26	10.9	3.0	1.75	2.40	5.15	<.01	.89
Self-Care	7.5	3.1	19.30	10.8	2.3	1.75	3.33	7.35	<.01	1.22
Self-Direction	8.1	3.0	7.02	10.8	2.5	0.00	2.70	5.65	<.01	.99
Social	7.6	3.1	17.54	10.6	3.1	1.75	3.00	5.24	<.01	.97
Motor	6.8	3.7	24.56	10.1	2.9	3.51	3.26	5.60	<.01	.98
Conceptual Domain	85.8	15.5	15.79	103.0	14.2	0.00	17.16	6.86	<.01	1.15
Social Domain	87.0	14.8	14.04	102.8	15.4	1.75	15.84	5.85	<.01	1.05
Practical Domain	82.1	17.0	24.56	103.3	13.1	1.75	21.25	8.06	<.01	1.40
GAC	81.6	17.5	26.32	102.8	14.4	0.00	21.19	7.86	<.01	1.32
Cases with ≥ 2 skill areas – 2*SD*			50.88			29.82				
Cases with ≥ 1 adaptive domain – 2*SD*			24.56			3.51				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			26.32			3.51				

Note. –2 *SD* = 2 or more *SD*s below the mean.

[a]Based on 42 observations.

Results show that very young children with known biological and physical conditions display significant deficits on the GAC and adaptive domains. Their mean GACs were 77 for the teacher/daycare provider sample and 82 for the parent/primary caregiver sample. Matched controls had mean GACs of 105 and 103 for the teacher/daycare and parent/primary caregiver samples, respectively. Adaptive domains showed deficits of a similar magnitude, with the Practical Adaptive Domain displaying the greatest deficit across both samples. Similar to the skill area scaled scores of the groups with developmental delays, the scaled scores of the children with biological and physical conditions were generally lower than those of their matched controls, though no consistent pattern of deficits emerged. All skill area and adaptive domains means were found to be significantly lower than those of the matched control groups.

Additionally, 26%–36% of the samples of children with biological or physical conditions scored at least two *SD*s below the mean on the GAC, 26%–59% scored at least two *SD*s below the mean on one or more adaptive domains or the GAC, and 36%–51% scored at least two *SD*s below the mean on two or more skill areas. For the matched control groups, 0% scored at least two *SD*s below the mean on the GAC, 0%–4% scored at least two *SD*s below the mean on one or more adaptive domains or the GAC, and 0%–30% scored at least two *SD*s below the mean on two or more skill areas.

In conclusion, these results suggest that this sample of children identified with known biological or physical conditions already shows deficits in overall adaptive functioning as well as in different skill areas. The results also suggest that comprehensive assessment of adaptive behavior, along with diagnostic assessment and evaluation of other developmental areas, including medical evaluation, may assist in the diagnosis of developmental disabilities and disorders such as mental retardation, and assist in planning interventions for infants and toddlers.

Children With Motor and Physical Impairments

Motor and physical impairments in young children have been linked to later delays in fine and gross motor development (Bouffard, Watkinson, Thompson, Dunn, & Romanow, 1996; Geuze & Boerger, 1993). It was predicted that children with significant motor impairments would have lower scores in the Motor Skill Area, and possibly in other skill areas dependent on motor functioning, while obtaining low average to average scores in other areas such as conceptual and social functioning. Several samples of children with motor or physical impairments were investigated.

A study of infant-preschool aged children with motor impairments included one sample of 32 children ages 2 years 6 months–5 years 11 months who were rated on the Teacher/Daycare Provider Form, and a second sample of 50 children ages 4 months–5 years 3 months rated on the Parent/Primary Caregiver Form. Children included in the samples either had significantly low scores on standardized measures of motor development, or had a physical condition resulting in significant motor impairment. Children with Cerebral Palsy with significant motor impairments and no concurrent diagnosis of mental retardation were included in the study. Table 5.42 presents the means and standard deviations of skill area, adaptive domain, and GAC scores for the motor impaired and matched control groups.

Results show that young children with motor impairments displayed significant deficits on the GAC and some adaptive domains. Mean GACs were 76 for the teacher/daycare provider sample and 79 for the parent/primary caregiver sample. Matched controls had mean GACs of 97 and 98 for the teacher/daycare provider and parent/primary caregiver samples, respectively. As expected, children with motor impairments performed significantly lower on the Motor Skill Area than their matched controls. They also showed large deficits in the Self-Care Skill Area and in the Practical Adaptive Domain when compared to matched controls, most likely because motor skills are needed to perform activities included in these areas.

Table 5.42 Mean Performance of Children With Motor Impairments and Matched Control Groups

Teacher/Daycare Provider Form

Ages 2:6–5:11 (*n* = 32)	Children With Motor Impairments			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication[a]	7.4	3.6	23.33	9.2	3.4	10.00	1.73	2.11	.04	.49
Functional Pre-Academics	6.6	3.6	22.58	10.1	3.8	12.90	3.48	4.84	<.01	.94
School Living	5.8	4.2	41.94	9.5	3.3	6.45	3.68	4.76	<.01	.97
Health and Safety	6.3	3.9	35.48	9.7	2.9	3.23	3.45	4.65	<.01	1.00
Leisure	7.3	3.5	19.35	9.9	3.4	9.38	2.68	3.73	<.01	.78
Self-Care	4.6	3.1	61.29	9.7	3.8	9.68	5.13	6.29	<.01	1.48
Self-Direction	8.4	3.6	22.58	10.1	3.5	6.45	1.68	2.22	.03	.47
Social	7.4	4.0	25.81	9.7	3.4	6.45	2.35	2.78	<.01	.63
Motor	3.3	3.3	67.74	9.8	3.4	6.45	6.55	8.61	<.01	1.96
Conceptual Domain[a]	84.0	19.8	30.00	97.6	20.3	13.33	13.63	3.21	<.01	.68
Social Domain	83.7	20.9	29.03	97.9	17.7	9.68	14.19	3.38	<.01	.73
Pra.ctical Domain	70.8	22.1	58.06	96.3	17.6	12.90	25.48	6.09	<.01	1.28
GAC[a]	75.5	21.3	40.00	97.1	19.5	10.00	21.53	4.99	<.01	1.05
Cases with ≥ 2 skill areas – 2*SD*			78.12			25.00				
Cases with ≥ 1 adaptive domain – 2*SD*			59.37			21.87				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			59.37			21.87				

Parent/Primary Caregiver Form

Ages 0:4–5:3 (*n* = 50)	Children With Motor Impairments			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	8.3	3.4	16.33	10.0	2.9	4.08	1.69	2.89	<.01	.53
Community Use[b]	7.6	2.9	15.91	10.2	2.6	2.27	2.64	5.32	<.01	.96
Functional Pre-Academics[b]	7.6	2.8	11.36	10.1	2.6	0.00	2.57	4.56	<.01	.95
Home Living[b]	6.6	3.0	15.91	9.8	2.8	4.55	3.20	5.20	<.01	1.10
Health and Safety	6.9	3.1	22.45	9.7	2.9	2.04	2.80	4.91	<.01	.93
Leisure	8.0	3.2	14.29	10.2	2.9	2.00	2.14	3.85	<.01	.70
Self-Care	6.3	3.4	30.61	9.5	3.1	6.12	3.22	5.07	<.01	.99
Self-Direction	8.1	3.0	14.29	9.5	2.6	4.08	1.41	2.60	.01	.50
Social	7.9	3.2	12.24	10.1	2.9	2.04	2.14	3.88	<.01	.70
Motor	5.1	3.6	48.98	10.3	2.7	0.00	5.20	9.12	<.01	1.63
Conceptual Domain	86.3	16.5	18.37	98.0	13.3	4.08	11.69	4.03	<.01	.78
Social Domain	86.5	17.6	16.33	99.1	14.8	0.00	12.67	4.40	<.01	.78
Practical Domain	78.9	16.7	24.49	97.0	13.8	2.04	18.10	6.13	<.01	1.18
GAC	79.4	17.0	32.65	98.2	13.7	0.00	18.80	6.56	<.01	1.22
Cases with ≥ 2 skill areas – 2*SD*			64.00			26.00				
Cases with ≥ 1 adaptive domain – 2*SD*			30.00			8.00				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			38.00			8.00				

Note. –2 *SD* = 2 or more *SD*s below the mean.

[a]Based on 30 observations.

[b]Based on 44 observations.

Data were also collected for a sample of 52 school-age children with various physical impairments to identify the degree to which the impairments may affect daily adaptive functioning. The performance of the group of children with physical impairments and a matched control group are reported in Table 5.43.

The mean GAC of the clinical group using the Teacher Form was 62, which was significantly lower than the mean GAC of 102 for the matched control group. Significant differences were found on all skill areas, adaptive domains, and the GAC. 62% of the clinical sample had GAC scores at least two *SD*s below the mean. In contrast, 2% of the matched control group had GAC scores at least two *SD*s below the mean. 83% of the clinical sample scored at least two *SD*s below the mean on one or more adaptive domains or the GAC, compared to only 12% of the matched control group. In addition, 88% of the clinical group scored at least two *SD*s below the mean on two or more skill areas, while only 19% of the matched control group did so. Children with physical impairments showed the greatest deficits in the Community Use, Functional Academics, and Self-Care Skill Areas, when compared to matched controls.

Children With Receptive and/or Expressive Language Disorders

Children meeting *DSM–IV–TR* criteria for a Receptive or Expressive Language Disorder obtain significantly lower scores on measures of receptive or expressive language ability than scores on nonverbal measures of intelligence. Therefore, it was expected that children with Receptive and/or Expressive Language Disorder would demonstrate deficits in adaptive skills, including communication.

The present study of children with Receptive or Expressive Language Disorder included one sample of 52 children ages 2 years 6 months–5 years 11 months who were rated on the Teacher/Daycare Provider Form, and a second sample of 52 children ages 2 years 6 months–5 years 11 months rated on the Parent/Primary Caregiver Form. Children in the language disorder samples met *DSM–IV–TR* criteria for either Receptive or Expressive Language Disorder, or both. Children who were totally nonverbal were excluded from the study. Table 5.44 shows the means and standard deviations of skill area, adaptive domain, and GAC scores for the children with language disorders and matched control groups.

Results show that young children with Receptive and/or Expressive Language Disorder displayed significant deficits on the GAC and some adaptive domains. The mean GAC across samples was 84 for the children with language disorders, and ranged from 99–102 for the control groups. As predicted, children with Receptive and/or Expressive Language Disorder exhibited the greatest deficits in the Communication Skill Area. They also showed a large deficit in the Functional Pre-Academics Skill Area when compared to their matched controls. Almost all skill area scaled scores were significantly lower than those of matched controls.

Children With Pervasive Developmental Disorder Not Otherwise Specified

Children diagnosed with Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS) experience symptoms that are similar to typical pervasive developmental disorders (i.e., Autistic Disorder, Asperger's Disorder); however, these symptoms do not meet the criteria necessary for confirming a more specific diagnosis. The development of social interaction and verbal and nonverbal communication is often severely impaired. In addition, these children may exhibit characteristic symptoms of autism such as stereotyped movements, repetitive activities, and resistance to change (*DSM–IV–TR*). A diagnosis of PDD-NOS includes "atypical autism", in which diagnostic criteria for Autistic Disorder are not met due to a late age of onset, atypical symptomology and/or subthreshold symptomology.

Children diagnosed with PDD-NOS may have a variety of developmental impairments and deficits in daily functioning, including those skills assessed by the ABAS–II. According to the *DSM–IV–TR* classification of the disorder, a child having this diagnosis would be expected to have difficulty in several daily adaptive skills, especially communication, leisure activities, self-care, and social competence. Consequently, lower mean scores on the Communication, Leisure, Self-Care, and Social Skill Areas were expected.

The present study of children diagnosed with PDD-NOS included one sample of 19 children ages 3 years 0 months–5 years 8 months who were rated on the Teacher/Daycare Provider Form, and a second sample of 18 children ages 3 years 0 months–5 years 9 months rated on the Parent/Primary Caregiver Form. Table 5.45 presents the means and standard deviations of skill area, adaptive domain, and GAC scores for the samples of children with PDD-NOS and the matched control groups.

Table 5.43 Mean Performance of Children With Physical Impairments and a Matched Control Group

Teacher Form

Ages 5–20 (n = 52)	Children With Physical Impairments			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	3.4	3.2	73.08	9.3	3.4	17.31	5.92	8.99	<.01	1.79
Community Use	3.1	3.2	76.92	9.8	2.8	9.62	6.67	11.52	<.01	2.22
Functional Academics	3.1	2.8	76.92	9.8	2.8	5.77	6.73	12.33	<.01	2.40
School Living	4.0	3.8	63.46	9.6	3.0	9.62	5.58	9.11	<.01	1.63
Health and Safety	4.1	3.9	63.46	10.1	2.6	7.69	5.92	9.04	<.01	1.79
Leisure	4.8	3.7	50.00	10.0	2.9	5.77	5.17	7.57	<.01	1.56
Self-Care	3.3	3.6	75.00	9.9	2.5	5.77	6.60	12.04	<.01	2.13
Self-Direction	3.7	3.2	67.31	9.4	2.8	13.46	5.63	9.43	<.01	1.87
Social	4.7	3.9	57.69	10.0	2.8	7.69	5.29	8.08	<.01	1.56
Conceptual Domain	65.0	16.7	69.23	102.0	15.8	3.85	37.02	11.11	<.01	2.28
Social Domain	73.6	18.3	48.08	101.5	15.5	3.85	27.92	8.15	<.01	1.65
Practical Domain	61.2	21.1	71.15	101.3	15.3	5.77	40.08	11.42	<.01	2.17
GAC	61.6	20.6	61.54	102.2	15.1	1.92	40.67	11.16	<.01	2.25
Cases with ≥ 2 skill areas – 2*SD*			88.46			19.23				
Cases with ≥ 1 adaptive domain – 2*SD*			82.69			11.54				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			82.69			11.54				

Note. –2 *SD* = 2 or more *SD*s below the mean.

Table 5.44 Mean Performance of Children With Receptive and/or Expressive Language Disorder and Matched Control Groups

Teacher/Daycare Provider Form

Ages 2:6–5:11 (*n* = 52)	Children With Language Disorders			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	6.5	2.9	26.92	10.3	3.3	3.85	3.85	6.22	<.01	1.24
Functional Pre-Academics	7.3	2.7	19.23	10.1	2.7	0.00	2.77	6.20	<.01	1.03
School Living	8.0	2.9	13.46	9.8	3.4	9.62	1.83	3.15	<.01	.58
Health and Safety	8.0	2.7	11.54	9.7	3.4	5.77	1.71	2.82	<.01	.56
Leisure	7.8	2.7	9.62	10.5	3.1	1.92	2.73	4.59	<.01	.94
Self-Care	8.3	2.8	7.69	9.4	3.2	7.69	1.17	2.02	.05	.39
Self-Direction	8.0	2.8	15.38	9.9	3.2	5.77	1.87	3.41	<.01	.62
Social	7.8	3.1	13.46	9.8	3.3	5.77	2.02	3.15	<.01	.63
Motor	8.4	2.9	11.54	10.3	3.3	3.85	1.90	2.98	<.01	.61
Conceptual Domain	81.7	13.6	25.00	99.4	15.2	3.85	17.73	6.69	<.01	1.23
Social Domain	86.4	14.2	11.54	99.8	16.8	3.85	13.42	4.24	<.01	.86
Practical Domain	87.4	15.4	17.31	96.0	17.8	13.46	8.65	2.68	<.01	.52
GAC	84.2	14.0	13.46	98.6	16.9	3.85	14.40	4.76	<.01	.93
Cases with ≥ 2 skill areas – 2*SD*			50.00			23.08				
Cases with ≥ 1 adaptive domain – 2*SD*			32.69			13.46				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			32.69			13.46				

Parent/Primary Caregiver Form

Ages 2:6–5:11 (*n* = 52)	Children With Language Disorders			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	6.3	3.0	25.00	10.8	2.8	1.92	4.48	7.65	<.01	1.54
Community Use	7.6	2.7	9.62	10.8	2.9	0.00	3.19	5.46	<.01	1.14
Functional Pre-Academics	7.6	2.9	17.31	10.8	2.6	0.00	3.21	5.55	<.01	1.17
Home Living	8.4	2.5	3.85	10.4	2.5	0.00	2.04	4.33	<.01	.82
Health and Safety	8.1	3.0	9.62	10.1	2.5	0.00	2.00	3.82	<.01	.72
Leisure	7.8	2.7	9.62	10.9	2.7	1.92	3.06	5.74	<.01	1.13
Self-Care	8.4	2.7	7.69	10.2	2.8	1.92	1.77	3.15	<.01	.64
Self-Direction	8.2	2.4	5.77	10.3	2.9	1.92	2.12	4.53	<.01	.80
Social	8.2	3.0	7.69	10.2	2.7	1.92	1.96	3.67	<.01	.69
Motor	8.5	3.1	11.54	10.2	2.9	1.92	1.69	2.88	<.01	.56
Conceptual Domain	81.3	14.1	26.92	102.3	13.6	1.92	21.02	7.85	<.01	1.52
Social Domain	86.6	15.1	9.62	101.5	13.9	1.92	14.88	5.42	<.01	1.03
Practical Domain	86.5	14.5	11.54	101.2	13.0	0.00	14.69	5.32	<.01	1.07
GAC	83.6	15.2	23.08	101.5	12.9	1.92	17.92	6.58	<.01	1.27
Cases with ≥ 2 skill areas – 2*SD*			38.46			3.85				
Cases with ≥ 1 adaptive domain – 2*SD*			32.69			1.92				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			32.69			1.92				

Note. –2 *SD* = 2 or more *SD*s below the mean.

Table 5.45 Mean Performance of Children With Pervasive Developmental Disorder Not Otherwise Specified and Matched Control Groups

Teacher/Daycare Provider Form

Ages 3:0–5:8 (*n* = 19)	Children With PDD-NOS			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	3.8	2.7	61.11	10.8	3.2	5.56	7.00	7.45	<.01	2.36
Functional Pre-Academics	6.2	3.2	38.89	10.5	2.8	5.56	4.33	5.04	<.01	1.44
School Living	5.6	3.5	50.00	9.7	3.4	11.11	4.11	3.40	<.01	1.19
Health and Safety	4.2	3.0	61.11	9.0	2.7	0.00	4.83	4.81	<.01	1.69
Leisure	4.8	2.3	38.89	10.5	3.4	0.00	5.67	6.35	<.01	1.95
Self-Care	4.8	2.9	50.00	9.2	2.9	0.00	4.39	4.69	<.01	1.51
Self-Direction	5.1	2.5	44.44	9.3	3.0	11.11	4.22	4.26	<.01	1.53
Social	3.6	2.9	66.67	9.1	3.2	11.11	5.50	5.48	<.01	1.80
Motor	6.3	3.2	27.78	10.7	2.5	0.00	4.33	4.91	<.01	1.51
Conceptual Domain	68.5	13.5	50.00	100.2	16.5	11.11	31.67	7.03	<.01	2.10
Social Domain	65.8	14.2	61.11	97.4	17.4	11.11	31.56	6.24	<.01	1.99
Practical Domain	66.3	18.6	72.22	94.3	16.8	11.11	28.06	4.65	<.01	1.58
GAC	65.7	16.5	55.56	97.6	16.8	11.11	31.83	6.23	<.01	1.91
Cases with ≥ 2 skill areas – 2*SD*			78.95			15.79				
Cases with ≥ 1 adaptive domain – 2*SD*			78.95			15.79				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			78.95			15.79				

Parent/Primary Caregiver Form

Ages 3:0–5:9 (*n* = 18)	Children With PDD-NOS			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	4.5	3.0	50.00	11.2	2.8	0.00	6.72	6.86	<.01	2.32
Community Use	4.9	3.0	44.44	11.2	2.9	0.00	6.28	6.07	<.01	2.13
Functional Pre-Academics	7.3	3.6	22.22	10.8	3.0	0.00	3.56	3.42	<.01	1.07
Home Living	6.3	3.3	33.33	10.7	2.9	0.00	4.39	4.01	<.01	1.41
Health and Safety	4.9	3.0	44.44	11.1	2.6	0.00	6.11	6.71	<.01	2.18
Leisure	5.9	3.4	33.33	11.1	2.8	0.00	5.17	4.90	<.01	1.66
Self-Care	5.8	3.6	38.89	10.2	2.7	5.56	4.39	4.21	<.01	1.38
Self-Direction	6.3	2.9	27.78	10.3	2.7	0.00	4.06	4.19	<.01	1.45
Social	5.2	3.2	38.89	10.6	2.8	0.00	5.44	5.37	<.01	1.81
Motor	6.7	3.1	22.22	10.3	1.9	0.00	3.67	3.86	<.01	1.43
Conceptual Domain	73.4	17.4	38.89	103.2	15.6	0.00	29.78	5.52	<.01	1.80
Social Domain	72.0	18.3	44.44	103.2	15.1	0.00	31.22	5.50	<.01	1.86
Practical Domain	69.6	18.0	50.00	103.4	13.4	0.00	33.89	6.35	<.01	2.14
GAC	69.4	18.2	50.00	103.2	14.8	0.00	33.78	5.93	<.01	2.04
Cases with ≥ 2 skill areas – 2*SD*			55.56			5.56				
Cases with ≥ 1 adaptive domain – 2*SD*			50.00			0.00				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			50.00			0.00				

Note. –2 *SD* = 2 or more *SD*s below the mean.

Children with PDD-NOS showed significant deficits in all skill areas, adaptive domains, and on the GAC. The mean GAC across samples ranged from 66–69 for the samples of children with PDD-NOS, and from 98–103 for the matched control groups. As expected, children with PDD-NOS displayed the most significant deficits in the Communication skill area. Within the parent/primary caregiver clinical sample, the skill area of Functional Pre-Academics was a relative strength, displaying the highest mean of all skill areas, and one of the smallest deficits when compared to matched controls. Results from this study indicate that children with PDD-NOS show global deficits in adaptive functioning, and are most affected in the area of communication.

Children With Autistic Disorder

Children diagnosed with Autistic Disorder, a specific Pervasive Developmental Disorder, are characterized by deficits in verbal and nonverbal communication and social interaction, and may exhibit stereotyped movements, repetitive activities, and resistance to change (IDEA, 1999; *DSM–IV–TR*). Children diagnosed with Autistic Disorder may have a number of developmental difficulties and deficits in daily functioning, such as those skills assessed by the ABAS–II. Shriver, Allen, and Mathews (1999) listed several core domains related to daily adaptive skills that are important in assessing and treating children with Autistic Disorder, including social competence, play/leisure skills, and self-help/independent living skills.

Present samples included one of 35 children with Autistic Disorder ages 3 years 2 months–5 years 11 months rated on the Teacher/Daycare Provider Form, and a second sample of 34 children ages 3 years 1 month–5 years 11 months rated on the Parent/Primary Caregiver Form. The performance of these samples of children with Autistic Disorder and their matched control groups is reported in Table 5.46.

The mean GAC of children with Autistic Disorder assessed using the Teacher/Daycare Provider Form was 67, which was significantly lower than the mean GAC of 102 for the matched control group. The mean GAC of children with Autistic Disorder assessed using the Parent/Primary Caregiver Form was 64, which was also significantly lower than the mean GAC of 98 for the matched control group. Significant differences were found on all skill areas, adaptive domains, and on the GAC, with the exception of the Functional Pre-Academics Skill Area on the parent sample. Both samples of children with Autistic Disorder exhibited the greatest deficits in the Communication, Health and Safety, Leisure, and Social Skill Areas. Similar to the sample of children with PDD-NOS, the skill area showing the least deficit in the samples with Autistic Disorder was Functional Pre-Academics. Within the clinical samples, the Conceptual Adaptive Domain was the only adaptive domain that did not fall two *SD*s below the mean of the matched control groups.

Furthermore, 71% of the clinical samples had GAC scores at least two *SD*s below the mean. In contrast, only 0%–6% of the matched control groups had GAC scores at least two *SD*s below mean. 71%–77% of the clinical samples had one or more adaptive domain scores or the GAC at least two *SD*s below the mean, while only 3%–6% of the matched control groups did so. In addition, 71%–80% of the clinical samples scored at least two *SD*s below the mean on two or more skill areas, in contrast to only 3%–9% of the matched control groups.

Teacher Form data were also collected for a sample of 32 children ages 5–18 years diagnosed with Autistic Disorder. The performance of the sample of children with Autistic Disorder and a matched control group is reported in Table 5.46. The mean GAC scores of the children with Autistic Disorder rated using the Teacher Form was 54, which was significantly lower than the mean GAC of 101 for the matched control group. Significant differences were found on all skill areas, adaptive domains, and on the GAC. 84% of the clinical sample had GAC scores at least two *SD*s below the mean, in contrast to only 3% of the matched control group. 84% of the clinical sample had one or more adaptive domains or the GAC at least two *SD*s below the mean, compared to 9% of the control group. In addition, 92% of the clinical sample scored at least two *SD*s below the mean on two or more skill areas, while only 16% of the matched control group did so.

Table 5.46 Mean Performance of Children With Autistic Disorder and Matched Control Groups

Teacher/Daycare Provider Form

Ages 3:2–5:11 (*n* = 35)	Children With Autistic Disorder			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	4.6	3.8	61.76	10.7	2.5	2.94	6.09	7.21	<.01	1.89
Functional Pre-Academics	7.4	3.9	14.71	11.1	2.8	2.94	3.62	4.53	<.01	1.07
School Living	5.4	3.5	47.06	9.8	2.8	0.00	4.41	5.78	<.01	1.39
Health and Safety	4.4	3.8	70.59	10.8	3.2	0.00	6.41	6.95	<.01	1.82
Leisure	4.9	3.4	62.86	10.4	2.5	0.00	5.50	7.22	<.01	1.84
Self-Care	4.9	3.4	64.71	10.0	2.6	0.00	5.18	6.91	<.01	1.71
Self-Direction	5.3	3.1	52.94	10.0	2.5	0.00	4.68	6.66	<.01	1.66
Social	4.1	3.8	67.65	10.2	3.1	0.00	6.06	7.16	<.01	1.75
Motor	6.4	2.6	20.59	11.0	2.2	0.00	4.62	7.31	<.01	1.92
Conceptual Domain	73.0	20.0	61.76	102.2	12.6	0.00	29.21	7.11	<.01	1.75
Social Domain	67.3	19.7	73.53	100.5	14.7	0.00	33.21	7.72	<.01	1.91
Practical Domain	65.9	21.1	73.53	100.5	15.7	0.00	34.65	7.25	<.01	1.86
GAC	67.2	21.2	70.59	101.5	14.0	0.00	34.26	7.51	<.01	1.91
Cases with ≥ 2 skill areas – 2*SD*			80.00			2.86				
Cases with ≥ 1 adaptive domain – 2*SD*			77.14			2.86				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			77.14			2.86				

Parent/Primary Caregiver Form

Ages 3:1–5:11 (*n* = 34)	Children With Autistic Disorder			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	4.4	3.7	58.82	10.4	2.7	0.00	6.03	7.55	<.01	1.86
Community Use	4.1	2.4	61.76	9.5	2.6	8.82	5.41	8.54	<.01	2.16
Functional Pre-Academics	7.8	3.9	20.59	9.3	3.0	2.94	1.47	1.88	.07	.42
Home Living	5.4	2.7	38.24	9.7	3.4	11.76	4.26	5.77	<.01	1.39
Health and Safety	4.2	2.9	58.82	9.8	3.6	5.88	5.68	6.49	<.01	1.74
Leisure	4.5	3.3	52.94	10.4	2.5	2.94	5.85	7.58	<.01	2.00
Self-Care	4.9	3.3	55.88	10.3	2.6	0.00	5.32	7.16	<.01	1.79
Self-Direction	5.2	3.1	38.24	10.1	2.6	0.00	4.88	8.22	<.01	1.71
Social	3.9	2.8	58.82	9.8	2.8	2.94	5.97	9.36	<.01	2.13
Motor	5.9	2.6	26.47	10.4	2.8	0.00	4.41	6.70	<.01	1.63
Conceptual Domain	71.7	20.1	55.88	97.9	11.8	0.00	26.18	6.80	<.01	1.59
Social Domain	64.6	16.4	64.71	99.2	13.3	5.88	34.62	9.25	<.01	2.32
Practical Domain	64.8	15.6	64.71	97.5	16.2	5.88	32.71	8.07	<.01	2.06
GAC	64.2	17.2	70.59	98.1	13.8	5.88	33.85	8.80	<.01	2.17
Cases with ≥ 2 skill areas – 2*SD*			70.59			8.82				
Cases with ≥ 1 adaptive domain – 2*SD*			70.59			5.88				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			70.59			5.88				

Note. –2 *SD* = 2 or more *SD*s below the mean.

Table 5.46 Mean Performance of Children With Autistic Disorder and Matched Control Groups *(continued)*

Teacher Form

Ages 5–18 (*n* = 32)	Children With Autistic Disorder			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	2.7	2.6	81.25	8.7	3.8	21.88	6.03	6.68	<.01	1.85
Community Use	2.6	2.4	81.25	9.4	2.7	9.38	6.84	9.34	<.01	2.68
Functional Academics	3.9	3.6	68.75	9.7	2.7	6.25	5.78	7.11	<.01	1.82
School Living	3.1	2.7	71.88	9.9	2.5	3.13	6.78	9.23	<.01	2.61
Health and Safety	2.2	2.0	81.25	9.8	2.2	6.25	7.59	12.72	<.01	3.61
Leisure	3.2	3.1	71.88	9.9	2.6	6.25	6.78	8.29	<.01	2.37
Self-Care	2.3	2.3	87.50	9.6	3.0	12.50	7.25	8.98	<.01	2.71
Self-Direction	2.3	2.5	84.38	8.7	3.1	12.50	6.41	8.75	<.01	2.28
Social	2.6	2.5	84.38	9.4	3.4	12.50	6.78	8.93	<.01	2.27
Conceptual Domain	62.7	16.5	81.25	98.9	16.1	6.25	36.19	8.27	<.01	2.22
Social Domain	64.7	13.1	75.00	101.0	16.4	6.25	36.25	8.82	<.01	2.44
Practical Domain	55.1	15.1	81.25	102.1	12.5	0.00	46.97	11.09	<.01	3.39
GAC	54.2	15.8	84.38	100.6	14.8	3.13	46.41	10.27	<.01	3.03
Cases with ≥ 2 skill areas – 2*SD*			91.62			15.62				
Cases with ≥ 1 adaptive domain – 2*SD*			84.37			9.37				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			84.37			9.37				

Note. –2 *SD* = 2 or more *SD*s below the mean.

The combined data from these studies suggest that children diagnosed with Autistic Disorder generally have significant deficits in adaptive skills. Assessment of adaptive skills may aid in the identification of specific deficits related to Autistic Disorder in the context of a comprehensive diagnostic assessment, and may also assist in the planning of treatment programs to increase the daily functioning of children with this disorder.

Children With Attention-Deficit/Hyperactivity Disorder

The performance of the samples of children diagnosed with ADHD and matched control groups is reported in Table 5.47. Although diagnostic criteria for ADHD do not specify that individuals exhibit adaptive skill deficits, many of the behavioral characteristics of ADHD may be associated with adaptive skill deficits. Comprehensive assessment of adaptive behavior may contribute to the broad evaluation needed for diagnosis. Intervention programs for children with ADHD may focus on increasing their daily adaptive skills. Two groups of individuals with ADHD were rated using Teacher or Parent Forms. The group rated on the Teacher Form included 30 children ages 5–9 years. The group rated on the Parent Form included 49 children ages 6–21 years.

For the sample of children ages 5–9 years and diagnosed with ADHD the mean GAC on the Teacher Form was 77, which was significantly lower than the mean GAC of 101 for the matched control group. Significant differences between the ADHD samples and control group were found on all skill areas, adaptive domains, and the GAC. 43% of the sample of children with ADHD had GAC scores at least two *SD*s below the mean. In contrast, 7% of individuals in the matched control group had GAC scores at least two *SD*s below the mean. 57% of the clinical sample had one or more adaptive domain scores or the GAC at least two *SD*s below the mean, compared to 10% of the matched control group. In addition, 63% of the clinical sample scored at least two *SD*s below the mean on two or more skill areas, while only 20% of the matched control group did so. Among the nine skill areas, the sample of children with ADHD rated by teachers showed the greatest deficits in the Self-Direction Skill Area, consistent with other typical behavioral characteristics of children with ADHD such as impulsivity and problems with concentration. 73% of the sample scored at least two *SD*s below the mean on Self-Direction, while only 17% of the matched control group did so.

For the sample of children ages 6–21 years diagnosed with ADHD, the mean GAC on the Parent Form was 91, which was significantly lower than the mean GAC of 100 for the matched control group. Significant differences were found in three of the nine skill areas. 14% of those with ADHD had GAC scores at least two *SD*s below the mean. In contrast, only 2% of children in the matched control group had GAC scores at least two *SD*s below the mean. 18% of the clinical sample had one or more adaptive domain scores or the GAC at least two *SD*s below the mean, compared to 4% of the matched control group. Consistent with the results from the sample of children with ADHD rated by teachers, this sample rated by parents displayed the greatest deficits in the Self-Direction Skill Area. 24% percent of the clinical sample scored at least two *SD*s below the mean on Self-Direction, while only 2% of the matched control group did so.

In conclusion, the samples of children diagnosed with ADHD exhibited deficits in adaptive skills when compared to matched controls. The samples rated by teachers had mean scores in all skill areas and adaptive domains that were significantly lower than those of children with typical functioning, whereas the sample rated by parents did not show significant deficits in all scores. These differences between the ratings of teachers and parents possibly reflect the tendency of children with ADHD to display more obvious behavior problems in situations such as a classroom where self-control is required. Both clinical samples obtained the lowest scores on the Self-Direction Skill Area. The findings of this study suggest that comprehensive assessment of the adaptive skills of children with ADHD may provide useful information for identifying the impact of attention problems on adaptive functioning in various settings and in planning intervention goals.

Table 5.47 Mean Performance of Children With ADHD and Matched Control Groups

Teacher Form

Ages 5–9 (*n* = 30)	Children With ADHD			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	5.6	3.9	46.67	9.0	3.1	13.33	3.37	4.32	<.01	.96
Community Use	6.4	3.6	40.00	9.3	2.9	10.00	2.93	3.48	<.01	.90
Functional Academics	6.9	3.8	33.33	9.4	3.1	3.33	2.47	2.77	<.01	.71
School Living	6.7	3.2	30.00	10.5	2.8	3.33	3.80	5.17	<.01	1.26
Health and Safety	6.0	3.1	40.00	9.9	2.4	3.33	3.87	5.44	<.01	1.40
Leisure	6.7	3.2	33.33	9.8	3.3	10.00	3.07	3.91	<.01	.94
Self-Care	5.8	4.2	50.00	9.4	3.3	16.67	3.57	4.02	<.01	.95
Self-Direction	3.7	3.0	73.33	9.2	3.3	16.67	5.43	7.37	<.01	1.72
Social	5.1	3.2	50.00	10.1	2.4	3.33	5.00	7.73	<.01	1.77
Conceptual Domain	78.2	18.6	40.00	99.6	15.3	6.67	21.43	5.36	<.01	1.26
Social Domain	80.5	15.3	36.67	100.7	15.4	10.00	20.27	5.67	<.01	1.32
Practical Domain	79.6	19.4	36.67	101.0	15.0	3.33	21.40	5.14	<.01	1.23
GAC	76.8	18.2	43.33	100.6	15.9	6.67	23.77	5.93	<.01	1.39
Cases with ≥ 2 skill areas – 2*SD*			63.33			20.00				
Cases with ≥ 1 adaptive domain – 2*SD*			56.67			10.00				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			56.67			10.00				

Parent Form

Ages 6–21 (*n* = 49)	Children With ADHD			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	8.6	3.1	8.16	10.2	2.4	0.00	1.59	2.99	<.01	.57
Community Use	9.8	3.2	6.12	10.4	2.5	4.08	.59	1.14	.26	.21
Functional Academics	8.8	2.9	10.20	10.6	2.5	0.00	1.73	3.49	<.01	.64
Home Living	7.7	3.8	28.57	8.5	3.4	20.41	.80	1.14	.26	.22
Health and Safety	8.8	3.4	12.24	9.9	2.9	6.12	1.16	1.70	.10	.37
Leisure	9.2	3.2	6.12	10.4	2.5	2.04	1.14	2.03	.05	.40
Self-Care	8.7	3.1	18.37	9.2	2.4	2.04	.57	.97	.34	.21
Self-Direction	7.0	3.4	24.49	10.5	2.5	2.04	3.49	6.30	<.01	1.17
Social	8.2	3.6	16.33	9.4	3.0	8.16	1.14	1.55	.13	.34
Conceptual Domain	90.7	14.9	12.24	102.5	11.7	2.04	11.78	4.67	<.01	.88
Social Domain	94.4	16.1	8.16	100.2	13.0	4.08	5.84	1.84	.07	.40
Practical Domain	93.2	15.9	10.20	97.8	12.6	2.04	4.63	1.51	.14	.32
GAC	91.1	16.5	14.29	99.9	13.3	2.04	8.84	2.83	<.01	.59
Cases with ≥ 2 skill areas – 2*SD*			26.53			12.24				
Cases with ≥ 1 adaptive domain – 2*SD*			16.33			4.08				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			18.37			4.08				

Note. –2 *SD* = 2 or more *SD*s below the mean.

Children With Behavior Disorders and Emotional Disturbance

Children diagnosed with behavior disorders and emotional disturbance may have deficits in adaptive skills associated with the impact of their behavior or emotional problems on their daily activities (Sparrow & Cicchetti, 1987). The performance of 56 children ages 6–21 years diagnosed with behavior disorders and a matched control group is reported in Table 5.48. The mean GAC of the sample of children with behavior disorders on the Teacher Form was 77, which was significantly lower than the mean GAC of 92 for the matched control group. Children with behavior disorders also displayed lower scores in all three adaptive domains and eight of the nine skill areas. 39% of the children with behavior disorders had GAC scores at least two *SD*s below the mean, in contrast to 16% of the matched control group. 52% of the clinical sample scored at least two *SD*s below the mean on one or more adaptive domains or the GAC, compared to only 27% of the matched control group. In addition, 73% of the clinical group scored at least two *SD*s below the mean on two or more skill areas, while only 36% of the matched control group did so. Similar to the sample of children with ADHD, the children with behavior disorders showed the greatest deficits in the Self-Direction Skill Area. 75% of the clinical sample scored at least two *SD*s below the mean on Self-Direction, while 32% of the matched control group did so.

Data on a sample of 73 children ages 5–18 years diagnosed with emotional disturbances and a matched control group is presented in Table 5.49. The mean GAC of the clinical sample on the Teacher Form was 78, which was significantly lower than the mean GAC of 99 for the matched control group. Significant differences were found in all skill areas, adaptive domains, and the GAC. 37% of the clinical sample had GAC scores at least two *SD*s below the mean, in contrast to only 10% of children in the matched control group. 49% of the clinical sample scored at least two *SD*s below the mean on one or more adaptive domains or the GAC, compared to only 14% of the matched control group. In addition, 70% of the clinical group scored at least two *SD*s below the mean on two or more skill areas, while only 25% of the matched control group did so.

The data for children diagnosed with behavior disorders and emotional disturbance were similar to those for children diagnosed with ADHD and demonstrate important differences in comparison to individuals diagnosed with mental retardation. Children with behavior and emotional problems scored significantly lower in adaptive skills than did matched controls. However, children with mental retardation scored lower in all skill areas, adaptive domains, and the GAC than did the children with ADHD, behavior disorders, or emotional disturbance. Children with ADHD, behavior disorders, and emotional disturbance exhibited their lowest performance on the Self-Direction Skill Area. In comparison, individuals with mental retardation generally exhibited their lowest performance on the Communication and Functional Academics Skill Areas. The data suggest that comprehensive adaptive skill assessment for children with attention, behavior, or emotional problems, in addition to those with mental retardation, may be important in diagnosis, in identifying important strengths and weaknesses in their adaptive skills and in formulating interventions.

Table 5.48 Mean Performance of Children With Behavior Disorders and a Matched Control Group

Teacher Form

Ages 6–21 (*n* = 56)	Children With Behavior Disorders			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	5.8	3.2	46.43	7.7	3.5	28.57	1.89	3.19	<.01	.56
Community Use	6.6	3.2	32.14	8.6	3.4	17.86	1.98	3.51	<.01	.60
Functional Academics	6.6	3.0	25.00	8.4	3.2	16.07	1.73	3.24	<.01	.56
School Living	6.1	3.7	46.43	8.5	3.6	19.64	2.41	3.54	<.01	.66
Health and Safety	5.5	3.3	48.21	8.5	3.8	25.00	3.02	4.60	<.01	.85
Leisure	6.7	3.2	28.57	8.7	3.2	14.29	2.04	3.70	<.01	.64
Self-Care	7.5	3.9	32.14	8.4	4.0	26.79	.89	1.09	.28	.23
Self-Direction	3.8	3.0	75.00	7.0	3.8	32.14	3.29	5.68	<.01	.96
Social	5.0	3.6	60.71	8.5	3.6	19.64	3.52	4.97	<.01	.98
Conceptual Domain	78.0	15.0	44.64	91.6	18.3	21.43	13.55	4.77	<.01	.81
Social Domain	79.8	16.5	33.93	94.5	18.2	14.29	14.75	4.49	<.01	.85
Practical Domain	81.3	15.7	25.00	93.1	19.9	16.07	11.86	3.52	<.01	.66
GAC	76.9	16.5	39.29	92.1	20.0	16.07	15.21	4.51	<.01	.83
Cases with ≥ 2 skill areas – 2*SD*			73.21			35.71				
Cases with ≥ 1 adaptive domain – 2*SD*			50.00			26.79				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			51.79			26.79				

Note. –2 *SD* = 2 or more *SD*s below the mean.

Table 5.49 Mean Performance of Children With Emotional Disturbance and a Matched Control Group

Teacher Form

Ages 5–18 (*n* = 73)	Children With Emotional Disturbance			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	5.3	3.8	54.79	8.8	3.6	20.55	3.44	5.47	<.01	.93
Community Use	5.2	3.8	54.79	9.0	3.0	10.96	3.75	6.89	<.01	1.10
Functional Academics	6.2	3.6	39.73	8.9	3.1	13.70	2.74	4.97	<.01	.82
School Living	6.4	3.8	39.73	9.2	3.3	12.33	2.85	4.51	<.01	.80
Health and Safety	5.9	3.7	46.58	9.3	3.1	13.70	3.34	5.51	<.01	.98
Leisure	6.7	3.0	26.03	9.7	2.8	6.85	3.04	6.27	<.01	1.05
Self-Care	7.5	3.6	30.14	9.3	3.1	15.07	1.79	3.18	<.01	.53
Self-Direction	4.7	3.3	54.79	8.7	3.3	17.81	3.99	6.66	<.01	1.21
Social	5.7	3.3	46.58	9.6	2.8	8.22	3.89	7.26	<.01	1.27
Conceptual Domain	78.8	18.2	41.10	97.8	17.1	12.33	19.03	6.34	<.01	1.08
Social Domain	81.6	14.8	31.51	100.4	15.2	6.85	18.81	7.41	<.01	1.25
Practical Domain	80.4	16.6	32.88	98.1	15.5	10.96	17.64	6.29	<.01	1.10
GAC	77.5	17.4	36.99	98.5	17.1	9.59	21.00	7.05	<.01	1.22
Cases with ≥ 2 skill areas – 2*SD*			69.86			24.66				
Cases with ≥ 1 adaptive domain – 2*SD*			49.32			13.70				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			49.32			13.70				

Note. –2 *SD* = 2 or more *SD*s below the mean.

Children who are Deaf or Hard of Hearing

An adaptive skill assessment for individuals diagnosed as deaf or hard of hearing, or with other sensory or physical impairments typically is not necessary for diagnosis or classification of the disability. However, an assessment of adaptive skills may assist in evaluating the impact of the disability on daily functioning and in identifying areas of needed skill development and support (Meacham, Kline, Stovall, & Sands, 1987). The performance of a sample of 19 children ages 5–19 years diagnosed as deaf or hard of hearing and a matched control group is reported in Table 5.50.

The mean GAC of the deaf and hard of hearing sample using the Teacher Form was 93 and does not differ significantly from the mean GAC of 99 for the matched control group. Significant differences were also not apparent on the adaptive domains or skill areas. However, 16% of the deaf and hard of hearing group had GAC scores at least two *SD*s below the mean. In contrast, 5% of children in the control group did so. 26% of the clinical sample scored at least two *SD*s below the mean on one or more adaptive domains or the GAC, compared to only 5% of the matched control group. Skill area scaled scores for the deaf and hard of hearing group did not display significant differences from those of the matched control group, although as expected, the Communication Skill Area showed the greatest deficit when compared to matched controls. Results from this study suggest that children who are deaf or hard of hearing, on average, do not exhibit major deficits in adaptive skills on the ABAS–II. However, these children may demonstrate deficits in specific skill areas and have slightly lower adaptive functioning than typically is found among children with no identified disabilities or disorders.

Children With Learning Disabilities

According to IDEA (1999), one of the criteria for identifying a specific learning disability is a severe discrepancy between achievement and intellectual ability in one or more of the following areas: oral expression, listening comprehension, written expression, basic reading skill, reading comprehension, mathematics calculation, and mathematics reasoning. A child diagnosed with a learning disability also may have deficits in adaptive skills because the learning disability may affect daily functioning (Weller & Strawser, 1987). Data were gathered for samples of children diagnosed with learning disabilities to identify typical areas in which adaptive skills may be affected by the disability. The performance of the children with learning disabilities and matched control groups is reported in Table 5.51. Four groups of children with learning disabilities were rated using Teacher or Parent forms. The three groups rated on the Teacher Form were organized by age as follows: 5–9 years ($n = 72$), 10–12 years ($n = 62$), and 13–21 years ($n = 114$). One group (ages 7–21 years, $n = 26$) was rated on the Parent Form.

Consistent across the four samples, the clinical groups displayed significantly lower scores than the matched control groups. The mean GACs of the children with learning disabilities ranged from 84–91, and were significantly lower than the mean GACs of the matched control groups, which ranged from 94–103. Adaptive domain scores ranged from 81–96 across clinical samples, and from 95–105 for matched control groups. The samples of children with learning disabilities displayed significantly lower scores on as few as two to as many as eight out of the nine skill areas, depending on the sample. 11%–29% of individuals with learning disabilities had GAC scores at least two *SD*s below the mean, in contrast to 3%–11% of those in the control groups. 28%–44% of the clinical sample scored at least two *SD*s below the mean on one or more adaptive domains or the GAC, compared to only 4%–18% of the matched control group. In addition, 42%–61% of the samples of children with learning disabilities scored at least two *SD*s below the mean on two or more skill areas, while only 15%–36% of the matched control group did so. Overall, the four clinical groups performed most poorly on the Communication, Functional Academics, and Self-Direction Skill Areas. Results from this sample of children with learning disabilities suggest that the disability may have an impact on adaptive skills, that adaptive behavior assessment may assist in diagnosis and classification, and that intervention programs focused on increasing adaptive functioning may be important.

Table 5.50 Mean Performance of Children who are Deaf or Hard of Hearing and a Matched Control Group

Teacher Form

Ages 5–19 (*n* = 19)	Deaf and Hard of Hearing Sample			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	7.2	4.1	36.84	9.5	3.0	5.26	2.26	1.98	.06	.63
Community Use	7.7	3.5	26.32	9.2	2.3	5.26	1.47	1.57	.13	.50
Functional Academics	8.0	3.7	26.32	9.0	2.6	10.53	.95	.88	.39	.30
School Living	9.7	3.5	15.79	9.4	3.6	15.79	-.26	-.22	.83	-.07
Health and Safety	9.2	3.5	15.79	9.7	2.9	10.53	.53	.50	.63	.16
Leisure	9.2	3.4	10.53	9.4	3.4	10.53	.21	.21	.84	.06
Self-Care	9.0	3.2	15.79	10.1	2.5	5.26	1.11	1.18	.25	.39
Self-Direction	8.2	3.6	15.79	8.9	3.5	15.79	.68	.56	.58	.19
Social	8.2	3.8	26.32	9.4	3.2	10.53	1.21	1.29	.21	.34
Conceptual Domain	90.6	19.5	21.05	98.4	13.4	0.00	7.79	1.44	.17	.47
Social Domain	93.4	17.8	15.79	98.8	16.9	0.00	5.47	1.14	.27	.32
Practical Domain	94.4	18.8	15.79	98.2	13.5	5.26	3.84	.72	.48	.23
GAC	93.2	20.4	15.79	99.2	14.8	5.26	6.00	1.03	.32	.34
Cases with ≥ 2 skill areas – 2*SD*			26.32			21.05				
Cases with ≥ 1 adaptive domain – 2*SD*			26.32			5.26				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			26.32			5.26				

Note. –2 *SD* = 2 or more *SD*s below the mean.

Table 5.51 Mean Performance of Children With Learning Disabilities and Matched Control Groups

Teacher Form

Ages 5–9 (*n* = 72)	Children With Learning Disabilities			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	6.8	3.6	30.56	9.4	3.1	13.89	2.60	4.82	<.01	.77
Community Use	7.6	3.4	25.00	9.7	2.6	6.94	2.04	3.75	<.01	.67
Functional Academics	6.4	2.7	29.17	9.7	2.4	1.39	3.31	8.33	<.01	1.30
School Living	9.3	2.6	4.17	10.1	2.9	2.78	.81	1.83	.07	.29
Health and Safety	8.9	2.6	8.33	9.9	2.8	5.56	1.06	2.32	.02	.39
Leisure	8.8	3.4	15.28	10.1	2.7	4.17	1.33	2.88	<.01	.43
Self-Care	8.9	3.4	18.06	9.7	2.8	11.11	.76	1.52	.13	.24
Self-Direction	7.4	3.4	25.00	9.7	2.9	9.72	2.38	4.29	<.01	.75
Social	9.2	2.6	6.94	9.8	2.8	8.33	.64	1.56	.12	.24
Conceptual Domain	86.3	15.2	22.22	101.9	14.0	1.39	15.54	6.51	<.01	1.06
Social Domain	95.7	14.8	5.56	101.7	15.1	2.78	6.00	2.64	.01	.40
Practical Domain	93.7	13.5	8.33	101.4	14.7	2.78	7.71	3.15	<.01	.55
GAC	91.1	14.2	11.11	102.1	15.1	2.78	10.99	4.59	<.01	.75
Cases with ≥ 2 skill areas – 2*SD*			41.67			16.67				
Cases with ≥ 1 adaptive domain – 2*SD*			27.78			4.17				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			27.78			4.17				

Ages 10–12 (*n* = 62)	Children With Learning Disabilities			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	6.2	4.1	46.77	8.6	3.3	19.35	2.47	3.92	<.01	.66
Community Use	6.5	3.8	43.55	9.0	2.6	12.90	2.45	4.23	<.01	.75
Functional Academics	5.4	3.5	59.68	9.2	2.8	8.06	3.85	6.61	<.01	1.21
School Living	7.2	3.9	35.48	9.1	3.2	17.74	1.94	2.94	<.01	.54
Health and Safety	7.2	3.7	30.65	8.9	3.1	14.52	1.66	2.91	<.01	.49
Leisure	8.2	3.3	14.52	9.3	3.1	9.68	1.06	1.88	.07	.33
Self-Care	7.6	3.7	32.26	9.6	2.7	11.29	1.97	3.34	<.01	.61
Self-Direction	6.0	3.5	45.16	8.5	3.5	19.35	2.48	4.53	<.01	.71
Social	7.1	3.8	33.87	9.2	2.9	11.29	2.10	3.97	<.01	.62
Conceptual Domain	81.0	18.1	38.71	97.3	16.0	11.29	16.37	5.51	<.01	.96
Social Domain	88.9	17.4	22.58	98.2	15.9	9.68	9.21	3.29	<.01	.55
Practical Domain	86.3	19.1	20.97	98.6	14.3	6.45	12.29	3.98	<.01	.73
GAC	83.8	19.6	29.03	99.1	16.5	8.06	15.32	4.85	<.01	.85
Cases with ≥ 2 skill areas – 2*SD*			61.29			27.42				
Cases with ≥ 1 adaptive domain – 2*SD*			43.55			12.90				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			43.55			12.90				

Note. –2 *SD* = 2 or more *SD*s below the mean.

Table 5.51 Mean Performance of Children With Learning Disabilities and Matched Control Groups *(continued)*

Teacher Form *(continued)*

Ages 13–21 (*n* = 114)	Children With Learning Disabilities			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	7.0	3.7	33.33	8.0	3.3	24.56	.95	2.15	.03	.27
Community Use	7.5	3.5	30.70	8.5	3.3	21.05	1.01	2.48	.01	.30
Functional Academics	7.3	3.2	17.54	8.7	3.0	10.53	1.45	3.66	<.01	.47
School Living	8.0	3.5	24.56	8.6	3.2	17.54	.63	1.55	.12	.19
Health and Safety	8.1	3.7	25.44	8.6	3.5	21.93	.50	1.18	.24	.14
Leisure	7.6	3.3	18.42	8.6	3.2	14.04	1.05	2.53	.01	.32
Self-Care	8.9	3.3	15.79	9.5	2.9	9.65	.61	1.50	.14	.20
Self-Direction	6.6	3.7	42.11	7.7	3.5	27.19	1.17	2.59	.01	.32
Social	7.5	3.8	30.70	9.1	3.2	14.91	1.59	3.68	<.01	.45
Conceptual Domain	87.3	17.6	24.56	94.7	16.6	10.53	7.36	3.44	<.01	.43
Social Domain	88.5	17.6	19.30	96.0	16.5	8.77	7.50	3.61	<.01	.44
Practical Domain	91.2	17.4	14.91	95.8	16.7	12.28	4.58	2.22	.03	.27
GAC	87.3	18.7	23.68	94.2	17.4	11.40	6.89	3.14	<.01	.38
Cases with ≥ 2 skill areas – 2*SD*			48.25			35.96				
Cases with ≥ 1 adaptive domain – 2*SD*			30.70			17.54				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			30.70			17.54				

Parent Form

Ages 7–21 (*n* = 26)	Children With Learning Disabilities			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	7.3	3.8	23.08	9.5	3.4	15.38	2.23	2.71	.01	.62
Community Use	8.9	3.7	11.54	10.4	3.0	0.00	1.50	1.76	.09	.45
Functional Academics	7.2	3.8	23.08	10.6	3.1	3.85	3.42	4.65	<.01	.99
Home Living	8.5	4.0	23.08	11.0	2.3	0.00	2.46	2.90	<.01	.75
Health and Safety	8.8	4.5	26.92	11.0	2.0	0.00	2.27	2.74	.01	.65
Leisure	8.2	4.2	19.23	10.2	3.1	3.85	2.04	1.96	.06	.55
Self-Care	8.6	4.0	19.23	10.4	2.2	3.85	1.77	2.30	.03	.55
Self-Direction	7.8	3.1	11.54	10.2	3.5	11.54	2.38	2.71	.01	.72
Social	7.2	4.3	34.62	9.8	3.7	11.54	2.58	2.49	.02	.64
Conceptual Domain	85.9	17.5	23.08	101.2	16.7	11.54	15.35	3.71	<.01	.90
Social Domain	88.2	19.7	23.08	100.3	17.0	7.69	12.04	2.44	.02	.65
Practical Domain	91.6	19.4	11.54	104.8	11.7	0.00	13.19	3.50	<.01	.82
GAC	87.6	20.5	15.38	102.5	15.2	7.69	14.88	3.39	<.01	.82
Cases with ≥ 2 skill areas – 2*SD*			42.31			15.38				
Cases with ≥ 1 adaptive domain – 2*SD*			34.62			11.54				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			34.62			11.54				

Note. –2 *SD* = 2 or more *SD*s below the mean.

Adults With Alzheimer's Disease

Identification of deficits in the daily skills necessary to care for oneself and get along with others may be useful in the selection of treatment programs and identification of supports for adults diagnosed with Alzheimer's disease. Data were collected for a sample of 25 adults ages 43–88 years diagnosed with Alzheimer's disease. The performance of the adults diagnosed with Alzheimer's disease and a matched control group is reported in Table 5.52.

The mean GAC of the group of adults with Alzheimer's disease rated by other respondents on the Adult Form was 61, and was significantly lower than the mean GAC of 104 for the matched control group. Adaptive domain scores also showed significant differences, ranging from 66–75 for the clinical sample, and from 104–105 for matched control group. Significant differences were found in all nine skill areas as well. 80% of the clinical sample had GAC scores at least two *SD*s below the mean compared to only 8% of the matched control group. 80% of the clinical sample scored at least two *SD*s below the mean on one or more adaptive domains or the GAC, in contrast to 8% of the matched control group. In addition, 80% of the clinical group scored at least two *SD*s below the mean on two or more skill areas, while only 8% of the matched control group did so. The data illustrate the impact of Alzheimer's disease on daily functioning and support the use of an adaptive behavior assessment for individuals diagnosed with the disease.

Adults With Neuropsychological Disorders

Adults diagnosed with neuropsychological disorders may have problems that influence daily functioning and justify the administration of an adaptive skill assessment. The performance of two samples of adults diagnosed with neuropsychological disorders and matched control groups are reported in Table 5.53 by rating forms. The first sample of 18 adults ages 18–85 rated on the Adult Form, Self Report included individuals with brain injury (39%), stroke (33%), Parkinson disease (11%), epilepsy (11%), and sclerosis (6%). The second sample of 20 adults ages 28–85 rated on the Adult Form, Rated by Others included individuals with brain injury (20%), stroke (60%), Parkinson disease (5%), epilepsy (10%), and unspecified neuropsychological disorder (5%).

Consistent across the two samples, adults diagnosed with neuropsychological disorders displayed lower scores when compared to the matched control groups. The mean GAC for the self-rated sample was 82, compared to the mean GAC of 100 for the matched control group. For the sample rated by others, the mean GAC was 67, which was significantly lower than the mean GAC of 101 for the matched control group. Adaptive domain scores ranged from 67–86 for the clinical samples, and from 99–103 for matched control groups. The sample of adults rated by others displayed significantly lower scores in all nine skill areas.

Furthermore, 28%–75% of the clinical groups had GACs at least two *SD*s below the mean, in contrast to 0%–5% of the matched control groups. 39%–80% of the clinical samples scored at least two *SD*s below the mean on one or more adaptive domains or the GAC, compared to 0%–5% of the matched control groups. In addition, 50%–75% of the clinical groups scored at least two *SD*s below the mean on two or more skill areas, while only 6%–10% of the matched control group did so. Although the samples of adults diagnosed with neuropsychological disorders did not have scores as low as the sample of adults diagnosed with Alzheimer's disease, most exhibited significant impairments in adaptive skills.

Table 5.52 Mean Performance of Adults With Alzheimer's Disease and a Matched Control Group

Adult Form, Rated by Others

Ages 43–88 (*n* = 25)	Adults With Alzheimer's Disease			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	4.1	2.6	68.00	10.2	2.7	0.00	6.08	8.97	<.01	2.29
Community Use	3.4	1.8	84.00	10.5	3.1	8.00	7.16	10.46	<.01	2.82
Functional Academics	3.2	1.9	76.00	10.9	3.3	8.00	7.72	10.79	<.01	2.87
Home Living	3.4	1.7	76.00	11.0	2.5	4.00	7.60	11.33	<.01	3.56
Health and Safety	3.4	1.7	76.00	10.5	2.5	8.00	7.12	12.25	<.01	3.33
Leisure	5.5	2.1	32.00	11.3	3.2	0.00	5.76	7.81	<.01	2.13
Self-Care	3.8	3.2	64.00	10.9	2.0	0.00	7.16	9.38	<.01	2.68
Self-Direction	3.9	1.7	72.00	11.2	3.1	4.00	7.32	10.43	<.01	2.93
Social	4.2	2.3	60.00	10.8	3.2	4.00	6.56	8.44	<.01	2.35
Conceptual Domain	67.4	12.6	72.00	103.7	15.1	8.00	36.28	10.05	<.01	2.61
Social Domain	74.7	9.9	44.00	104.4	14.7	0.00	29.76	8.59	<.01	2.37
Practical Domain	66.2	14.5	64.00	105.2	12.5	4.00	38.96	10.56	<.01	2.88
GAC	61.4	11.6	80.00	103.6	16.6	8.00	42.16	10.68	<.01	2.94
Cases with ≥ 2 skill areas – 2*SD*			80.00			8.00				
Cases with ≥ 1 adaptive domain – 2*SD*			72.00			8.00				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			80.00			8.00				

Note. –2 *SD* = 2 or more *SD*s below the mean.

Table 5.53 Mean Performance of Adults With Neuropsychological Disorders and Matched Control Groups

Adult Form, Self Report

Ages 18–85 (*n* = 18)	Adults With Neuropsychological Disorders			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	8.2	3.5	16.67	10.3	2.6	0.00	2.11	1.92	.07	.68
Community Use	7.3	4.4	33.33	9.8	2.7	5.56	2.44	2.00	.06	.67
Functional Academics	7.2	3.9	27.78	9.8	2.5	0.00	2.67	2.39	.03	.82
Home Living	7.1	4.3	27.78	10.4	2.2	0.00	3.33	2.85	.01	.97
Health and Safety	7.0	4.3	33.33	10.2	2.4	0.00	3.17	2.66	.02	.91
Leisure	7.7	3.4	16.67	10.1	2.3	0.00	2.39	2.26	.04	.82
Self-Care	7.4	4.2	27.78	10.6	2.5	5.56	3.17	2.57	.02	.92
Self-Direction	6.8	4.2	33.33	10.1	2.7	0.00	3.28	2.46	.02	.93
Social	7.3	3.8	22.22	9.9	2.7	0.00	2.56	2.00	.06	.78
Conceptual Domain	85.1	19.7	27.78	99.5	12.5	0.00	14.44	2.50	.02	.88
Social Domain	86.0	17.6	22.22	99.1	13.0	0.00	13.11	2.29	.04	.85
Practical Domain	81.9	23.4	33.33	99.6	12.7	0.00	17.72	2.65	.02	.94
GAC	82.2	21.6	27.78	99.6	12.3	0.00	17.39	2.74	.01	.99
Cases with ≥ 2 skill areas – 2*SD*			50.00			5.56				
Cases with ≥ 1 adaptive domain – 2*SD*			38.89			0.00				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			38.89			0.00				

Adult Form, Rated by Others

Ages 28–85 (*n* = 20)	Adults With Neuropsychological Disorders			Matched Control Group			Mean Difference of the Two Samples			
	Mean	*SD*	% of Scores – 2 *SD*	Mean	*SD*	% of Scores – 2 *SD*	Difference	*t* value	*p* value	Cohen's *d*
Communication	5.7	2.9	35.00	10.5	2.8	0.00	4.80	5.56	<.01	1.68
Community Use	4.4	2.7	65.00	10.0	3.0	5.00	5.65	6.46	<.01	1.98
Functional Academics	5.1	3.4	50.00	10.3	3.0	5.00	5.15	6.15	<.01	1.61
Home Living	4.1	3.0	70.00	11.5	2.2	0.00	7.40	8.77	<.01	2.81
Health and Safety	4.0	2.9	70.00	10.3	2.6	10.00	6.35	7.12	<.01	2.31
Leisure	6.4	2.7	25.00	10.4	3.4	5.00	4.00	4.46	<.01	1.30
Self-Care	4.4	3.8	65.00	10.5	2.3	0.00	6.10	5.68	<.01	1.94
Self-Direction	4.7	2.8	40.00	10.7	3.4	5.00	5.95	6.54	<.01	1.91
Social	6.1	3.3	30.00	10.8	2.5	0.00	4.75	5.48	<.01	1.62
Conceptual Domain	74.4	16.2	45.00	102.2	16.2	5.00	27.85	6.76	<.01	1.72
Social Domain	80.0	13.2	40.00	101.7	14.4	0.00	21.75	5.59	<.01	1.57
Practical Domain	67.0	16.7	65.00	103.0	14.0	0.00	36.00	7.89	<.01	2.34
GAC	67.4	15.2	75.00	101.4	16.2	5.00	34.05	7.48	<.01	2.17
Cases with ≥ 2 skill areas – 2*SD*			75.00			10.00				
Cases with ≥ 1 adaptive domain – 2*SD*			70.00			5.00				
Cases with ≥ 1 adaptive domain or the GAC – 2*SD*			80.00			5.00				

Note. –2 *SD* = 2 or more *SD*s below the mean.

Summary of Clinical Validity Studies

The results of the clinical validity studies suggest that the ABAS–II demonstrates good levels of sensitivity in differentiating between clinical and nonclinical samples. The mean GACs of most clinical samples were significantly lower than those of the matched control groups. Furthermore, the percentages of individuals who scored at least two *SD*s below the mean of one or more adaptive domains or on the GAC, or on at least two skill areas were significantly higher for the clinical samples than for the matched control groups. In addition, the results of the clinical studies indicate that the ABAS–II has good specificity in differentiating individuals with different levels of disabilities. For example, there were significant differences between mean GAC scores of the school-age and adult samples of individuals diagnosed with mild and moderate mental retardation. Overall, the validity data with clinical samples suggest that adaptive skill assessment is important in the comprehensive assessment of individuals with a number of different disabilities and disorders. Adaptive skill assessment is required for the diagnosis and classification of individuals with mental retardation. It should also be considered for use in the comprehensive assessment of individuals being evaluated for other disabilities or disorders to aid in diagnoses, to identify strengths and limitations in adaptive skills, and to help develop needed interventions.

Consequences of Using the ABAS–II

Tests are commonly administered with the belief that the individual being assessed will derive some benefit from the test results. Tests can also assist professionals and institutions in meeting professional and legal standards governing diagnosis and classification, program planning and monitoring, institutional planning, and research and evaluation activities. The authors and publisher believe that tests are technical resources intended to assist professionals and parents or others involved in the care of the individual being assessed in accurately describing behaviors and improving decisions based on test results. We trust the consequences of using the ABAS–II are beneficial for those being tested as well as those using the results.

Professionals must be alert to intended and unintended consequences of test use. Professionals should also acknowledge intended and unintended consequences of relying on informal judgments instead of those informed by test results. Although information concerning the consequences of testing may influence the decision to use tests, such consequences alone do not detract from the validity of the intended test interpretations (American Education Research Association, et al., 1999).

Part 5:
Test Administration

Part 5: Test Administration

Determining Eligibility for Special Education in South Dakota: A Technical Assistance Manual

The South Dakota Department of Education has published a technical manual outlining the administrative rules that define special education processes regarding student evaluation, eligibility, and identification criteria in major categories of disability. Special Education Programs within the state advocate for the availability of the full range of personnel, programming, and placement options, including early intervention and transition services. These elements are required to ensure that all individuals with disabilities are able to achieve maximum independence upon exiting from school.

Decision Making Process

South Dakota established criteria for the IEP Team to use for the purpose of determining participation in the STAARS or State Test for Educational Progress (STEP). A companion document further delineates the IEP Team process and role.

Timelines

The timelines for testing are found in the Test Coordinators Manual.

Rating Form

The STAARS Rating Form is designed to measure the important behaviors that an individual displays at home, school, work, and other settings. The behaviors included on this scale range from those suitable for young children to those suitable for young adults. The 12 page Rating Form measures different types of daily living activities and academic skills. The student is rated according to how he or she correctly performs a behavior or skill, without help, when the behavior needs to be displayed. A frequency scale from 0–3 is used to determine performance of each behavior and skill area. South Dakota used only those items pertaining to reading and mathematics for scoring. The clusters/behavior categories were used to establish rater reliability and inter-rater reliability.

Directions for Administration

Directions for Administration are provided to carry out the STAARS examination procedures. To ensure accurate and reliable results, the examiner should become thoroughly familiar with these procedures before attempting to administer the test. Part of the STAARS measurement of Reading/Language Arts and Mathematics is the evidence of student work in those areas (Body of Evidence). This process is used in relation to the development of the IEP and is explained further in this section.

Test Coordinators Manual

Individual responsibilities of the District Test Coordinator, Building Test Coordinator, and Special Education Teachers and their colleagues are provided in the Test Coordinators Manual. The post–test responsibilities of the District Test Coordinator are outlined and include collecting, completing, verifying, packing, and shipping alternate assessment materials.

Part 6: Scoring Plan— Final Summary Scoring of the STAARS

Part 6: Scoring Plan—Final Summary Scoring of the STAARS

Overview of South Dakota's Extended Standards

Both state and federal law require that educational content standards be developed for all children. In 1997, the South Dakota State Legislature passed a bill directing content standards be developed for language arts, mathematics, social studies, and science across all grade levels. Reading and math standards were revised in 2004 and to date are being implemented statewide.

The IDEA required states to establish goals to assess the performance of children with disabilities. These standards must be consistent with the goals and standards for all children (IDEA 300.137). The NCLB has established regulations for alternate assessment for students with significant cognitive disabilities.

The Standards Committee revised the current South Dakota Content Standards and Performance Descriptors utilizing input from students, parents, teachers and South Dakota communities. Final documents evolved from: recent research in best practices, NCLB legislation, and classroom experience with existing South Dakota Content Standards, evolution of published standards from other states, numerous professional publications, and lengthy discussions by experienced K–12 South Dakota teachers.

The Purpose of the South Dakota Standards

The standards provide a listing of content to be taught and learned and to guide instructional planning and assessment of learning from K–12. Performance descriptors provide information to teachers and students at particular levels, giving them specific targets for instruction and learning. The standards present a starting point for informed dialogue among those dedicated and committed to quality education in South Dakota. Providing a common set of goals and expectations for *all* students in *all* schools will strengthen and enhance this dialogue.

Workgroup

The SD DOE selected a diverse group of educators to develop extended standards and determine how they apply to the education of students with significant disabilities. The workgroup used the South Dakota content standards as a reference document when developing the extended standards. The goals and indicators come directly from the South Dakota content standards. The extended standards emphasize skills progression rather than being grade specific.

When developing the extended standards, the workgroup carefully divided the skills into three categories: sensory, basic, and functional. The categories range on a scale of less complex to more complex. From these three categories several levels of skills were developed. The skills were divided into target skills, developed in the context of grade level curriculum, which serve as entry points to the extended standards. For those students not able to meet the target skills, access skills were developed to provide a tool for students to work towards the target skills and to approach grade level expectations.

These entry points provide a range of options at which a student with a disability can access the learning standards. The skills found in the extended standards introduce students to challenging new ideas and content, promoting movement to grade-level standards.

Training for educators will assure all children have access to the South Dakota content standards through the extended standards. Educators will be trained by the DOE in the correct use of target academic skills and lower level access skills with emphasis on how the skills should be taught in the context of grade level curriculum. Upon completion of training, participants will be able to describe the components of South Dakota's extended standards and their relationship to the South Dakota content standards, and understand the implementation requirements of the alternate assessment.

What, Who, How and Entry Points

What are the Extended Standards?

Many students with disabilities are able to work toward the content standard goals. However, the standards, as developed, do not appropriately address the educational needs of all students. Therefore, extended content standards have been developed to meet individual student needs.

The extended standards expand the developmental spectrum of the South Dakota content standards. This allows all students the opportunity to access the general education curriculum.

The extended standards are:

- a user-friendly guide in assisting with IEP development,
- a progression of skills necessary for independent functioning (birth – age 21),
- an academically based skill and ability set (presently in reading and mathematics), and
- a correlation to the state content standards.

Who will use the Extended Standards?

The following are guidelines to assist the IEP team in determining which students will use the extended standards:

- Even with modifications and accommodations, the general education standards are deemed inappropriate for the student's cognitive ability and adaptive skill levels.
- The student requires extensive direct instruction in multiple settings to apply and transfer skills.
- The student requires substantial adjustment to grade-level content standards.
- A student is not eligible to use the extended standards if the primary reason for consideration is the result of extended absences, visual, auditory, or physical disabilities; or social, cultural or economic differences.

How does the IEP team use the Extended Standards?

Once the IEP team determines that extended standards are appropriate for a student, the team discusses the relationship of grade-level standards to the extended standards appropriate for the student:

- to determine the impact on curriculum and instruction, and
- to use extended standards as a basis for the development of the individualized education plan.

Educators will use the extended standards document to align and develop instruction for students who will not participate in the Dakota STEP, as determined by the IEP team. This document's access skills and target skills identify how and at what level of complexity students will address and attain learning standards. Educators can set realistic and challenging academic goals for individual students based on the content standards. The skills encourage teachers to reach for higher levels of achievement for their students.

As a reader becomes familiar with this document, they will discover the goal statements and indicators are retained from the South Dakota content standards. Extended standards are not referenced by grade level in order to more appropriately address the diverse needs of students. Each extended standard is intended to capture the essence of the South Dakota general education content standards. Access or target skills under each extended standard provide entry points towards attaining the extended standard.

Entry Points to the Extended Standards

The access or target skills can be viewed as entry points of student performance related to the extended standards. These entry points provide a range of options at which a student with a disability can access the learning standard at a challenging level. These entry points are a tool to be used by educators and parents to identify instructional goals and objectives for the student. Access skills and target skills are listed under each extended standard and represent a continuum of complexity.

Access skills are defined as motor, social, and communication skills applied and practiced within the context of instructional activities based on the extended learning standards. This allows a student with a severe disability to gain entrance (or access) to and participate in the general curriculum as required by IDEA.

Target skills are defined as higher-level skills that enable students with disabilities to individually utilize the extended standards in order to demonstrate a link to the South Dakota Content Standards.

Using access skills and target skills in the context of academic instruction benefits students by:

- allowing students access to the general education standards,
- introducing students to challenging new ideas and content,
- providing new opportunities to practice skills in a variety of settings by using a range of instructional approaches, and

- achieving outcomes that exceed expectations.

Access and target skills are aligned to the extended standards. The extended standards are aligned to the general education goals/strands and indicators. Access and target skills are listed in order of complexity and allow the student with a severe disability to gain access to the general curriculum.

It should be noted that the extended standards capture the essence of the content standards across grade levels rather than being defined as grade specific. This allows for the flexibility of placement within the content standard while honoring the diverse needs of the individual student.

An IEP team then can use the access and target skills as examples to determine the next level of progress for the student which then becomes the basis for the assessment of the student for a given assessment period.

The IEP team can use the access and target skills under each indicator to determine ***where the student is*** *at the beginning of the school term,* ***where the student may reasonably be taken through instruction*** *during the school term, and thus* ***determine the assessment item for progress reporting and assessment reporting.***

Performance Levels

The State of South Dakota has defined four levels of student achievement for the alternate academic achievement standards:

Introducing = Below Basic

Developing = Basic

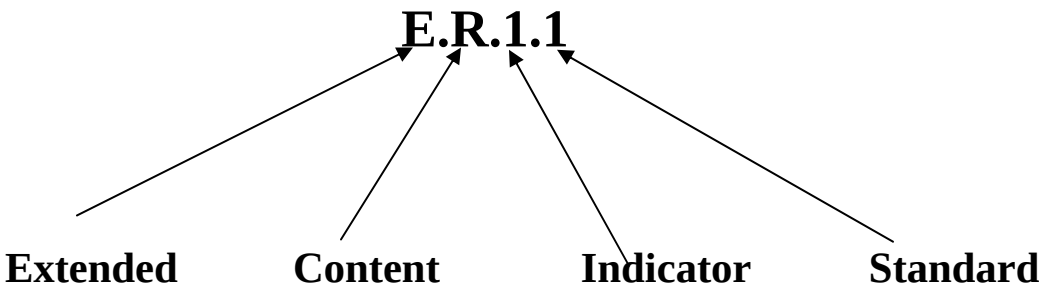
Applying = Proficient

Advancing = Advanced

Extended content standards have been established for reading and math and were approved by the State Board of Education in September 2004. Definitions of alternate achievement levels will be expressed through the performance descriptors. On May 17 and 18, Harcourt conducted a standards setting process with the SD DOE in establishing alternate achievement levels for reading and math. Cut scores for proficiency levels were established at that meeting.

Guide to the Numbering and Symbol System Used

Extended Standards are coded to cross reference content, indicators, and standards.



Extended refers to the extension of the general content goals and indicators.

Content refers to content area of reading and the major areas of mathematics:

R for Reading

A for Algebra

G for Geometry

M for Measurement

N for Number Sense

S for Statistics and Probability

Indicator refers to the general education indicator for each goal or strand. Each goal or strand has one or more related indicators that describe key aspects of the goal or strand.

Standard refers to the number of the extended standard for the indicator. (Example: E.R.1.**1**, E.R.1.**2**, E.R.1.**3**) Each extended standard describes what the students will know and be able to do. The standard is the essence of the general education grade level instruction and curriculum standards.

Evidence of Student's Work Data Collection and Teacher Scoring

Teachers were asked to follow state IEP procedures in selecting the extended standards for their students. The teachers were asked to select two goals and indicators for Mathematics and two goals and indicators for Reading. Teachers were asked to identify the access and target skills by number. Teachers were directed to submit samples of work to provide evidence that showed the student could function at least three separate times at that level.

Teachers were asked to score their students using the following state established ratings:

1. Introducing = Below Basic
2. Developing = Basic
3. Applying = Proficient
4. Advancing = Advanced

Harcourt added:

0. No evidence of performance in the rubric

For scoring and reporting purposes, these were defined as:

0	1	2	3	4
Indicates that no evidence of performance was submitted or was off target, not math or reading.	Indicates that the student has made limited progress towards the goals and standards. A student has some knowledge and skills but needs much more support to reach the next level.	Indicates that the student is approaching proficiency on the standard. There is still inconsistent performance of the skill or behavior. These links are still below standard.	Indicates evidence of achievement at beginning grade level standards. The child meets the extended standard, but functions below grade level.	Indicates that the student meets the content standards for his/her grade and is ready to work on higher levels.
Below grade level, requires discussion	Below grade level, requires discussion	Approaching grade level	On grade level for concept and application	On grade level

Scoring Alternate Assessments

Scoring Criteria. The criteria were devised by Harcourt for the first year. Time did not permit consulting South Dakota teachers for their input.

Scoring for the STAARS Field Test reflects South Dakota's overall goal of Dakota STEP which is to assess the level at which a student has learned, understands, and can apply subject matter outlined in the South Dakota Standards.

Scoring Process. Scorers will use the attached rubrics to review, evaluate, and score alternate assessment Evidence of Student Work material. These scores will be combined with that from the teacher. Harcourt special education staff and the Performance Assessment Scoring Center (PASC) scored all of the material submitted. Two people, plus the teacher, scored each child's work. Cut scores were set with SD DOE staff, South Dakota teachers, and Harcourt staff in May 2005.

The scores from the Evidence of Work were then correlated with the rating scale results.

0. No evidence of Performance
1. Introducing = Below Basic
2. Developing = Basic
3. Applying = Proficient
4. Advancing = Advanced

Handscoring. Five members of the Harcourt Team (including two contractors) reviewed the teacher submitted materials from January through February. The team consisted of two special educators, two experienced scorers with recent experience, and a technical writer who will be writing the final Technical Report.

The group:

- reviewed the data collection sheets for reading and mathematics to ensure that the standards and objectives collected were valid, and
- scored the submissions in a focus group format, discussing scoring issues as needed.

There were a significant number of errors made by the teachers submitting materials–everything from using objectives that were not reading or mathematics, not submitting evidence of student work, to submitting evidence that did not pertain to the objective. All of these were given a special code equal to zero. Scores were determined from the score from each child's special education teacher and then two Harcourt scorers.

Scoring was then turned over to Harcourt's hand-scoring unit (PASC) for final scoring. Five experienced PASC readers were trained in a four-hour session. During that training, the South Dakota Extended Standards from August 2004 were reviewed in detail. Seven previously scored packets of material were also reviewed and correlated with the Extended Standards. The next morning, the readers began scoring the material. At mid-morning, they met again with the Alternate Assessment Team to resolve any questions that had arisen.

The PASC scoring team scored all the remaining students' work. In addition, they rescored 30% of the remaining entries to double-check the scores. Hence, in the end, 500 cases out of 707 cases were hand-scored by PASC to ensure objectivity.

The scorers assigned a 0, 1, 2, 3, or 4 to each student's work. This was applied to each goal area attempted. Two of the 3 scorers must agree. No fractional scores were permitted.

Final Scoring of Rating Scale and Evidence of Student Work. Scoring for the AYP was accomplished by combining items from the ABASII Revised and the academic reading and math sections (see the attached Match and Item Identification). Scores were reported as:

Reading – Rating Form __X__	Math – Rating Form __X__
Reading – Evidence of Student Work __X__	Math – Evidence of Student Work __X__
Total – Reading __X__	Total – Math __X__

See sample reports in Appendix B for which items were used. Total point values from the Rating Scales follow (note the maximum points for each item were three; Scores could range 0–3 per item).

Reading			Math		
Rating Scale	**# of Items**	**Max Point Value**	**Rating Scale**	**# of Items**	**Max Points Available**
Communication	22	66	--	--	--
Community Use	12	36	Community Use	3	9
Functional Academics	15	45	Functional Academics	6	18
Leisure	17	51	--	--	--
Social	20	60	--	--	--
Augmented Items – Academic Reading	32	96	Augmented Items – Academic Math	40	120
Total	118	354	**Total**	49	147

Math scores from the Rating Scale were weighted by 2. Hence, the total possible rating scale for math was 294.

The top score for reading for the Rating Scale and Evidence of Student work was 354. The top score for math was 298 (combining the rating scale and Evidence of Student Work).

After the final test administration in April 2005, rating scores and Evidence of Student Work were also tallied. Tables of scaled scores and percentile ranks based on composite scores were created in May 2005. They were computed at the 95% confidence interval for both age and grade.

Scoring for Evidence of Student Work

The highest possible scale score for reading and mathematics was set at 400 points ranging from a low of 0. This scale score was determined as a composite of the Rating Scale score and the Evidence of Student Work (EOW) score where the Evidence of Student Work reflects 25% of the final scale score. In terms of scale score points, 300 points are contributed from the Rating Scale and 100 from the Evidence of Student Work. The final weighting for reading and math is presented in Table 5 and Table 6 below.

Table 5. Reading

	Maximum Raw Score Points	Wt. in Comp	Pts in Comp	Final Weights (Raw Score Multiplier)
Body of Work	8	25%	100	12.500000
Rating Scale	273	75%	300	1.098901
	Total	100%	400	

Table 6. Math

	Maximum Raw Score Points	Wt. in Comp	Pts in Comp	Final Weights (Raw Score Multiplier)
Body of Work	8	25%	100	12.500000
Rating Scale	177	75%	300	1.694915
	Total	100%	400	

STAARS Standard Setting Report

On June 1st and 2nd, Harcourt Assessment led a standard setting meeting for the STAARS. The following document is intended as a summary of the methodology that was proposed and implemented, specifics about the actual meetings, and results.

The sessions were conducted at the Holiday Inn Centre in Sioux Falls, South Dakota on June 1st and 2nd. Tim O'Neil acted as lead facilitator and handled all data analysis. Test development and content support was provided by David Kirk and Sheree Kreusel. Dawn Smith and Gary Skoglund were the primary representatives from the department of education.

Methodology

Harcourt provided the participants with all the necessary materials for the standard setting, including:

- Agendas and training materials
- Performance descriptors, test blueprints, test booklets, a sample of scored anchor papers
- Rating forms used by panelists to rate test items during the standard setting
- Certification of security and confidentiality forms to certify that panelists will not reveal the substance of any materials and signature sheets used to track secure materials
- Evaluation forms

Composition of the Committees

As is typical for standard setting conferences, we recommended that all the individuals have extensive experience in special education and in the application of alternate assessments. South Dakota recruited a total of 26 participants for these meetings to reflect experienced educators of the most severely impaired South Dakota students from kindergarten through high school and a handful of regular education teachers.

Standard Setting Method

Traditional methods of standard setting (e.g., Modified Angoff, Bookmark, etc.) may not be fully appropriate for use with the STAARS assessment system. Reasons for this include the interpretive differences of the checklist items, incorporation of the Body of Evidence task, and the need to accomplish the task within a two-day window of time. Thus Harcourt recommended a modification of an approach proposed by Hofstee (De Gruijter, 1985). Hofstee's model is considered a *compromise model* because it is premised on both absolute and relative standards; where absolute standards would be set to a specific score point on a scale for example and relative standards would be set to a certain percentage passing.

In this approach panelists are presented with a cumulative score distribution from the given test and asked to provide four judgments for each cut score: minimum and maximum acceptable failure rates and minimum and maximum cutoff scores relative to

threshold students. Using a plot of the score distribution and these four points, a line of intersection is then drawn from the point of maximum acceptable failure/minimum cutoff score to the point of minimum acceptable failure/maximum cutoff score. The resulting intersection point is used as the panelist's cut score (see Figure 1). With four performance levels, panelists needed to determine three cut scores reflective of threshold students (just barely representative of a given level).

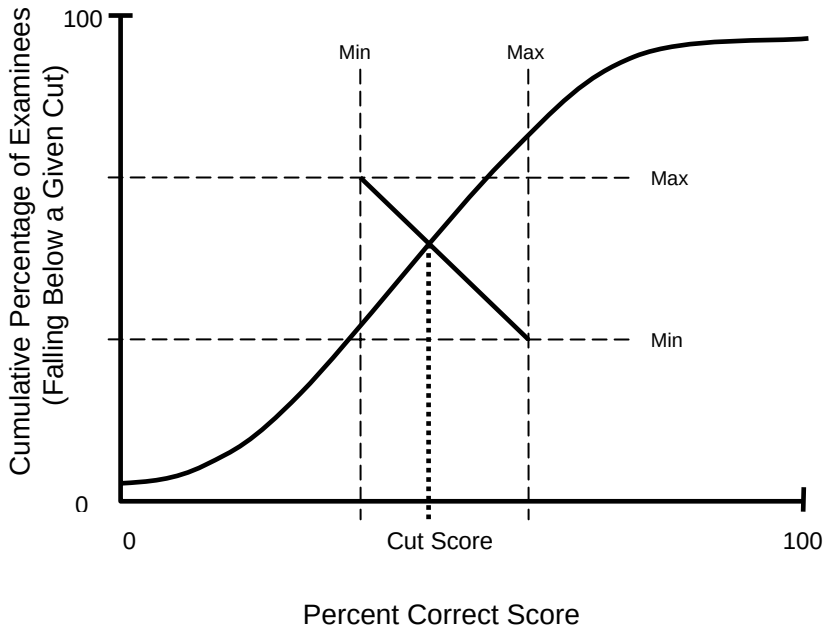


Figure 1. Illustration of Hofstee Method Applied to Cumulative Score

Additionally, panelists were asked to provide ratings focusing on each of four grade levels (2, 4, 7, and 11). This was due to the fact that scores from this year's STAARS assessment apply to all grade levels. In considering these four grades, vertical alignment will be an explicit consideration in the process. What this helps prevent are across-grade reversals (e.g., where apparently lower standards are expected at a higher grade level). Interpolation and smoothing was used to determine the remaining between-grade cuts.

Standard Setting Process

Three fundamental components of any standard setting approach include: 1) *an in-depth training* to establish a reasonable understanding by panelists of how standards exist in operational sense (e.g., through elicitation of state-level performance descriptors) and how these come to be reflected in the components of the test (at item and test level) such that informed judgments can be made in setting cut scores relative to a consensus perspective, 2) *a task* intended to help guide panelists in arriving at cut scores (directly or indirectly) that incorporates both an individual rating scheme as well as group discussions around results and existing impact data, and 3) *a means of determining final cut-score recommendations* that takes into an account of quality control efforts, a consideration of

outliers, any desired adjustments, a vertical alignment, etc. The STAARS standard setting process for each of the two subjects will take approximately 12 hours of time spread across two days. Orientation and initial training will take place on the first morning followed by the mathematics standard setting. Because there are more items to consider for reading, this meeting will take place on the second day. The final activity will be a presentation of the ratings.

Day1—Introduction to the Process and Training

The first activity during the standard setting conference will be an orientation of the committee members to the standard setting process. The explanation of the procedures for establishing cut scores for each proficiency level is an important step in ensuring the smooth operation of the standard setting conference. It is likely that standard setting represents an activity that will be unfamiliar to most of the panel members, so acquainting them with the expectations for their performance serves to increase their comfort with the task and their effectiveness.

At the outset, the lead facilitator will explain to the panelists that their task is to make informed recommendations on performance level cut scores. The panelists will be told that the standard setting conference is not a forum to address the quality of the standards, the test, or the policies related to the administration of the test.

The orientation will concentrate on helping the panelists to become familiar with two substantive aspects of the standard setting procedure. First, the panelists' task will be to estimate how students who are just at the threshold for each proficiency level should perform rather than how they do or will perform. This important distinction will be emphasized on numerous occasions.

Second, the panelists will be assured that their individual ratings will remain confidential. The recommended cut points will be based on the group's ratings, and individual ratings will not be released in any technical documentation. Although an important goal of the process is for panelists to approach consensus or convergence in ratings, it is integral to the process for panelists to feel free to maintain a rating that they personally believe is correct, whether or not it is consistent with ratings made by other panelists. As Fitzpatrick (1989) noted, preserving the anonymity of the panelists may make it easier for them to revise an initial item rating after they have learned more about the item, because the panelists have not been publicly committed to their initial rating of the item. Fitzpatrick suggests that conformity due to social pressure is not desirable in standard setting. Items with disparate ratings will be discussed in order to educate the panelists about the rationale their colleagues' used for rating these items. Any potential effects of undue social pressure will be moderated through the group process skills of the group facilitators.

As part of this orientation, panelists will receive initial training on the Hofstee method.

This training will proceed in a manner that will first allow for general contextual familiarity with the task and the graphical display of the distributional information. Then the details of working with this information in arriving at the four judgments per cut will be explained. This will be presented along with procedural information about how the

group cuts will be gathered, how initial results will be arrived at and presented, and how this information will lead to discussion and final ratings.

Rating Task. At the beginning of the actual task, the group facilitator and content representative will lead the panelists in developing a shared concept of the threshold student at each performance level in math (the same will follow for reading on Day 2). This will be accomplished by reviewing performance descriptors for each subject in line with the state standards and coming up with explicit statements that describe what should be expected of the performance of these threshold students around each cut. These descriptions will be developed and recorded beginning with grade 11, then to grades 8, 5, and 3 respectively.

The panelists will then receive copies of the test items that apply to the math scores. These copies will also include the Body of Evidence component and samples of anchor sets around each score point. Panelists will then be asked to experience the test. In this case, the panelists will be asked to review each given item to understand how performance on the items relates to overall test scores. In order to tie this experience in with the score distribution, panelists will be provided with a reference sheet that demonstrates what a student who effectively receives 4 across the board will obtain relative to 3, 2, etc. Panelists will initially work independently on this task. But after a reasonable time (e.g., 20 to 30 minutes), group discussion will help address any remaining questions/issues.

Next, panelists will be given enough time to come up with their initial judgments around each cut at grades 3, 5, 8, and 11. With four judgments per cut, and three cuts per grade, this leads to a total of 48 judgments the panelists will have to determine. Panelists will be reminded to only focus on threshold students when considering their ratings (not the entire range of students within a category), to keep in mind the distinction of *should* versus *would*, as well as on how the cuts might be expected to relate both within and across grade level (as would have been discussed at the group level earlier). So for each cut a panelist will provide ratings for minimum and maximum acceptable failure rates and minimum and maximum cutoff scores. After initial math ratings are completed, panelists will break long enough for rating sheets to be collected, entered, and cut points determined (individual and group).

The last activity of the day will be to reconvene the group and present the results of the initial ratings. Here, discussion will be directed toward understanding outlying data collectively in order to ensure all voices are heard with respect to particular points. Once the results have been thoroughly discussed, panelists will be asked to submit final ratings for each of the cuts. Unlike the initial ratings, where four judgments per cut were required, the final ratings involve adjusting (or not) the actual cut scores directly. That is, if a panelist feels a particular cut was not entirely accurate relative to their expectation of where it should reside, they are given this opportunity to make a final adjustment. After final ratings are completed, panelists are dismissed for the day. Final ratings will be presented at the end of the second day.

Day 2—Standard Setting Process: Comments, Corrections, and Results of Scoring Alternate Assessments

The second day will proceed in a similar manner to the first. However, no orientation session will be required. As the first day was used to set cuts on math, the second is for setting cuts on reading. Here the meeting will proceed according to what is described under the Rating Task section. Lastly, final results will be presented to panelists with concluding remarks and questionnaires will be completed by panelists having to do with their overall impressions. A debriefing will also be held with state department staff on June 3.

Comments. During the course of Day 1, three modifications to the procedure were implemented. The first change was requested by SD DOE during the task where panelists worked together using state standards and general performance definitions to produce lists of descriptive statements that would appropriately describe threshold students. This activity (or some variation) is a critical component of every standard setting. It is through this focused activity that panelists become engaged in the process of being able to conceptualize what skills and abilities students possess at each of the performance levels. It is the first point at which a picture of individual perspectives begins to give rise to a more collective picture of a broader, statewide perspective.

This process is typically a difficult and frustrating task for panelists (at least in the beginning). Working from broadly defined definitions and producing tangible descriptors that often already exist can take some working through to better understand that the exercise itself is as important as the end product (if not more). These descriptors are intended to be used as calibration points for the panelists when it comes to the task of setting cuts. That is, it may not always be easy to recall specifics about students within a given level and these descriptors help ensure the collective vision of what these students actually *look* like.

For the STAARS, the process was proceeding as expected. At one point one of the panelists who had been a part of an earlier meeting for the South Dakota alternate assessment program offered her insight. The earlier meeting had been held for the task of determining extensions of the state standards and performance descriptors for each grade level (precisely the task these panelists were involved in, albeit for a different intent). While the insight was appropriate, the panelists could not see the value of continuing a task that had apparently already been accomplished. By this time it had become clear that there was too much left to accomplish within the window of time (coming up with descriptors for 4 grades and 3 cuts–12 lists). So it was decided that in the remaining time, panelists would work directly from the extended standards and performance descriptors established earlier in the year.

A second requested change had to do with breaking the larger group into two smaller groups of 13 panelists each. The breakout helped to focus expertise around the upper and lower grade levels and it was felt that the number of panelists per group would still produce defensible results. One group focused on grades 2 and 4, while the other focused on grades 7 and 11.

The final change to the procedure had to do with the rating task itself. The four ratings gathered with the Hofstee method traditionally have to do with *acceptable* maximum and minimum percentages of students failing and *acceptable* maximum and minimum scores for a given cut. In this case, panelists were working from the actual score distribution in setting cuts that would apply to this year only (conceding that there would likely be some relationship to next year's cuts). Given this fact coupled with the way in which panelist cuts are estimated, it was deemed necessary to ask panelists to ensure the curve was contained within the two intersecting ranges of ratings (minimum to maximum–see Figure 1).

Once the rating activity began, it became apparent that the traditional Hofstee instruction on how to interpret the two axes rating sets was untenable with the restriction of confining ratings to the curve itself. Without a clear solution based on coming up with a different definition of how to appropriately re–envision the y-axis, a modification was employed. The most critical ratings were coming from the range of cut scores panelists were determining would bound students at a given threshold. Panelists were instructed to provide ratings that defined the minimum and maximum expected percent correct scores that threshold students would fall within. Since we were working with the actual distribution of scores, the other ratings were taken directly from the curve itself. That is, for each percent correct rating a panelist made, a line was effectively drawn from that point on the x-axis up to the curve, and then over to the y-axis at the point of intersection. Using these values, the resulting line segments were guaranteed to intersect the curve.

As to whether or not such a change might have impacted the overall validity of the process, there is reason to believe this step strengthened the validity argument. For one, it simplified the task in such a way as to make their determinations much more focused and efficient. In this case, they were freer to devote resources to the specific question of score ranges that they felt would define threshold students as opposed to having to wrestle with the task itself. Secondly, the fact that the population of students being considered in this case involves serious cognitive deficits of varying degree means that determining grade-specific thresholds potentially cover a much wider range of performance (especially considering that a single assessment was used for kindergarten through high school). Based on this it is felt that this process, which asks panelists to consider these ranges of performance explicitly, turned out to be quite appropriate. Once this change was employed, panelists were immediately able to proceed without confusion.

Corrections. From the task of working with the actual testing materials, it was discovered that the score distributions being used as a reference point for computing panelist cut scores might have been shifted slightly. This was later confirmed and was the result of having determined total scores based on ratings of checklist items up to 4 instead of 3 (as is correct). No student scores were ever computed incorrectly. But the divisor used to arrive at a percent correct score was larger and the result was that the distributions were shifted left.

This was presented to panelists before any final ratings were made. The presentation involved a description of what the problem had been, and a graphical display showing the initial math distribution placed over the corrected distribution. Panelists were instructed to be certain to keep this difference in mind to the extent that they had been relying upon the distribution to inform their ratings. Since the emphasis after the changes to the rating

task was on percent correct scores from the test itself, it seems as though this problem was minimal.

Results. The final cut scores are presented below in Table 7 and Table 8. With respect to the adjustments made to the process on the first day, the results of the rating task might be characterized as *ideal*. While consensus is a desired outcome, it is not a necessary one. It is more important for the individual results to reflect each panelist's truest informed perspective (informed with respect to the greater statewide student population). Preliminary review of the panel surveys suggested that panelists were almost entirely somewhat confident or confident in their ratings.

Table 7. Final Results for Reading Based on Percent Correct Score

Grade	Developing	Applying	Advancing	Round
2	20%	29%	40%	Final
4	25%	37%	47%	Final
7	35%	58%	75%	Final
11	45%	63%	80%	Final

Table 8. Final Results for Math Based on Percent Correct Score

Grade	Developing	Applying	Advancing	Round
2	15%	30%	40%	Final
4	20%	35%	50%	Final
7	23%	41%	64%	Final
11	30%	45%	70%	Final

Conference Schedule

STAARS

READING AND MATH STANDARD SETTING CONFERENCE
JUNE 1–2, 2005
SIOUX FALLS, SOUTH DAKOTA

Day 1:	**MATH**	**Wednesday, June 1, 2005**
8:00–8:30	Continental Breakfast	
9:00–9:15	Introductions and Logistics	
9:15–9:45	Standard Setting Training – Hofstee Method	
9:45–10:00	Break	
10:00–12:00	Define Performance Level Descriptors (Math – 2, 4, 7, and 11)	
12:00–1:00	Lunch	
1:00–2:00	Checklist Review & Discussion (Math)	
2:00–3:00	Round 1 Ratings	
3:00–3:45	Break (data entry & QC of initial ratings)	
3:45–4:15	Presentation/discussion of Round 1 Results	
4:15–4:30	Final Ratings for Math	
Day 2:	**READING**	**Thursday, June 2, 2005**
8:00–8:30	Continental Breakfast	
8:30–10:30	Define Performance Level Descriptors (Reading – 2, 4, 7, and 11)	
10:30–10:45	Break	
10:45–12:15	Checklist Review & Discussion (Reading)	
12:15–1:30	Lunch	
1:30–2:30	Round 1 Ratings	
2:30–3:15	Break (data entry & QC of initial ratings)	
3:15–3:45	Presentation/discussion of Round 1 Results	
3:45–4:00	Final Ratings for Reading	
4:00–4:15	Break (data entry & QC of final reading ratings)	
4:15–4:30	Presentation of Final Results (Math and Reading)	

Wrap-up

Rater Form and Cumulative Score Distributions and Graphs

G2 Reading

RATER _____

What do you feel the % correct cut score SHOULD be?

Developing_____ Applying _____ Advancing_____

Resulting Cuts (Initial):

% Correct Score

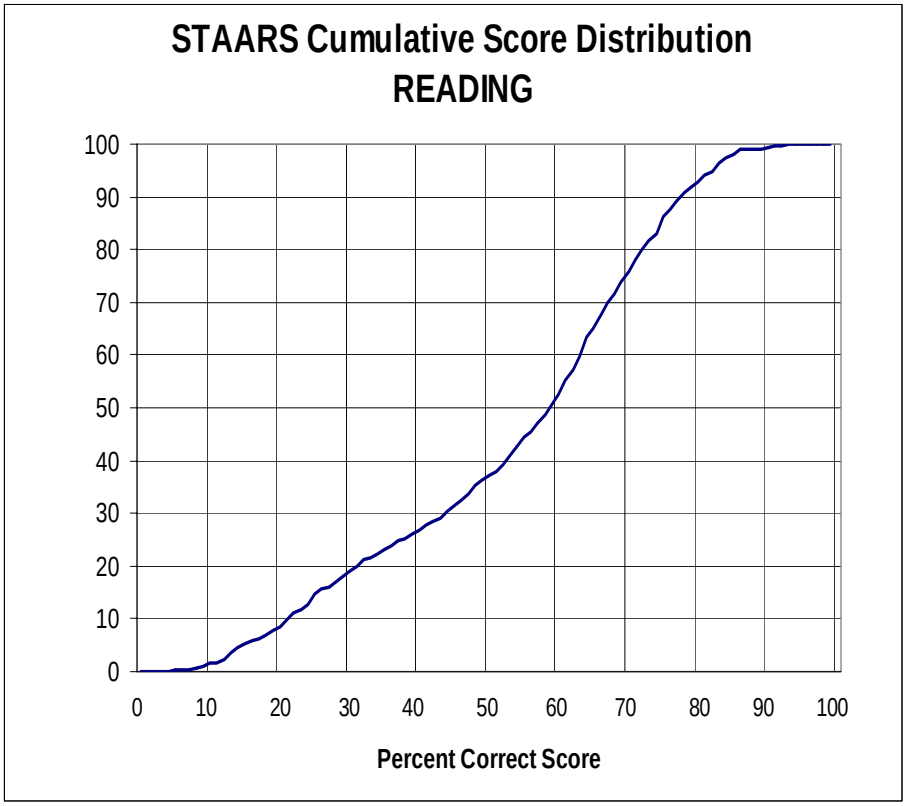
Developing_____ Applying _____ Advancing_____

Adjusted (final) Cuts:

% Correct Score

Developing_____ Applying _____ Advancing_____

STAARS Standard Setting — June 2, 2005



	Performance Levels		
	Developing	**Applying**	**Advancing**
Maximum % Correct Score	X2	X2	X2
Minimum % Correct Score	X1	X1	X1

Sample Reports

Sample reports for a student, class, school, and state appear on the following pages.

SOUTH DAKOTA STATEWIDE TEAM-LED ALTERNATE ASSESSMENT AND REPORTING SYSTEM

Student Report | MIKE SMITH

Reading

TEACHER: BETTY JONES
SCHOOL: STAR HIGH
DISTRICT: ROCKET ISD 90703
GRADE: 11 **AGE:** 17 Yrs 04 Mos
TEST DATE: 04/05 **STUDENT NO:** 077888805

Learner Snapshot

Your child was tested on standards selected by the Individual Education Plan Team (IEP). This student's Performance Level is **APPLYING**. The scores below show your child's current performance level on the extended standards.

Reading Composite Scaled Score
259

Performance Level	Introducing	Developing	Applying	Advancing
Scaled Score	.		x	

000 400

Content Area	Possible Score	Actual Score	Scaled Score	Performance Level	Narrative
Academic Rating Scale	273	190	259	APPLYING	Based on the extended content standards in reading your child is functioning at an applying level of knowledge. For further information, please contact your child's teacher.
Evidence of Work	8	4			

Reading Performance Levels

1 Introducing
The student is introduced to and demonstrates emerging knowledge and skills in the reading extended standards. The student needs extensive assistance and continued guidance to complete tasks requiring reading concepts and or expressive and receptive communication skills in order to build to developing achievement.

2 Developing
The student demonstrates partial knowledge and basic skills in the reading extended standards with instruction. The student is developing in completing tasks requiring knowledge of reading concepts. The student uses the skills of expressive and receptive language to build to the application level of achievement.

3 Applying
The student demonstrates proficiency in applying the knowledge and skills needed to consistently perform tasks requiring the utilization of reading concepts. The student demonstrates advancement of expressive and receptive language skills toward meeting their individually established criteria standard.

4 Advancing
The student demonstrates advanced knowledge and skills in the extended reading standards at their individually established criteria.

* = Inadequate information provided ** = Not attempted or not measured.

Student Reports	Definitions
• Reports provide information about individual students' scores for content area, evidence of work, and totals. • The student's name appears at the top of the report for high visibility and quick recognition. • The classroom teacher's name, school, and district appear in the upper portion of the report, below the student's name, for easy identification. • Grade and test date are printed below district information. • Performance level for each content area is written in the corresponding column. • Performance level is reported as advancing, applying, developing, introducing, and not attempted. This reporting method enables the teacher to identify relative strengths and weaknesses within a content area. • Number Possible (Possible Score) and Number Correct (Actual Score) for each content area are also reported.	**Actual Score (AS):** Score student achieved in content area. **Academic Rating Scale:** Score based on teacher observation. **Content Area:** Area of academic work evaluated. **Evidence of Work:** Evidence collected by teacher and provided to contractor for scoring. **Possible Score (PS):** Highest score student could achieve in content area. **Performance Level (PL):** Student's level of ability when compared to South Dakota Alternate Achievement Standards. Performance levels are typically split into four sections. For example, the Dakota STEP has the performance levels of Below Basic, Basic, Proficient and Advanced. SELP has Pre-Emergent, Emergent, Basic, Intermediate, and Proficient. For the STAARS, the performance levels follow the same setup. From lowest to highest, the sections are called, respectively, Introducing, Developing, Applying and Advancing. **Scaled Score (SS):** A mathematical transformation of a Possible Score. Scaled scores are useful when comparing test results over time or over the performance of a large testing group (i.e. National, State).
Abbreviations	
IEP = Individual Education Plan LVL = Level N, % = Number, Percent	

SOUTH DAKOTA STATEWIDE TEAM-LED ALTERNATE ASSESSMENT AND REPORTING SYSTEM

Master List of Test Results | BETTY JONES

GROUP CODE: 399
SCHOOL CODE:STARR HIGH GRADE: 11 TEST DATE: 04/05
DISTRICT: ROCKET ISD 90703

Student listing is alphabetical	Reading			Mathematics		
	Academic Rating Score	Evidence of Work	Total Composite	Academic Rating Score	Evidence of Work	Total Composite
Maximum Score Points Possible	273	8		177	8	
Smith, Mike	17 Yrs 04Mos		Student Number 077888805			
Actual Score	190	4		113	4	
Scaled Score			259			242
Performance Level			APPLYING			APPLYING
Thomas, Andie	17 Yrs 08 Mos		Student Number 073388805			
Actual Score	31	4		12	4	
Scaled Score			84			70
Performance Level			iNTRODUCING			iNTRODUCING
	Yrs Mos		Student Number			
Actual Score						
Scaled Score						
Performance Level						
	Yrs Mos		Student Number			
Actual Score						
Scaled Score						
Performance Level						
	Yrs Mos		Student Number			
Actual Score						
Scaled Score						
Performance Level						

* = Inadequate information provided ** = Not attempted or not measured.

Master List of Test Results	Definitions
• Reports provide complete overview of every student's performance. Students appear in alphabetical order. • The teacher's name appears at the top of the report for high visibility and quick recognition. • The school and/or district names appear in the upper portion of the report, below Master List of Test Results, for easy identification. • Grade and test date are printed beside school/district information. • Student performance level for each content area is indicated in the third column under the main content columns. Also, there are two columns defining the Actual Scores and the Scaled Scores under each content area header. • Student performance level is divided into rating scale, evidence of work, and total composite score for each content area.	**Actual Score (AS):** Score student achieved in content area. **Content Area:** Area of academic work evaluated. **Rating Scale:** Score based on teacher observation. **Evidence of Work:** Evidence collected by teacher and provided to contractor for scoring. **Possible Score (PS):** Highest score student could achieve in content area. **Performance Level (PL):** Student's level of ability when compared to South Dakota Alternate Achievement Standards. Performance levels are typically split into four sections. For example, the Dakota STEP has the performance levels of Below Basic, Basic, Proficient and Advanced. SELP has Pre-Emergent, Emergent, Basic, Intermediate, and Proficient. For the STAARS, the performance levels follow the same setup. From lowest to highest, the sections are called, respectively, Introducing, Developing, Applying and Advancing **Scaled Score (SS):** A mathematical transformation of a Possible Score. Scaled scores are useful when comparing test results over time or over the performance of a large testing group
Abbreviations	
IEP = Individual Education Plan LVL = Level N, % = Number, Percent	

SOUTH DAKOTA STATEWIDE TEAM-LED ALTERNATE ASSESSMENT AND REPORTING SYSTEM

Master List of Test Results | STARR HIGH

DISTRICT: ROCKET ISD 90703
TEST DATE: 04/05 GRADE: 11

Student listing is alphabetical	Reading			Mathematics		
	Academic Rating Score	Evidence of Work	Total Composite	Academic Rating Score	Evidence of Work	Total Composite
Maximum Score Points Possible	273	8		177	8	
Smith, Mike	17Yrs 04 Mos		Student Number 077888805			
Actual Score	190	4		113	4	
Scaled Score			259			242
Performance Level			APPLYING			APPLYING
Thomas, Andie	17Yrs 08 Mos		Student Number 073388805			
Actual Score	31	4		12	4	
Scaled Score			84			70
Performance Level			INTRODUCING			INTRODUCING
Thompson, Ginger	16Yrs 01 Mos		Student Number 079328803			
Actual Score	223	4		132	4	
Scaled Score			295			274
Performance Level			APPLYING			APPLYING
Vann, Madera	18Yrs 01 Mos		Student Number 073388707			
Actual Score	251	5		159	4	
Scaled Score			338			319
Performance Level			ADVANCING			ADVANCING
Vasquez, Jose	17Yrs 07 Mos		Student Number 073389111			
Actual Score	134	4		55	3	
Scaled Score			197			131
Performance Level			DEVELOPING			DEVELOPING

* = Inadequate information provided ** = Not attempted or not measured.

Master List of Test Results	Definitions
• Reports provide complete overview of every student's performance. Students appear in alphabetical order. • The teacher's name appears at the top of the report for high visibility and quick recognition. • The school and/or district names appear in the upper portion of the report, below Master List of Test Results, for easy identification. • Grade and test date are printed beside school/district information. • Student performance level for each content area is indicated in the third column under the main content columns. Also, there are two columns defining the Actual Scores and the Scaled Scores under each content area header. • Student performance level is divided into rating scale, evidence of work, and total composite score for each content area.	**Actual Score (AS):** Score student achieved in content area. **Content Area:** Area of academic work evaluated. **Rating Scale:** Score based on teacher observation. **Evidence of Work:** Evidence collected by teacher and provided to contractor for scoring. **Possible Score (PS):** Highest score student could achieve in content area. **Performance Level (PL):** Student's level of ability when compared to South Dakota Alternate Achievement Standards. Performance levels are typically split into four sections. For example, the Dakota STEP has the performance levels of Below Basic, Basic, Proficient and Advanced. SELP has Pre-Emergent, Emergent, Basic, Intermediate, and Proficient. For the STAARS, the performance levels follow the same setup. From lowest to highest, the sections are called, respectively, Introducing, Developing, Applying and Advancing **Scaled Score (SS):** A mathematical transformation of a Possible Score. Scaled scores are useful when comparing test results over time or over the performance of a large testing group
Abbreviations	
IEP = Individual Education Plan LVL = Level N, % = Number, Percent	

SOUTH DAKOTA STATEWIDE TEAM-LED ALTERNATE ASSESSMENT AND REPORTING SYSTEM

Group Report | STATE

GRADE: 11
TEST DATE: 04/05

Performance Levels

Reading

4 Advancing
The student demonstrates advanced knowledge and skills in the extended reading standards at their individually established criteria.

3 Applying
The student demonstrates proficiency in applying the knowledge and skills needed to consistently perform tasks requiring the utilization of reading concepts. The student demonstrates advancement of expressive and receptive language skills toward meeting their individually established criteria.

2 Developing
The student demonstrates partial knowledge and basic skills in the reading extended standards with instruction. The student is developing in completing tasks requiring knowledge of reading concepts. The student uses the skills of expressive and receptive language to build to the application level of achievement.

1 Introducing
The student is introduced to and demonstrates emerging knowledge and skills in the reading extended standards. The student needs extensive assistance and continued guidance to complete tasks requiring reading concepts and or expressive and receptive communication skills in order to build to developing achievement.

* Not attempted or not measured.

Mathematics

4 Advancing
The student demonstrates command of knowledge and skills in the mathematics extended standards to complete tasks requiring mathematics concepts and problem solving skills at their individual established criteria.

3 Applying
The student has the knowledge and skills needed to consistently perform tasks requiring mathematical concepts with minimal errors and is progressing toward meeting the standard.

2 Developing
The student demonstrates partial knowledge and skills in math extended standards with instruction. The student is developing independence in components of the skills to recognize and compute basic math concepts in order to build to progressing achievement.

1 Introducing
The student is introduced to and demonstrates emerging knowledge and skills in the mathematics extended standards. The student needs extensive assistance and continued guidance to complete tasks requiring mathematic concepts and problem solving skills in order to build toward developing achievement.

* Not attempted or not measured.

Content Area	Maximum Possible Score	Average Actual Score	Average Scaled Score	Advancing NO. OF STUDENTS / % OF STUDENTS	Applying NO. OF STUDENTS / % OF STUDENTS	Developing NO. OF STUDENTS / % OF STUDENTS	Introducing NO. OF STUDENTS / % OF STUDENTS	Not Attempted NO. OF STUDENTS / % OF STUDENTS
Reading Academic Rating Scale	273	128						
Evidence of Work	8	5						
Reading Composite			200	1 8%	4 33%	2 17%	5 42%	0 0%
Math Academic Rating Scale	177	69						
Evidence of Work	8	4						
Math Composite			170	2 17%	4 33%	1 8%	5 42%	0 0%

Group Reports	Definitions
• Reports provide information about class, school, or district scores for content area, evidence of work, and totals. • The group name appears at the top of the report for high visibility and quick recognition. • The school and/or district names appear in the upper portion of the report, below the group name, for easy identification. • Grade and test date are printed below school/district information. • Group performance level for each content area is indicated by a percentage in the corresponding column. • Group performance level is reported as advancing, applying, developing, introducing, and not attempted. Maximum Possible Score, the Average Actual Score and the Average Scaled Score for each content area are also reported.	**Content Area:** Area of academic work evaluated. **Rating Scale:** Score based on teacher observation. **Evidence of Work:** Evidence collected by teacher and provided to contractor for scoring. **Maximum Possible Score:** Highest score student could achieve in content area. **Average Actual Score:** The average of all actual scores of all the students achieved in a specific content area. **Performance Level (PL):** Student's level of ability when compared to South Dakota Alternate Achievement Standards. Performance levels are typically split into four sections. For example, the Dakota STEP has the performance levels of Below Basic, Basic, Proficient and Advanced. SELP has Pre-Emergent, Emergent, Basic, Intermediate, and Proficient. For the STAARS, the performance levels follow the same setup. From lowest to highest, the sections are called, respectively, Introducing, Developing, Applying and Advancing. **Average Scaled Score:** A mathematical transformation of an Actual Score. Scaled scores are useful when comparing test results over time or over the performance of a large testing group. The average of the reporting groups determines this value.
Abbreviations	
IEP = Individual Education Plan LVL = Level N, % = Number, Percent	

Part 7:
Data from Spring 2005 Administration of the STAARS

Part 7: Data from Spring 2005 Administration of the STAARS

The STAARS was an individually based instrument used to assess the achievement of students with significant cognitive disabilities. Three raters completed the rating scale on each child. The teacher also submitted evidence of student work to demonstrate the student's level of performance on specific indicators. South Dakota teachers are to be commended for utilizing best practices with this population where they used age appropriate educational activities to learn and assess the learning of grade level content– the staff training effort of the SD DOE was readily apparent.

Student Demographics

Table 9 summarizes the number of students participating at the STAARS at each grade level. SD DOE chose to allow special education teachers to submit rating scales and Evidence of Student Work on students in any grade rather than just grades 3 through 8 and grade 11 as required by the SD State Plan submitted to the U.S. Department of Education.

Teachers submitted material (Rating Scale and Evidence of Student Work) on 705 students. There were 50 total students in Kindergarten, grade 1 and 2 (1, 21, and 28 respectively). The vast majority of students were in grades 3 through 8.

Table 9. Summary of Students by Grade

Grade	Number	Percent
K	1	.1
1	21	3.0
2	28	4.0
3	104	14.8
4	78	11.1
5	85	12.1
6	92	13.0
7	90	12.8
8	104	14.8
9	17	2.4
10	12	1.7
11	72	10.2
12	1	.1
Total	**705**	**100.0**

Table 10 summarizes the number of students participating by gender. As in many states, there were more males participating than females. The ratio of females to males was more balanced in South Dakota than in the overall U.S. where it is typically 3 males to 1 female (U.S. Department of Education, 2004).

Table 10. Summary of Students by Gender

Grade	Number Female	Number Male
K	0	1
1	5	16
2	10	18
3	36	68
4	38	40
5	26	59
6	40	52
7	27	63
8	45	59
9	7	10
10	5	7
11	31	41
12	0	1
TOTAL	**270**	**435**

Table 11 summarizes the total number and percent of students participating by ethnicity. Twenty percent (20%) of the total number of students were American Indian or Alaska natives. Only 1%≥ were Asian or Pacific Islander. Another 3% were Black/African American, and 2.4% were Hispanic. Seventy-three point six percent (73.6%) of the students were White. As South Dakota has pointed out in other reports, 26.4% of their population is minority, a small percentage compared to other states.

Table 11. Number and Percent of Students by Ethnicity

Grade	American Indian or Alaska Native	Asian or Pacific Islander	Black / African American	Hispanic	White	TOTAL
K	1	0	0	0	0	1
1	2	0	1	2	16	21
2	5	1	4	1	17	28
3	22	2	1	3	77	104
4	16	1	1	0	60	78
5	21	0	2	2	61	85
6	19	0	3	5	65	92
7	19	2	3	1	66	90
8	18	1	5	2	78	104
9	5	0	0	0	13	17
10	3	0	0	0	9	12
11	12	2	3	1	56	72
12	0	0	0	0	1	1
TOTALS	**143**	**9**	**23**	**17**	**519**	**705**

Table 12 summarizes reading performance in each of the four levels by indicating the number and percent of students by ethnicity. There were a total of 711 students who were assessed in Reading Performance. Out of these 711, most of the students 44% scored in Level 4 (Advancing), followed by Level 3 at 23%, Level 1 at 18%, and Level 2 at 15% of the total. Level 4 ethnicity included 38%, American Indian/Alaska Native, 67% Asian/Pacific Islander, 56% Black/African American, 46% Hispanic, and 45% White.

Table 12. Reading Performance Level by Ethnicity

ETHNICITY	Number Level 1	Percent Level 1	Number Level 2	Percent Level 2	Number Level 3	Percent Level 3	Number Level 4	Percent Level 4	TOTAL
Amer. Indian / Alaska Native	28	20	26	18	34	24	55	38	143
Asian or Pacific Islander	2	22	0	0	1	11	6	67	9
Black / African American	2	9	2	9	6	26	13	56	23
Hispanic	4	24	1	6	4	24	8	46	17
White	89	17	79	15	120	23	231	45	519
Total	**125**	**18%**	**108**	**15%**	**165**	**23%**	**313**	**44%**	**711**

Table 13 summarizes math performance in each of the four levels by indicating the number and percent of students by ethnicity. Out of the 711 students who were assessed in Math, most of the students 39% scored in Level 4 (Advancing), followed by Level 3 at 27%, Level 1 at 19%, and Level 2 at 15%. Level 4 ethnicity included 38% American Indian/Alaska Native, 67% Asian/Pacific Islander, 57% Black/African American, 35% Hispanic, and 37% White.

Table 13. Math Performance Level by Ethnicity

ETHNICITY	Number Level 1	Percent Level 1	Number Level 2	Percent Level 2	Number Level 3	Percent Level 3	Number Level 4	Percent Level 4	TOTAL
Amer. Indian / Alaska Native	30	21	18	12	41	29	54	38	143
Asian or Pacific Islander	1	11	1	11	1	11	6	67	9
Black / African American	3	13	1	4	6	26	13	57	23
Hispanic	2	12	5	29	4	24	6	35	17
White	102	20	83	16	140	27	194	37	519
Total	**138**	**19%**	**108**	**15%**	**192**	**27%**	**273**	**39%**	**711**

Table 14 summarizes reading performance in each of the four levels by indicating the number and percent of students by gender. Females had a higher percentage over males in Levels 1 and 2 while males had a higher percentage over females in Levels 3 and 4. Overall, males and females both scored 44% in Level 4 followed by Level 1 at 17%, and Level 2 at 15%.

Table 14. Reading Performance Level by Gender

GENDER	Number Level 1	Percent Level 1	Number Level 2	Percent Level 2	Number Level 3	Percent Level 3	Number Level 4	Percent Level 4	TOTAL
FEMALE	58	22	43	16	55	20	114	42	270
MALE	65	15	64	15	110	25	196	45	435
TOTAL	**123**	**17%**	**107**	**15%**	**165**	**23%**	**310**	**44%**	**705**

Table 15 summarizes math performance in each of the four levels by indicating the number and percent of students by gender. Females had a higher percentage over males in Levels 1 and 2 while males had a higher percentage over females in Levels 3 and 4. Respectively, males and females both scored 41% and 34% in Level 4 with both scoring 44% of the overall score. Level 4 was the area most students scored in, with Level 3 next at 27%, followed by Level 1 at 19%, and Level 2 at 15%.

Table 15. Math Performance Level by Gender

GENDER	Number Level 1	Percent Level 1	Number Level 2	Percent Level 2	Number Level 3	Percent Level 3	Number Level 4	Percent Level 4	TOTAL
FEMALE	62	23	46	17	70	26	92	34	270
MALE	73	17	62	14	121	28	179	41	435
TOTAL	**135**	**19%**	**108**	**15%**	**191**	**27%**	**271**	**38%**	**705**

Table 16 lists individual student accommodations by grade. These accommodations were only those used specifically for test taking on the alternate assessment. The accommodations used most frequently by students were pictures, symbols, word schedules, and switch devices which accounted for 32% of the total amount. Use of an interpreter, personal assistant or a calculator accounted for 27% of the needed accommodations. The remaining accommodations were the use of a smaller setting, number line, assistive technology, oral tests, and cued speech. General accommodations to assist with instruction were not listed in the table.

Table 16. Reported Accommodations by Grade

Grade	Cued Speech	Picture Schedule Symbol	Interpreter Assistant	Switch Device	Number Line	Calculator	Smaller Setting	Assistive Technology	Oral Tests
K	X								
1		X	X	X					
2		X	X		X		X		
3		X		X	X	X	X	X	X
4		X				X			X
5		X	X	X	X	X	X	X	X
6			X	X	X	X	X		
7				X		X		X	
8		X		X			X		X
9									
10									
11				X		X			
12									

Teacher Demographics

Table 17 summarizes the spread of special education teachers by grade. Because some teachers rated more than one student, there were not 705 teachers who participated. In one instance, one special education teacher completed 32 rating scales which was contrary to the directions. It was a head or lead special education teacher who filled out the forms to ease the burden on the other teachers. This table compares to Table 9 in Student Demographics.

Table 17. Rater Information by Grade

Grade	Number	Percent
K	1	.1
1	21	3.0
2	28	4.0
3	104	14.8
4	78	11.1
5	85	12.1
6	92	13.0
7	90	12.8
8	104	14.8
9	17	2.4
10	12	1.7
11	72	10.2
12	1	.1
TOTAL	**705**	**100.0**

Table 18 summarizes the teachers' report of the number of years experience in their current position compared to their total number of years teaching experience. The percentage was not 100% due to the fact that 11 teachers did not fill out the section regarding the number of years in their current position, and 22 teachers did not fill out the section on total years of experience.

Table 18. Years in Position and Years of Experience by Grade

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
YRS_POS * GR	694	98.4%	11	1.6%	705	100.0%
YRS_EXP * GR	683	96.9%	22	3.1%	705	100.0%

*****Counts may include repeated occurrences of the same rater.

Table 19 summarizes the teachers' report of the number of years in their current teaching position. The table shows that the large majority (60%) of teachers have been teaching in their current position less than 5 years. Eighteen percent of the teachers have been in their position 5 to 10 years while 11% have stayed 10 to 15. Only 6% have remained in their position 15 to 20 years and 4% more than 20 years.

Table 19. Number of Years in Current Position

Years in Position	Number of Teachers
0.5 to 5	418
5 to 10	130
10 to 15	75
15 to 20	40
20+	31
Total	694

Table 20 summarizes the teachers' report of the total number of year's experience in the teaching profession. The table shows that 28% of the teachers have been teaching five years or less, 24% have been teaching 5–10 years, 13% have been teaching 10–15 years, 14% have been teaching 15–20 years, and 21% of the teachers have more than 20 years teaching experience.

Table 20. Number of Years Experience

Years Experience	Number of Teachers
0.5 to 5	192
5 to 10	161
10 to 15	86
15 to 20	97
20 to 25	75
25+	72
Total	683

Part 8: Adjustments to the Assessment Plan for 2005-2006

Part 8: Adjustments to the Assessment Plan for 2005–2006

On January 6, 2005, the SD DOE informed Harcourt that the Alternate Assessment Standards (Extended Standards) would be re-written to be grade-based rather than the current plan. The standards would be tied closely to the general state academic standards and have more of an emphasis on academics rather than access and entry skills.

With the change in focus to grade-based standards in reading and mathematics for 2005–2006, again science and social studies are included in 2006–7, the plan for instruments was changed. Harcourt was to develop grade-based assessments for each grade 3 through 8 and one grade in high school for reading and mathematics. Science and social studies standards and instruments would mirror the general education grades, developed in 2005–2006, and be implemented in 2006–7.

With the change in focus to grade-level academics, it was decided that the ABAS-II would no longer be used. An academically based rating scale tied to the grade-based Alternate Content Standards would be developed in its place. The test name will be changed from the STAARS to *Dakota STEP-A*. It will consist of the rating scale and the Body of Evidence. Two raters will complete the rating scale rather than three. The assessment will be administered once in the spring (rather than twice).

Buros will conduct the alignment study checking the instrument to the grade-based Extended Standards. Harcourt will continue to utilize the Webb model for alignment as part of its test development process to ensure that the assessment has the most appropriate breadth, depth, categorical concurrence, and range of knowledge possible (see description, Part 3)

Part 9: References

Part 9: References

American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (1999). *Standards for educational and psychological testing.* Washington, DC: Author.

Browder, D. M., Fallin, K., Davis, S., & Karvonen, M. (2003). Consideration of what may influence student outcomes on alternate assessment. *Education and Training in Developmental Disabilities, 38,* 255–270.

Browder, D. M., Spooner, F., Algozzine, R., Ahlgrim-Delzell, L., Flowers, C., & Karvonen, M. (2003). What we know and need to know about alternate assessment. *Exceptional Children, 70,* 45–61.

Case, B. J., Thompson, S., & Thurlow, M. (2000, June). *Alternate assessments: State of the states.* Presentation at CCSSO Large Scale Conference: Snowbird, Utah.

Elementary and Secondary Education Act, 20 U.S.C. § 6311(b)(3)(C)(ii) (2002).

Elliott, S. N., Braden, J. B., & White, J. L. (2001). *Assessing one and all: Educational accountability for students with disabilities.* Arlington, VA: Council for Exceptional Children.

Elliott, S. N., & Fuchs, L. S. (1997). The utility of curriculum-based measurement and performance assessment as alternatives to traditional intelligence and achievement tests. *School Psychology Review, 26,* 224–233.

Green, D. R. (1998). Consequential aspects of the validity of achievement tests: A publisher's point of view. *Educational Measurement: Issues and Practices, 17*(2), 16–19, 34.

Hoge, R. D., & Coladarci, T. (1989). Teacher-based judgments of academic achievement: A review of the literature. *Review of Educational Research, 59,* 297–313.

Individuals with Disabilities Education Act Amendments of 1997, Pub. L. No. 105-17, 111 Stat. 37 (codified as amended at 20 U.S.C. § 1400 *et seq.).*

Kleinert, H. L., & Kearns, J. F. (1999). A validation study of the performance indicators and learner outcomes of Kentucky's alternate assessment for students with significant disabilities. *The Journal of the Association for Persons with Severe Handicaps, 24,* 100–110.

Koertz, D., McCaffrey, D., Klein, S., Bell, R., & Stecher, B. (1993). *The reliability of scores from the 1992 Vermont portfolio assessment program. (CSE Technical Report 355).* Los Angeles: National Center for Research on Evaluation, Standards, and Student Testing.

Lane, S. (1999, October). *Validity evidence for assessments.* Paper presented at the Edward Reidy Interactive Lecture Series, The National Center for the Improvement of Educational Assessment, Providence, RI.

Lewis, D. M., Mitzel, H. C., & Green, D. R. (1996, June). Standard setting: A bookmark approach. In D. R. Green (Chair), *IRT-based standard-setting procedures utilizing behavioral anchoring.* Symposium conducted at the meeting of the Council of Chief State School Officers National Conference on Large Scale Assessment, Phoenix, AZ.

Messick, S. (1993). Validity. In *Educational Measurement, 3rd Edition.* Ed. R. L. Linn. New York: Macmillan.

Pugach, M.C. & Warger, C.L. (2001). Curriculum matters: Raising expectations for students with disabilities. *Remedial and Special Education, 22*(4), 194–196.

Roach, A. T., Elliott, S. N., & Webb. N. L. (2003). *Alignment analysis and content validity of the Wisconsin Alternate Assessment for Students with Disabilities. WCER working paper No. 2003-2.* Available on the web at: http://www.wcer.wisc.edu/publications/workingpaper/abstract/Working_ PaperNo_2003_2. asp

Roach, A. T., Elliott, S. N. (2004, September). *Alignment analysis and standard-setting procedures for alternate assessment. WCER working paper No. 2004-1.* Available on the web at: http://www.wcer.wisc.edu/publications/workingpaper/abstract/WorkingPaperNo-2004-1.asp

Shinn, M. R. (1995). Best practice in curriculum-based measurement and its use in a problem-solving model. In A. Thomas, & J. Grimes (Eds.), *Best practices in school psychology—III* (pp. 547–568). Washington, DC: National Association of School Psychologists.

Thompson, S. J., & Thurlow, J. L. (2003). *2003 state special education outcomes: Marching on.* Minneapolis, MN: University of Minnesota, National Center On Educational Outcomes. Retrieved March 1, 2004 from http://education.umn.edu/NCEO/OnlinePubs/2003State Report.htm.

Thurlow, M. & Case, B. J. (2004, June). *Alternate assessments: State of the states.* Presentation at CCSSO Large Scale Conference: Boston.

Tindal, G., McDonald, M., Tedesco, M., Glasgow, A., Almond, P., Crawford, L., & Hollenbeck, K. (2003). Alternate assessments in reading and math: Development and validation for students with significant disabilities. *Exceptional Children, 69,* 481–494.

Turner, M. D., Baldwin, L., Kleinert, H. L., & Kearns, J. F. (2000). The relation of a statewide alternate assessment for students with severe disabilities to other measures of instructional effectiveness. *Journal of Special Education, 34,* 69–76.

Webb, N. L. (1997). Determining alignment of expectations and assessments in mathematics and science education. *National Institute for Science Education Brief, 1*(2), 1–8.

Webb, N. L., Horton, M., & O'Neal, S. (2002, April). *An analysis of the alignment between language arts standards and assessment in four states.* Paper presented at the annual meeting of the American Educational Research Association, New Orleans.

Ysseldyke, J., Thurlow, M., McGrew, K., & Vanderwood, M. (1994). *Making decisions about the inclusion of students with disabilities in large-scale assessments (Synthesis report 13).* Minneapolis, MN: National Center on Educational Outcomes.

Ysseldyke, J., Thurlow, M., & Shin, H. (1995). *Opportunity-to-learn standards (Policy Directions No.4).* Minneapolis, MN: National Center on Educational Outcomes. Retrieved March 18, 2003 from: http://education.umn.edu/NCEO/OnlinePubs/Policy4.html.

Appendix A: Technical Assistance Manual

Determining Eligibility for Special Education in South Dakota

A Technical Assistance Document

Developed by the
State of South Dakota
Department of Education
Office of Educational Services and Support,
Special Education Programs
700 Governors Drive,
Pierre, SD 57501

August 1996
Revised October 1998
Revised July 2001
Revised December 2004

It is the policy of the South Dakota Department of Education to provide services to all persons without regard to race, creed, religion, sex, disability, ancestry, or national origin in accordance with State Law (SDCL 20-13) and Federal Law (Title VI of Civil Rights Act of 1964, the Rehabilitation Act of 1973 as amended, and the Americans with Disabilities Act of 1990).

MISSION STATEMENT

Special Education Programs

South Dakota Department of Education

Special Education Programs, located in the South Dakota Department of Education advocates for the availability of the full range of personnel, programming, and placement options, including early intervention and transition services, required to assure that all individuals with disabilities are able to achieve maximum independence upon exiting from school. In accomplishing this mission, Special Education Programs:

1. Provides the leadership and technical support essential for school districts, other public agencies, and families to meet the individualized needs of children and youth with disabilities eligible for early intervention programming, special education, or special education and related services;

2. facilitates and, where federal and/or state policy mandates, oversees collaboration among all agencies and individuals involved in the provision of early intervention programming and special education or special education and related services;

3. ensures statewide compliance with all state and federal mandates governing the provision of early intervention programming, special education or special education and related services; and

4. administers the distribution of state and federal funds appropriated to assure the provision of early intervention programming, special education, or special education and related services for all eligible infants, toddlers, children and youth with disabilities.

TABLE OF CONTENTS

A. Introduction 1

B. Administrative Rules of South Dakota pertaining to eligibility and evaluation for special education in South Dakota 3

C. Statistical overview 16

D. List of testing instruments 20

E. Autism 50

F. Deaf-Blindness 54

G. Deafness 56

H. Hearing Impairment 58

I. Mental Retardation 60

J. Multiple Disabilities 62

K. Orthopedic Impairment 63

L. Other Health Impaired 65

M. Emotional Disturbance 68

N. Specific Learning Disability 73

O. Speech/Language Impairment 76
   1. Articulation disorder 77
   2. Fluency disorder 78
   3. Voice disorder 79
   4. Language disorder 80

P. Traumatic Brain Injury 82

Q. Visual Impairments 84

R. Development Delay 86

S. Prolonged Assistance 88

T. IEP Team Override 89

ADMINISTRATIVE RULES OF SOUTH DAKOTA
PERTAINING TO ELIGIBILITY FOR SPECIAL EDUCATION IN SOUTH DAKOTA

CHAPTER 24:05:24.01

ELIGIBILITY CRITERIA

Section

24:05:24.01:01. Students with disabilities defined.
24:05:24.01:02. Screening procedures for autism.
24:05:24.01:03. Autism defined.
24:05:24.01:04. Diagnostic criteria for autism.
24:05:24.01:05. Diagnostic procedures for autism.
24:05:24.01:06. Instruments used in diagnosis of autism.
24:05:24.01:07. Deaf-blindness defined.
24:05:24.01:08. Deafness defined.
24:05:24.01:09. Developmental delay defined.
24:05:24.01:10. Hearing impairment defined.
24:05:24.01:11. Mental retardation defined.
24:05:24.01:12. Multiple disabilities defined.
24:05:24.01:13. Orthopedic impairment defined.
24:05:24.01:14. Other health impaired defined.
24:05:24.01:15. Prolonged assistance defined.
24:05:24.01:16. Emotional disturbance defined.
24:05:24.01:17. Criteria for emotional disturbance.
24:05:24.01:18. Specific learning disability defined.
24:05:24.01:19. Criteria for specific learning disability.
24:05:24.01:20. Speech or language disorder defined.
24:05:24.01:21. Articulation defined disorder.
24:05:24.01:22. Criteria for articulation disorder.
24:05:24.01:23. Fluency disorder defined.
24:05:24.01:24. Criteria for fluency disorder.
24:05:24.01:25. Voice disorder defined.
24:05:24.01:26. Criteria for voice disorder.
24:05:24.01:27. Language disorder defined.
24:05:24.01:28. Criteria for language disorder.
24:05:24.01:29. Traumatic brain injury defined.
24:05:24.01:30. Visual impairment including blindness defined.
24:05:24.01:31. IEP Team override.
24:05:27:22 Occupational therapy defined
24:05:27:23 Criteria for occupational therapy
24:05:27:24 Physical therapy defined
24:05:27:25 Criteria for physical therapy

24:05:24.01:01. Students with disabilities defined.

Students with disabilities are students evaluated in accordance with chapter 24:05:25 as having autism, deaf-blindness, deafness, hearing impairment, mental retardation, multiple disabilities, orthopedic impairment, other health impairments, emotional disturbance, specific learning disabilities, speech or language impairments, traumatic brain injury, or visual impairments including blindness, which adversely affects educational performance, and who, because of those disabilities, need special education or special education and related services. If it is determined through an appropriate evaluation, under chapter 24:05:25, that a student has one of the disabilities identified in this chapter, but only needs a related service and not special education, the student is not a student with a disability under this article. If, consistent with this chapter, the related service required by the student is considered special education, the student is a student with a disability under this article.

24:05:24.01:02. Screening procedures for autism.

If a student is suspected of having autism, screening procedures for autism shall include a review of any medical, hearing, and vision data on the student; the history of the student's behavior; and the student's current patterns of behavior related to autism.

24:05:24.01:03. Autism defined.

Autism is a developmental disability that significantly affects verbal and nonverbal communication and social interaction and results in adverse effects on the student's educational performance.

Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences.

The term does not apply if the student's educational performance is adversely affected primarily because the student has an emotional disturbance as defined under Part B of Individuals with Disabilities Education Act.

24:05:24.01:04. Diagnostic criteria for autism.

An autistic disorder is present in a student if at least six of the following twelve characteristics are expressed by a student with at least two of the characteristics from subdivision (1), one characteristic from subdivision (2), and one characteristic from subdivision (3):

(1) Qualitative impairment in social interaction, as manifested by at least two of the following:

(a) Marked impairment in the use of multiple nonverbal behaviors, such as eye-to-eye gaze, facial expression, body postures, and gestures, to regulate social interaction;

(b) Failure to develop peer relationships appropriate to developmental level;

(c) A lack of spontaneous seeking to share enjoyment, interests, or achievements with other people, such as a lack of showing, bringing, or pointing out objects of interest;

(d) Lack of social or emotional reciprocity;

(2) Qualitative impairment in communication as manifested by at least one of the following:

(a) Delay in, or total lack of, the development of spoken language not accommodated by an attempt to compensate through alternative modes of communication, such as gesture or mime;

(b) In an individual with adequate speech, marked impairment in the ability to initiate or sustain a conversation with others;

(c) Stereotyped and repetitive use of language or idiosyncratic language;

(d) Lack of varied, spontaneous make-believe play or social imitative play appropriate to developmental level;

(3) Restricted repetitive and stereotyped patterns of behavior, interests, and activities as manifested by at least one of the following:

(a) Encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus;

(b) Apparently inflexible adherence to specific, nonfunctional routines or rituals;

(c) Stereotyped and repetitive motor mannerisms, such as hand or finger flapping or twisting, or complex whole-body movements;

(d) Persistent preoccupation with parts of objects.

A student with autism also exhibits delays or abnormal functioning in at least one of the following areas, with onset generally prior to age three: social interaction, language used as a social communication, or symbolic or imaginative play. A student who manifests the characteristics of autism after age three could be diagnosed as having autism if the criteria in this section are satisfied.

24:05:24.01:05. Diagnostic procedures for autism.

School districts shall refer students suspected as having autism for a diagnostic evaluation to an agency specializing in the diagnostic and educational evaluation of autism or to another multidisciplinary team or group of persons who are trained and experienced in the diagnosis and educational evaluation of persons with autism.

A student suspected of autism must be evaluated in all areas related to the suspected disability, including, where appropriate, health, vision, hearing, social and emotional status, general intelligence, academic performance, communicative status, and motor abilities.

The evaluation shall utilize multiple sources of data, including information from parents and other caretakers, direct observation, performance on standardized tests of language/communication and cognitive functioning and other tests of skills and performance, including specialized instruments specifically developed for the evaluation of students with autism.

24:05:24.01:06. Instruments used in diagnosis of autism.

Instruments used in the diagnosis of students suspected of having autism include those which are based on structured interviews with parents and other caregivers, behavior rating scales, and other objective behavior assessment systems.

Instruments used in the diagnosis of students with autism must be administered by trained personnel in conformance with the instructions provided by their producer.

No single instrument or test may be used in determining diagnosis or educational need. Specific consideration must be given to the following issues in choosing instruments or methods to use in evaluating students who are suspected of having autism:

(1) The student's developmental level and possible deviations from normal development across developmental domains;

(2) The student's primary mode of communication;

(3) The extent to which instruments and methods identify strengths as well as deficits; and

(4) The extent that instruments and methods are tailored to assess skills in relationship to everyday activities and settings.

24:05:24.01:07. Deaf-blindness defined.

Deaf-blindness means that hearing and visual impairments affect a student at the same time. Students may be identified as deaf-blind when both vision and hearing impairments exist which are so severe that their sensory acuity cannot be determined and adaptations in both auditory and visual modes are required, or there is no response to auditory and visual stimuli.

24:05:24.01:08. Deafness defined.

Deafness is a hearing impairment that is so severe that the student is impaired in processing linguistic information through hearing, even with amplification.

A student may be identified as deaf when the unaided hearing loss is in excess of 70 decibels and precludes understanding of speech through the auditory mechanism, even with amplification, and demonstrates an inability to process linguistic information through hearing, even with amplification.

24:05:24.01:09. Developmental delay defined.

A student three, four, or five years old may be identified as a student with a disability if the student has one of the major disabilities listed in §24:05:24.01:01 or if the student experiences a severe delay in development.

A student with a severe delay in development functions at a developmental level two or more standard deviations below the mean in any one area of development specified in this section or 1.5 standard deviations below the mean in two or more areas of development.

The areas of development are cognitive development, physical development, communication development, social and emotional development, and adaptive functioning skills.

The student may not be identified as a student with a disability if the student's delay in development is due to factors related to environment, economic disadvantage, or cultural difference.

A district is not required to adopt and use the term developmental delay for any students within its jurisdiction. If a district uses the term developmental delay, the district must conform to both the division's definition of the term and to the age range that has been adopted by the division.

A district shall ensure that all of the student's special education and related services needs that have been identified through the evaluation procedures described under chapter 24:05:25 are appropriately addressed.

24:05:24.01:10. Hearing impairment defined.

A student may be identified as hearing impaired if an unaided hearing loss of 35 to 69 decibels is present that makes the acquisition of receptive and expressive language skills difficult with or without the help of amplification.

24:05:24.01:11. Mental retardation defined.

Mental retardation is significantly below-average intellectual functioning existing concurrently with deficits in adaptive behavior and is generally manifested before age eighteen. The required evaluative components for identifying a student with mental retardation are as follows:

(1) General intellectual functioning two standard deviations or more below the mean as determined by the full scale score on an individual cognitive evaluation, plus or minus standard error of measurement, as determined in accordance with § 24:05:25:04; and

(2) Exhibits deficits in adaptive behavior and academic or preacademic skills as determined by an individual evaluation in accordance with § 24:05:25:04.

24:05:24.01:12. Multiple disabilities defined.

Multiple disabilities means that two or more of the following disabilities affect the student at the same time: deafness, mental retardation, orthopedic impairment, other health impairment, serious emotional disturbance, speech or language impairment, traumatic brain injury, and visual impairment including blindness. The term does not include deaf-blindness.

24:05:24.01:13. Orthopedic impairment defined.

Orthopedic impairment is an impairment caused by a congenital anomaly, such as club foot or absence of some member; a disease, such as poliomyelitis, or bone tuberculosis; or another cause, such as cerebral palsy, an amputation, or a fracture or burn that causes contractures.

There must be evidence of the following:

(1) That the student's impaired motor functioning significantly interferes with educational performance;

(2) That the student exhibits deficits in muscular or neuromuscular functioning that significantly limit the student's ability to move about, sit, or manipulate materials required for learning;

(3) That the student's bone, joint, or muscle problems affect ambulation, posture, or gross and fine motor skills; and

(4) That current medical data by a qualified medical evaluator describes and confirms an orthopedic impairment.

24:05:24.01:14. Other health impaired defined.

Other health impaired means having limited strength, vitality, or alertness, including a heightened alertness to environmental stimuli that results in limited alertness with respect to the educational environment, because of a chronic or acute health problem, such as a heart condition, tuberculosis, rheumatic fever, nephritis, asthma, attention deficit disorder or attention deficit hyperactivity disorder, sickle cell anemia, hemophilia, epilepsy, lead poisoning, leukemia, or diabetes, that adversely affects a student's educational performance.

Adverse effects in educational performance must be verified through the multidisciplinary evaluation process as defined in §24:05:13:01(18).

24:05:24.01:15. Prolonged assistance defined.

Children from birth through two may be identified as being in need of prolonged assistance if, through a multidisciplinary evaluation, they score two standard deviations or more below the mean in two or more of the following areas: cognitive development, physical development including vision and hearing, communication development, social or emotional development, and adaptive development.

24:05:24.01:16. Emotional disturbance defined.

Emotional disturbance is a condition that exhibits one or more of the following characteristics to a marked degree over a long period of time:

(1) An inability to learn that cannot be explained by intellectual, sensory, or health factors;

(2) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers;

(3) Inappropriate types of behavior or feelings under normal circumstances;

(4) A general pervasive mood of unhappiness or depression; or

(5) A tendency to develop physical symptoms or fears associated with personal or school problems.

An emotional disturbance is not a transient expected response to stressors in the individual's environment; or misbehavior that can generally be corrected by environmental intervention. Environmental intervention includes feedback to the individual, advice to parents, and modifications and strategies addressed through teacher assistance team programs, or similar programs.

The term, emotional disturbance, includes schizophrenia. The term does not apply to a student who is socially maladjusted unless a multidisciplinary evaluation team determines pursuant to §24:05:24.01:17 that the student has an emotional disturbance.

24:05:24.01:17. Criteria for emotional disturbance.

A student may be identified as emotionally disturbed if the following requirements are met:

(1) The student demonstrates serious behavior problems over a long period of time, generally at least six months, with documentation from the school and one or more other sources of the frequency and severity of the targeted behaviors;

(2) The student's performance falls two standard deviations or more below the mean in emotional functions, as measured in school, home, and community on nationally normed technically adequate measures; and

(3) An adverse effect on educational performance is verified through the multidisciplinary evaluation process as defined in §24:05:13:01(18).

A student may not be identified as having an emotional disturbance if common disciplinary problem behaviors, such as truancy, smoking, or breaking school conduct rules, are the sole criteria for determining the existence of an emotional disturbance.

24:05:24.01:18. Specific learning disability defined.

Specific learning disability is a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. The term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The terms does not apply to students who have learning problems that are primarily the result of visual, hearing, or motor disabilities; mental retardation; emotional disturbance; or environmental, cultural, or economic disadvantage.

24:05:24.01:19. Criteria for specific learning disability.

A student may be identified as having a specific learning disability under the following circumstances:

(1) The student does not achieve commensurate with the student's age and ability levels in one or more of the areas listed in subdivision (2) of this section when provided with learning experiences appropriate for the student's age and ability levels; and

(2) The team finds that a student has a severe discrepancy of 1.5 standard deviations between achievement and intellectual ability in one or more of the following areas:

(a) Oral expression;
(b) Listening comprehension;
(c) Written expression;
(d) Basic reading skill;
(e) Reading comprehension;
(f) Mathematical calculation; or
(g) Mathematical reasoning.

The team must consider regression to the mean in determining the above discrepancy.

When using a measure of intellectual functioning which has verbal and performance subscales, the total score must be used unless there is a difference of more than one standard deviation between the two scores. If there is a difference of more than one standard deviation between the two subscales, the higher scale must be used.

24:05:24.01:20. Speech or language disorder defined.

Speech or language impairment is a communication disorder such as stuttering, impaired articulation, a language disorder, or a voice disorder.

24:05:24.01:21. Articulation disorder defined.

Articulation disorders include all non-maturational speech deviations based primarily on incorrect production of speech sounds. Articulation disorders include omissions, substitutions, additions, or distortions of phonemes within words. Articulation patterns that can be attributed to cultural or ethnic background are not disabilities.

24:05:24.01:22. Criteria for articulation disorder.

A student may be identified as having an articulation disorder if one of the following criteria exist:

(1) Performance on a standardized articulation test falls two standard deviations below the mean and intelligibility is affected in conversation;

(2) Test performance is less than two standard deviations below the mean but the student is judged unintelligible by the speech and language clinician and one other adult;

(3) Performance on a phonological assessment falls in the profound or severe range and intelligibility is affected in conversation; or

(4) Performance on a phonological assessment falls in the moderate range, intelligibly is affected in conversation, and during a tracking period of between three and six months there was a lack of improvement in the number and type of errors; or

(5) An error persists six months to one year beyond the chronological age when 90 percent of students have typically acquired the sound based on developmental articulation norms.

24:05:24.01:23. Fluency disorder defined.

A fluency disorder is an interruption in the flow of speaking characterized by atypical rate, rhythm, and repetitions in sounds, syllables, words, and phrases. This may be accompanied by excessive tension, struggle behavior, and secondary mannerisms.

24:05:24.01:24. Criteria for fluency disorder.

A student may be identified as having a fluency disorder if:

(1) The student consistently exhibits one or more of the following symptomatic behaviors of dysfluency:

(a) Sound, symbolic, or word repetition;

(b) Prolongations of sounds, syllables, or words;
(c) Blockages; or
(d) Hesitations.
(2) There is a significant discrepancy from the norm as measured by speech sampling in a variety of contexts. A significant discrepancy from the norm is five dysfluencies a minute; or
(3) The disruption occurs to the degree that the individual or persons who listen to the individual react to the manner of speech and the disruptions in a way that impedes communication.

24:05:24.01:25. Voice disorder defined.

A voice disorder is characterized by the production absence of vocal quality, pitch, loudness, resonance, duration which is inappropriate for an individual's age or gender, or both.

24:05:24.01:26. Criteria for voice disorder.

A student may be identified as having a voice disorder if:
(1) Consistent deviations exit in one or more of the parameters of voice: pitch, quality, or volume;
(2) The voice is discrepant from the norm for age, gender, or culture and is distracting to the listener; and
(3) The disorder is not the result of a temporary problem, such as normal voice changes, allergies, colds, or similar conditions.

24:05:24.01:27. Language disorder defined.

A language disorder is a reduced ability, whether developmental or acquired, to comprehend or express ideas through spoken, written, or gestural language. The language disorder may be characterized by limited vocabulary, an inability to function through the use of words (pragmatics) and their meanings (semantics), faulty grammatical patterns (syntax and morphology), or the faulty reproduction of speech sounds (phonology). A language disorder may have a direct or indirect affect on a student's cognitive, social, emotional or educational development or performance and deviates from accepted norms. The term language disorder does not include students whose communication problems result solely from a native language other than English or from their dialectal differences.

24:05:24.01:28. Criteria for language disorder.

A student may be identified as having a language disorder as a primary disability if:
(1) Through age eight, performance falls 1.5 standard deviations below the mean on standardized evaluation instruments; beginning at age nine, a difference is present of 1.5 standard deviations between performance on an individually administered

standardized language assessment instrument and measured expected potential as measured by an individually administered intelligence test; and

(2) The student's pragmatic skills, as measured by checklists, language samples, or observation, adversely affect the student's academic and social interactions.

24:05:24.01:29. Traumatic brain injury defined.

A traumatic brain injury is an acquired injury to the brain caused by an external physical force, resulting in a total or partial functional disability or psychosocial impairment, or both, that adversely affects a student's educational performance. The term applies to open or closed head injuries resulting in impairments in one or more areas, such as cognition; language; memory; attention; reasoning; abstract thinking; judgment; problem solving; sensory, perceptual, and motor abilities; psychosocial behavior; physical functions; information processing; and speech. The terms does not apply to brain injuries that are congenital or degenerative, or brain injuries induced by birth trauma.

Adverse effects in educational performance must be verified through the multidisciplinary evaluation process as defined in §24:05:13:01(12).

24:05:24.01:30. Visual impairment including blindness defined.

Visual impairment including blindness is an impairment in vision that, even with correction, adversely affects a student's educational performance. The term includes both partial sight and blindness.

A student with a visual impairment has a deficiency in visual acuity that, even with the use of lenses or corrective devices, requires special education or special education and related services.

Partial sight is one or more deficiencies in visual acuity, as follows:

(1) Visual acuity of no better than 20/70 in the better eye after correction.

(2) Restricted visual field.

(3) Limited ability to move about safely in the environment because of visual disability.

Blindness is a deficiency in visual acuity of 20/200 or less in the better eye with correcting lenses or a limited field of vision in which the widest diameter subtends an angular distance of no greater than twenty degrees or has a medically indicated expectation of visual deterioration.

24:05:24.01:31. IEP team override.

If the IEP team determines that a student is eligible for special education or special education and related services because the student has a disability and needs special education even though the student does not meet specific requirements in this chapter, the IEP team must include documentation in the record as follows:

(1) The record must contain documents that explain why the standards and procedures, that are used with the majority of students resulted in invalid findings for this student;

(2) The record must indicate what objective data were used to conclude that the student has a disability and is in need of special education. These data may include test scores, work products, self-reports, teacher comments, previous tests, observational data, and other developmental data;

(3) Since the eligibility decision is based on a synthesis of multiple data and not all data are equally valid, the team must indicate which data had the greatest relative importance for the eligibility decision; and

(4) The IEP team override decision must include a sign-off by the IEP team members agreeing to the override decision. If one or more IEP team members disagree with the override decision, the record must include a statement of why they disagree signed by those members.

The district director of special education shall keep a list of students on whom the IEP team override criteria were used to assist the state in evaluating the adequacy of student identification criteria.

24:05:27:22. Occupational therapy defined.

Occupational therapy, as a related service, includes the development of fine motor coordination; sensory motor skills; sensory integration; visual motor skills; use of adaptive equipment; consultation and training in handling, positioning, and transferring students with physical impairments; and independence in activities of daily living.

24:05:27:23. Criteria for occupational therapy.

A student may be identified as in need of occupational therapy as a related service if:

(1) The student has a disability and requires special education;

(2) The student needs occupational therapy to benefit from special education; and

(3) The student demonstrates performance on a standardized assessment instrument that falls at least 1.5 standard deviations below the mean in one or more of the following areas: fine motor skills, sensory integration, and visual motor skills.

24:05:27:24. Physical therapy defined.

Physical therapy, as a related service, includes gross motor development; mobility; use of adaptive equipment; and consultation and training in handling, positioning, and transferring students with physical impairments.

24:05:27:25. Criteria for physical therapy.

A student may be identified as in need of physical therapy as a related service if:

(1) The student has a disability and requires special education;

(2) The student needs physical therapy to benefit from special education; and

(3) The student demonstrates a delay of at least 1.5 standard deviations below the mean on a standardized motor assessment instrument.

INTRODUCTION

When the 1995 Legislature adopted its new funding system for special education, it also required DOE to develop administrative rules which "further define special education processes regarding student identification, the placement committee process and create an extraordinary cost oversight board." Following this directive, DOE convened a special education task force. The task force, chaired by Representative Janice Nicolay, consisted of legislators, educational cooperative directors, superintendents, higher education representatives, local district special education directors and a parent representative. After more than a year of study, expert consultation and public testimony, the special education task force proposed a set of administrative rules which set forth identification criteria in major categories of disability.

Regarding student identification, or eligibility criteria, the task force decided to adopt the disability categories as defined in the federal Individuals With Disabilities Education Act (IDEA) and quantify, to the extent possible, the federal definitions. For example, the federal definition of specific learning disabilities speaks to a student exhibiting a "severe discrepancy between achievement and intellectual ability." The task force defined "severe discrepancy" for South Dakota students at 1.5 standard deviations between achievement and intellectual ability.

While the task force reviewed student eligibility criteria from surrounding states, members focused on criteria currently used by several South Dakota school districts. Thus, administrative rules reflect, in large part, criteria that is used, and seems to work for many of our school districts.

The task force proposed a revised definition of children in need of "prolonged assistance." This is a state-specific category pertinent to infants and toddlers, ages birth through two years, in need of early intervention. The category is important to school districts because districts are responsible for providing these children with early intervention services. The definition would narrow the scope of school district responsibility.

The task force also proposed definitions for occupational therapy and physical therapy as related service necessary to support special education. Due to a wide variability across the state of children receiving these therapies, the task force felt that criteria would bolster consistency in service provision.

Finally, the task force proposed a method of local IEP team override of eligibility criteria. The override is important because there are children who will not "fit" certain criteria, yet their need for special education instruction remains. Further, the federal Office of Special Education Programs requires this flexibility at the local level, particularly for students with specific learning disabilities. The IEP team override is to be used cautiously, not in a routine manner.

On June 28, 1996, the South Dakota Board of Education held a public hearing regarding proposed administrative rule for eligibility criteria, and passed those rules. However, the proposed definitions for occupational therapy and physical therapy were not adopted due to concerns expressed by parents and professionals to the board. The definitions were revisited at a later date. The final definitions for occupational therapy and physical therapy were adopted by the South Dakota Board of Education on January 27, 1997.

The definition for mental retardation was called into question during the inservice training for the eligibility criteria. A revised definition for mental retardation was adopted by the South Dakota Board of Education on January 27, 1997.

Regardless of the category under which a student is eligible for special education, the disabling condition does not affect the way the special education program is developed or where the services occur. Eligibility determination is a separate process from developing an individual education program and determining placement.

STATISTICAL OVERVIEW

Choosing appropriate assessment instruments is a vital step in the evaluation process. Having a basic understanding of the terms and concepts used provides the evaluator with the skills to ensure that the student will be appropriately evaluated.

A. Norm Referenced/Criterion Referenced
   1. Norm referenced instruments compare a student's performance to same age peers, which indicates a student's ranking relative to that group.
      a. norm referenced instruments provide standard scores, percentiles/stanines, and standard deviation scores.
      b. examples: K-TEA, Key Math, PPVT

   2. Criterion referenced instruments compare a student's performance in certain skill areas to the student himself, rather than to same age peers. Criterion referenced tests provide useful information for program planning for the individual student.
      a. can obtain percentage and/or age equivalent.
      b. examples: Brigance, Spellmaster, HELP

B. Standardization:
   1. The test selected must be representative of the student to be evaluated.
   2. The sample should be based on the most recent census data of the United States according to:
      age
      race
      ethnicity
      grade
      socioeconomic status
      place of residence (urban/rural)
      geographic location
   3. To be adequately standardized, there must be at least 100 children per age or grade level.
   4. The standardization sample should be relatively current because of the rapidly expanding knowledge base that exists for children today.

C. Reliability:
   1. Reliability is the consistency and accuracy of test scores.
   2. A reliability coefficient expresses the degree of consistency in measurement of the test scores. The reliability coefficient (r) ranges from 1.00 (indicating perfect reliability) to .00 (indicating absence of reliability).
   3. The standard error of measurement (SEM) provides an estimate of the accuracy of the individual score, given each type of error possible in a test. Factors to consider:
      a. the lower the SEM, the better, and

b). use the range when reporting test scores, for example: standard score=90 SEM=5, report that the score falls within a range of 85-95.

D. Three types of reliability data:
1. Test/retest (stability) reliability measures how stable the scores are over time. The test is administered to the same group of children two times using a specified interval, then correlated to determine consistency. Generally, achievement tests are best if a 2-week interval is used, and for ability tests (IQ) are best if a 30 day interval is used.
2. Alternate form reliability is obtained when two equivalent tests are administered to the same group of children and the results are correlated.
3. Internal consistency (split-half) reliability is obtained when the test is administered to a group of children and the answers are divided into odd/even, then correlated.

E. Factors that affect reliability:
1. the number of items on the test;
2. the interval between testing;
3. guessing (multiple choice tests);
4. effects of memory and practice; and
5. variations in the testing conditions.

F. Reliability in general:
1. Reliability coefficients of .85 or greater are accepted as meeting the minimum criteria for a test used to make important educational decisions.
2. For screening instruments, a reliability coefficient of .80 or higher is generally accepted as meeting minimum reliability criteria.

G. Validity:
1. Answers the question - Does the test measure what it is supposed to measure?
2. 3 types of validity data:
   a. Content validity - determined by examining 3 factors:
      1. Are the test items relevant?
      2. Are there enough items on the entire test for each area and/or skill?
      3. Are the testing procedures appropriate?
   b. Criterion-related validity - the extent to which the test results correlate with that student's performance on another measure of the same construct.
      1. Concurrent validity is how much the results agree with the results from another test measuring the same construct.
      2. Predictive validity is how well the results of the test predict the future success of the student (the higher the r the better)

c. Construct validity - the extent to which the test measures the construct it purports to measure. Typically, research is reviewed and conducted to demonstrate the validity of a test to measure a trait or construct.

H. Factors that affect validity include:
1. reliability;
2. intervening conditions; and
3. test-related factors (e.g. anxiety, motivation, speed, directions, administration procedures).

I. Choosing an assessment instrument for eligibility:
1. must be normed on the student's age in order to compare current performance to other age peers; and
2. must measure the skill areas identified through the referral process as areas of concern (i.e., reading, motor skills, language skills, etc).

J. Interpreting the assessment results:
1. The assessment needs to be administered and scored according to the directions given in the test manual. If there are any modifications or deviations from the way a test was standardized, this should be noted in any evaluation results or reports, stating that current results may not be valid due to testing modifications.
2. Standard scores should always be reported. Standard scores are raw scores that have been converted to equal units of measurement. They have a given mean and standard deviation. Standard scores from one test are comparable to standard scores on other assessments, if based upon the same mean and standard deviation. Age equivalent scores should not be used in determining eligibility.

K. General Information:
1. Standard deviation is a measure of how spread out the things being compared are i.e. "This egg is a lot bigger than average." The standard deviation is a way of saying what "a lot" means.
   - Standard deviation is typically 15 points, but always refer to the test manual to determine standard deviation.
   - One standard deviation above and below the mean is average. A measurement of one and a half standard deviations (or 23 points) is considered below average.
1. Standard error of measurement (SEM) indicates how much a person's score might vary if examined repeatedly with the same test. It is also a way of showing a test's reliability. Example: "80 + or - 5" means a standard score of 80 plus or minus 5 points is the anticipated range (75 to 85) a student would receive for a score if given the same test repeatedly. As a reminder, **when determining eligibility, the only time the SEM**

range is to be utilized is for the category of mental retardation. For all other disability categories, the standard score received must be used.

3. Regression equations – "The equation takes into account regression-to-the mean effects, which occur when the correlation between two measures is less than perfect, and the standard error of measurement of the difference score. The regression-to-the mean effect means that children who are above average on one measure will tend to be less superior on the other, whereas those who are below average on the first measure will tend to be less inferior on the second. Use of the most effective regression equation requires knowledge of the correlation between the two tests used in the equation; the correlation should be based on a large representative sample." (Sattler, 1988) As a reminder, **the team must consider regression to the mean when determining if a specific learning disability exists** (ARSD 24:05:24.01.19.)

LIST OF SUGGESTED TEST INSTRUMENTS FOR EVALUATIVE PURPOSES

Administrative Rules of South Dakota, ARSD 24:05:25:04. Evaluation procedures. States that school districts shall ensure, at a minimum, that evaluation procedures include the following:

(1) Tests and other evaluation materials are provided and administered in the child's native language or by another mode of communication that the child understands, unless it is clearly not feasible to do so. Any standardized tests that are given to a child:

(a) Have been validated for the specific purpose for which they are used; and

(b) Are administered by trained and knowledgeable personnel in conformance with the instructions provided by their producer;

(2) Tests and other evaluation materials include those tailored to assess specific areas of educational need and not merely those which are designed to provide a single general intelligence quotient;

(3) Tests are selected and administered so as best to ensure that a test administered to a child with impaired sensory, manual, or speaking skills accurately reflects the child's aptitude or achievement level or whatever other factors the test purports to measure, rather than the child's impaired sensory, manual, or speaking skills except where those skills are the factors which the test purports to measure;

(4) No single procedure is used as the sole criterion for determining eligibility or an appropriate educational program for a child;

(5) A variety of assessment tools and strategies are used to gather relevant functional and development information about the child, including information provided by the parents, that may assist in determining:

(a) Whether the child is a child with a disability; and

(b) The content of the child's IEP, including information related to enabling the child:

(i) To be involved in and progress in the general curriculum; or

(ii) For a preschool child, to participate in appropriate activities;

(6) Technically sound instruments, assessment tools, and strategies are used that:

(a) May assess the relative contribution of cognitive and behavioral factors, in addition to physical or developmental factors; and

(b) Provide relevant information that directly assists persons in determining the educational needs of the child;

(7) The child is assessed in all areas related to the suspected disability, including, as applicable, health, vision, hearing, social and emotional status, general intelligence, academic performance, communicative status, and motor abilities;

(8) The evaluation is sufficiently comprehensive to identify all of the child's special education and related services needs, whether or not commonly linked to the disability category in which the child has been classified;

(9) Materials and procedures used to assess a child with limited English proficiency are selected and administered to ensure that they measure the extent to which the child has a disability and needs special education, rather than measuring the child's English language skills; and
(10) If an assessment is not conducted under standard conditions, a description of the extent to which it varied from standard conditions (e.g., the qualifications of the person administering the test, or the method of test administration) must be included in the evaluation report.

The following list of tests is intended to be used as a brief guide when determining which assessment measures to use when evaluating children. The adequacy of the standardization sample, reliability, and validity are based on guidelines contained in Assessment in Special and Remedial Education (Salvia & Ysseldyke, 1988).

References

Giuliani, Psy.D., George & Pierangelo, Ph.D., Roger (1998). Special Educator's Complete Guide to 109 Diagnostic Tests. West Nyack, New York: The Center for Applied Research in Education.

Salvia,J., & Ysseldyke, J.E. (1988). Assessment in special and remedial education (4th Ed.). Boston, MA: Houghton-Mifflin.

Wodrich, Ph.D., David L. (1997). Children's Psychological Testing, Third Edition. Baltimore, Maryland: Paul H. Brookes Publishing Co., Inc.

INDIVIDUALLY ADMINISTERED ACHIEVEMENT TESTS	AGE/GRADE LEVELS	ADEQUATE STANDARDIZATION	ADEQUATE RELIABILITY	ADEQUATE VALIDITY	COMMENTS
Basic Achievement Skills Individual Screener (1983)	1 - 12 grade	Yes	Yes	Yes	
Basic School Skills Inventory (1998)	4 to 6-11 years	Yes	Yes	Questionable	Most useful for ESL and low incidence disabilities
Diagnostic Achievement Test for Adolescents – 2 (1993)	12 to 18-11 years	Yes	Yes	Yes	Not a very low floor
Developmental Tasks for Kindergarten Readiness II (1994)	Pre - K	Yes	Yes	Questionable	Best used for screening & as functional measure
Hammill Multiability Achievement Test (1998)	7 to 17 years	Yes	Yes – area scores only	Questionable	Screening
Hudson Education Skills Inventory (1989)	K-12	NA	NA	Yes	Criterion referenced
Kaufman Functional Academic Skills Test (1994)	15 to 85 years	Questionable NE & Indian are low	Questionable	Yes	
Kaufman Survey of Early Academic & Language Skills(1993)	3 to 6-11 years	Yes	Yes	Yes	
Kaufman Test of Educational Achievement 2nd Ed (2004)	4-6 to 25-11 years	Yes	Yes	Yes	Age & grade norms available
Kaufman Test of Educational Achievement – Brief Form 2nd Ed. (2004)	4-6 to 25-11 years	Yes	Yes	Yes	Best used for screening
Mini-Battery of Achievement (1994)	4 years to adult	Yes			Screening
Multilevel Academic Skills Inventory (1982)	1 – 8th grade	NA	NA	Questionable	Criterion referenced
Norris Educational Achievement Test (1992)	4 to 17 years	No	No	Questionable	
Peabody Individual Achievement- III (1997)	5 to 22 yrs	Yes	Yes	Yes	
Process Assessment of the Learner (2001)	K-6	Yes	No	No	Best used as a functional measure
Quick Score Achievement Test (1987)	1 - 12 grade	Yes	Yes	Yes	
Scaled Curriculum Achievement Levels Test (1992)	3 – 8th grade	No	No	Questionable	
Wechsler Individual Achievement Test 2 (2001)	4 years to adult	Yes	Yes	Yes	

Wide Range Achievement Test-3 (1993)	5 to 75 years	Questionable	Yes	Yes	Limited item sample-best used as a screen
Wide Range Achievement Test – Expanded (2001)	4 to 24 years	Yes	No	Questionable	
Woodcock-Johnson Psycho- Educational Battery- III Achievement (2001)	2 years to adult	Yes	Yes	Yes	Use composite scores only for eligibility
Young Children's Achievement Test (2000)	4 to 7-11 years	Yes	Yes	Yes	
INDIVIDUALLY ADMINISTERED READING TESTS	**AGE/GRADE LEVELS**	**ADEQUATE STANDARDIZATION**	**ADEQUATE RELIABILITY**	**ADEQUATE VALIDITY**	**COMMENTS**
Analytical Reading Inventory-4 (1989)	Primer- 9th grade	NA	Yes	No	Criterion referenced
Basic Early Assessment of Reading (2002)	K – 3rd grade	NA	NA	NA	Criterion referenced
Bader Reading & Language Inventory –3 (1998)	PP – 12th grade	NA	NA	Yes	Criterion referenced
Burns – Roe Informal Reading Inventory 6th Edition (2002)	Pre – 12th grade	NA	NA	NA	Informal
Classroom Reading Inventory (1990)	Pre – 8th grade	NA	NA	NA	Informal
Comprehensive Test of Phonological Processing (1999)	5 to 24 –11 years	Yes	Questionable		Best used as a functional measure
Criterion Reading (1971)		NA	NA	No	Criterion referenced
Decoding Skills Test	1st – 5th grade rdg. levels	NA	NA	Na	Criterion referenced
Diagnosis an Instructional Aid, Reading A & B (1974)	1st – 6th grade	NA	No	No	May be useful as a screen
Diagnostic Assessments of Reading with Trial Teaching Strategies (1992)	1st grade – 12th grade reading levels	NA	No	Questionable	Criterion referenced
Diagnostic Reading Scales (Spache) (1981)	1 - 7.5 grade	NA	NA	Yes	Criterion referenced
Durrell Analysis of Reading Difficulty (1980)	1 - 6 grade	Questionable	No	Questionable	Useful as a diagnostic measure
Early Reading Diagnostic Assessment (2001)	K – 3rd grade				
Ekwall/Shanker Reading Inventory (2001)	K – 9th grade	NA	Yes	Yes	Criterion referenced
El Paso Phonics Survey (1985)	K – 3rd grade rdng level	NA	NA	Yes	Criterion referenced
Formal Reading Inventory (1986)	1 - 12 grade	Questionable	No	Yes	

Gates-McKillop- Horowitz Reading Diagnostic Test (1981)	1 – 6th grade	No	No	No	
Gates-MacGinitie Reading Tests (1989)	K-12 grade	Questionable	Questionable	Yes	
Gilmore Oral Reading Test (1968)	1 - 8 grade	No	No	No	
Gray Oral Reading Test – 4 (2001)	6 to 18-11 years	Yes	Yes	Yes	
Gray Oral Reading Tests – Diagnostic (1991)	5 to 12-11 years				
Gray Silent Reading (1997)	7 to 25 years	Yes	Yes	Yes	
Informal Reading Inventory (1989)	Pre - 12 grade	NA	NA	No	Criterion referenced
Phonological Awareness Test 1 (1992)	Pre to elementary	NA	NA	NA	Criterion referenced
Prescriptive Reading Inventory Reading System (1980)	K - 9 grade	NA	NA	No	Criterion referenced
Qualitative Reading Inventory -3( )	Pre – HS rdg levels	NA	Yes	Yes	Criterion referenced
Quick Survey Word List (1985)		NA	NA	NA	Screening - Designed to quickly determine if the student has the skills to read material @ 4th grade level or above
Rosewell-Chall Diagnostic Reading Test (1959)	2nd to 6th grade	NA	Questionable	Questionable	Screen for word analysis skills
Scholastic Abilities Test for Adults (1991)	16 to 70 years	Yes	Questionable		
Sipay Word Analysis Test (1974)		NA	NA	No	Criterion referenced
SRA Diagnosis Instructional Aid - Reading A & B (1974)	1 -6 grade	NA	NA	Questionable	Criterion referenced
Slosson Oral Reading Test, Revised (1990)	Pre - to adult	Yes	Yes	Yes	Screening
Sulcher-Allred Reading Placement Inventory (1981)	Pre - 9 grade	NA	NA	NA	Informal
Standardized Reading Inventory-2 (1999)	pre - 8 grade	No	Questionable	Yes	
Stanford Diagnostic Reading Test (1984)	End of 1st grade to college level	Yes	Yes	Yes	Can be group administered
Test of Early Reading Ability –3 (1989)	3 to 9-11 years	Yes	Yes	Yes	
Test of Reading Comprehension-3 (1995)	7 to 17-11 years	Yes	Yes	Questionable	
Test of Silent Reading Skills (2001)	7 to 14 years	Questionable	Questionable	Questionable	
Test of Word Reading Efficiency (1999)	6 to 24-11 years	Yes	Questionable	Questionable	

Woodcock Diagnostic Reading Battery (1997)	4 to 90 years	Yes	Questionable	Questionable	Selected subtests from the WJ-R
Woodcock Reading Mastery Tests-R (1998 Updated Norms)	K - adult	Yes	Yes	Yes	
INDIVIDUALLY ADMINISTERED MATH TESTS	**Age/Grade Levels**	**Adequate Standardization**	**Adequate Reliability**	**Adequate Validity**	**Comments**
Comprehensive Mathematical Abilities Test (2000)	7 to 18-11 years	Yes	Questionable	Yes	
Diagnosis: An Instructional Aid in Math (1981)	K - 8 grade	NA	NA	No	Criterion referenced
Diagnostic Mathematics Inventory (1977)	1.5 -8.5 grade	NA	NA	Yes	Criterion referenced
Diagnostic Test of Arithmetic Strategies (1984)	1 – 6th Grade	NA	NA	Yes	Useful for development of objectives
Key Math - R (1997 Updated Norms)	K – 12th grade	Yes	Yes	Questionable	Use area scores only for eligibility
Enright Diagnostic Inventory of Basic Arithmetic Skills (1983)	1 - 6.8 grade	NA	NA	Yes	Criterion referenced
Sequential Assessment of Mathematics Inventory (1985)	5 to 13 years	Yes	Questionable	Questionable	
Stanford Diagnostic Math Test – 4 (1996)	1 – 12th grade	Yes	Yes	Yes	
Test of Early Math Ability-3 (2003)	3 to 8-11 years	Yes	Yes	Yes	
Test of Math Abilities-2 (1994)	8 to 18-11 years	Yes	Yes	Yes	
INDIVIDUALLY ADMINISTERED WRITTEN LANGUAGE TESTS	**Age/Grade Levels**	**Adequate Standardization**	**Adequate Reliability**	**Adequate Validity**	**Comments**
Checklist of Written Expression (1980)	K – 12th grade	NA	NA	NA	Informal
Denver Handwriting Analysis (1983)	3 – 8th grade	NA	NA	NA	Informal
Diagnostic Evaluation of Writing Skills (1980)	All grades	NA	NA	NA	Informal – has a good error analysis procedure
Diagnostic Spelling Test (1970)	2 – 6th grade	NA	NA	NA	Informal
Diagnostic Word Patterns (1985)	2nd grade – adult	NA	NA	NA	Informal, spelling only
Evaluation Tool of Children's Handwriting	1 – 6th grade	NA	NA	NA	Criterion referenced
Illinois Test of Psycholinguistic Abilities – 3 (2001)	5 to 12-11 years	Yes	Yes	Yes	Oral and written language
Mather-Woodcock Group	6 – 18 years	Yes	Yes	Yes	

Writing Tests (1997)					
Oral & Written Language Scales (written) (1995)	5 to 21 years	Yes	Yes	Yes	
Slosson Written Expression Test (2000)	8 – 17 years	Yes	Yes	Yes	Screening test & progress monitoring
Spellmaster (1976)	K - 10 grade	NA	NA	Yes	Criterion referenced
Test of Early Written Language - 2 (1996)	4 to 10-11 years	Yes	Yes	Yes	
Test of Handwriting Skills (1998)	5 to 11 years	Yes	Questionable	Questionable	
Test of Legible Handwriting (1989)	2 – 12th grade	Yes	Yes	Yes	Group or individual
Test of Written English (1979)	6th grade and above	NA	NA	NA	Criterion referenced screening device
Test of Written Expression (1995)	6-6 to 14-11 years	Yes	Questionable	Yes	Informal error analysis a plus
Test of Written Language-3 (1996)	7-6 to 17-11 years	Yes	Yes	Yes	
Test of Written Spelling – 4 (1999)	1 – 12th grade	Yes	Yes	Yes	
Written Language Assessment (1989)	8 to 18 years	No	Questionable	Questionable	Good functional assessment
Writing Process Test (1992)	8 to 19 yrs 2nd–12th grade	Questionable	Questionable	Yes	
INDIVIDUALLY ADMINISTERED SPEECH/LANGUAGE TESTS	**Age/Grade Levels**	**Adequate Standardization**	**Adequate Reliability**	**Adequate Validity**	**Comments**
Apraxia Profile (1997)	3 to 13 years	NA	NA	NA	Diagnostic assessment
Arizona Articulation Proficiency Scale-3 (2000)	18 months to 18-11 years	Questionable; low Hispanic, high west	Yes	Yes	
ASSET Assessing Semantic Skills Through Everyday Themes (1986)	3 to 9 years	No	No	No	
Assessment of Children's Language Comprehension (1983)	3 to 8 years	NA	NA	No	Criterion referenced
Assessment of Phonological Processes – Revised (1986)	For use with highly unintelligible children	No	No	No	Test should be administered only by ASHS certified speech and language pathologist.
Bankson Language Test-2 (1990)	3 to 6-11 years	Yes	Questionable	Questionable	
Bankson-Bernthal Test of Phonology Language (1990)	3 to 9 years	Questionable	Questionable	Yes	
Bilingual Verbal Ability	5 to 90 years	Yes	Questionable	Yes	Items from WJ-R,

Tests (1998)					Woodcock Language Proficiency Battery, WJ-R Cog
Boehm Test of Basic Concepts – 3 (2000)	K – 2nd grade	Yes	Questionable	Yes	Can be group administered
Boehm Test of Basic Concepts – 3 Preschool (2001)	3 to 5-11 years	Yes	Yes	Yes	
Boehm Test of Basic Concepts – 3 Spanish (2000)	K – 2nd grade	Yes	Questionable	Yes	
Bracken Basic Concept Scale - Revised (1998)	2-6 to 8 years	Yes	Yes	Yes	Complete measure of receptive vocabulary
Bracken Basic Concept Scale-R Spanish Edition	2-6 to 8 years	NA	Yes	Yes	Criterion referenced
Carrow Elicited Language Inventory (1973)	3 to 7-11 years	No	Yes	No	
Clark-Madson Test of Oral Language (1986)	4 to 8-11 years	No	No	No	
Clinical Evaluation of Language Functions – 3 (1995)	6 to 21-11 years	Questionable, only 50 kids/age level 17 to 21	Yes	Yes	Total language scores can be used for eligibility
Clinical Evaluation of Language Functions-3 Observational Rating Scales (1996)	6 to 21 years	NA	Questionable	Questionable	Functional Measure
Clinical Evaluation of Language Functions-Preschool (1992)	3 to 6-11 years	Yes	Yes	Yes	
Communication Activities of Daily Living – 2 (1999)	20 to 96 years	Questionable	Yes	Yes	Best used as a functional measure
Comprehensive Assessment of Spoken Language (1999)	3 to 21 years	Yes	Yes	Yes	Use composite scores for eligibility
Comprehensive Receptive & Expressive Vocabulary Test -2 (2002)	5 years to adult	Yes	Yes	Yes	
Contextual Test of Articulation (2000)	4 to 9-11 years	NA	NA	NA	Criterion referenced
Dos Amigos Verbal Language Scales (1996)	5 to 13-5 years	NA	NA	NA	Criterion referenced
Early Language Milestone Scale – 2 (1993)	Birth to 48 months	No	Questionable	Questionable	
Evaluating Acquired Skills in Communication (EASIC) (1991)	2 to 26-11 years	NA	NA	No	Criterion referenced; Designed to be used with autistic students, but also useful for other disabilities

Expressive Language Test (1998)	5 to 11 years	No	No	No	
Expressive One-Word Vocabulary Test – Revised (1990)	2 to 11-11 months	No	No	No	
Expressive Vocabulary Test (1997)	2.5 to 90 years	Yes	Questionable	Yes	
Fisher-Logemann Test of Articulation Competence (1971)	3 years and up	NA	NA	No	Criterion referenced
Fluharty Preschool Speech & Language Screening Test 2nd ed (2000)	3 to 6-11 years	Yes	Questionable	Yes	
Full Range Picture Vocabulary Test (1948)	2 years to adult	No	No	No	
Functional Communication Profile (1994)	3 yrs to adult; mental age 2 months to adult	NA	NA	NA	Functional checklist; good with more severe disabilities
Goldman-Fristoe Test of Articulation – 2 (2000)	2 to 21 years	Yes	Yes	Yes	
Goldman-Fristoe-Woodcock Test of Auditory Discrimination (1970)	3 to Adult	No	No	Yes	
HELP Test (1996)	6 to 12 yrs	Yes	Yes	No	
Houston Test of Language Development (1963)	6 months to 6 years	No	No	No	
Illinois Test of Psycholinguistic Abilities – 3 (2001)	5 to 12-11 years	Yes	Yes	Yes	Oral and written language
Indiana Preschool Developmental Assessment Scale (1976)	Birth to 6 years	NA	NA	No	Criterion referenced
Joliet 3-Minute Speech and Language Screen (1992)	2.5 to 4.5 years	Questionable	Yes	Questionable	Screening
Joliet 3-Minute Preschool Speech & Language Screen (1992)	2.6 to 4.5 years	Questionable	Questionable; very limited data, but the info reported looks good	Yes	
Kaufman Survey of Early Academic & Language Skills (1993)	2 to 6-11 years	Yes	Yes	Yes	Articulation and language
Khan-Lewis Phonological Analysis – 2 (2002)	2 to 21-11 years	Yes	Yes	Yes	
Kindergarten Language Screening Test – 2nd ed (1998)	4 to 6-11 years	No	Questionable	Questionable	Screening
Language Assessment Battery (1977)	K - 12 grade	No	Questionable	No	
Language Assessment Scales (1977)	K - 6 grade	No	No	No	
Language Processing Test - Revised	5 to 11 years	Yes	No	No	

Lindamood Auditory Conceptualization Test (1979)	K - 6 grade	No	No	No	
Northwestern Syntax Screening Test (1969)	3 to 7-11 years	No	No	No	
Oral Speech Mechanism Screening Examination -3 (2000)	5 years to adult	Questionable	Yes	NA	Screening
Oral & Written Language Scales (listening and oral) (1995)	3 to 21 years	Yes	Questionable	Yes	
Peabody Picture Vocabulary Test – 3 (1997)	2-5 to 90 years	Yes	Yes	Yes	Measures receptive language
Phonological Awareness Test – Revised (Linguisystems)	5 to 9 years	Yes	Yes	No	
Photo Articulation Test - 3 (1999)	3 to 8 Years	Yes	Questionable	Questionable	
Preschool Language Assessment Instrument (1978)	3 to 6 years	No	No	No	
Preschool Language Scale – 3rd edition (1992)	Birth to 6-11 years	Questionable – Not 100 children at each age for B to 1 year	Questionable - low for younger ages	Yes	
Preschool Language Scale – 4th edition (2002)	Birth to 6-11 years	Questionable – Not 100 children at each age for B to 1 year	Yes	Yes	
Quick Test (1962)	2 years to adult	No	No	No	
Reynell Developmental Language Scales (1991)	12 months - 6 years	No	No	No	Best used as diagnostic measure
Riley Articulation and Language Test (1979)	4 to 7-11 years	No	No	No	
Rhode Island Test of Language Structure (1983)	3 – 6 years; 3 – 20 years for hearing impaired	Questionable	No	No	Good informal measure for hearing impaired students
Rosetti Infant-Toddler Language Scale (1990)	B to 36 months	NA	NA	NA	Criterion referenced
Ross Information Processing Assessment – 2 (1996)	15 to 90 years	Questionable	Questionable	No	Cognitive–linguistics of TBI
Ross Information Processing – Primary(1999)	5 to 12-11 years	No	Questionable	No	Cognitive–linguistics of TBI
Scales of Early Communication Skills for Hearing Impaired Children (1975)	2 to 8 years	No	No	No	
SCAN-A Test for Auditory Processing Disorders in Adolescents & Adults (1994)	12 to 50 years	No	Questionable	Yes	

SCAN-C Test for Auditory Processing Disorders in Children-Revised (1999)	5 to 11-11 years	Yes	Questionable	Yes	
Screening Test for Developmental Apraxia of Speech (1980)	Preschool & school age	No	No	No	
Screening Test of Adolescent Language – R (1980)	11 to 18-11 years	Yes	No		Screening only
Sequenced Inventory of Communication Development – Revised (1984)	4 months to 4 years	No	Yes	Yes	
Smit-Hand Articulation & Phonology Evaluation (1997)	3 to 9 years	Yes	Questionable	Questionable	
Speech & Language Evaluation Scale (1989)	4.5 to 19 years	Yes	Questionable	No	
Structured Photographic Articulation Test – 2nd Edition (1989)	4 to 9-5 years	Yes	Yes	Yes	
Structured Photographic Expressive Language Test Manual Update (1995)	4 to 9-5 years	No	Questionable	Yes	Measures syntactic structures
Stuttering Prediction Instrument for Young Children (1981)	3 to 8.9 years	No	No	Questionable	
Swallowing Ability & Function Evaluation (2003)	Adolescents & adults	NA	NA	NA	Informal measure
Templin-Darley Tests of Articulation (1969)	3 to 8 years	No	No	No	
Test for Auditory Comprehension of Language-3 (1999)	3 to 9-11 years	Questionable, low in urban areas	Yes	Yes	Receptive vocabulary
Test for Examining Expressive Morphology-TEEM (1983)	3 to 7-12 years	No	No	Questionable	
Test of Adolescent and Adult Language-3 (1994)	12 to 24-11 years	Questionable, 12-18 years is good	Yes	Questionable	
Test of Auditory Perceptual Skills (1985)	4 to 12 years	No	No	No	
Test of Children's Language: Assessing Aspects of Spoken Lang, Reading, and Writing (1996)	5 to 8-11 years	Questionable	Questionable	Questionable	Best used as a screener
Test of Early Language Development – 3 (1999)	2 to 7-11 years	Yes	Yes	Yes	Good screening device
Test of Language Competence Expanded Ed. (1989)	5 to 18-11 years	Yes	Questionable	Yes	
Test of Language Development – Primary: 3	4 to 8-11 years	Yes	Yes	Yes	Composite scores can be

(1997)					used for eligibility
Test of Language Development - Intermediate: 3 (1997)	8-0 to 12-11 years	Yes	Yes	Yes	Composite scores can be used for eligibility
Test of Syntactic Abilities (1978)	10 to 18 years	Yes	Questionable	Yes	hearing impaired
Test of Pragmatic Language (1992)	5 to 12-11 years	Questionable, less than 100 @10,12, 13	No	Questionable	
Test of Pragmatic Skills - R (1986)	3 to 8 years	Questionable	Yes	Questionable	
Test of Problem Solving – Elementary Revised	6 to 11 years	Yes	No	Questionable	
Test of Problem Solving Adolescent	12 to 17-11 years	Questionable	Questionable	Yes	
Test of Relational Concepts (1988)	3 to 7-11 years	Yes	Questionable	Questionable	
Test of Word Finding – 2 (2000)	4 to 12-11 years	Yes	No	No	
Test of Word Knowledge (1992)	5 to 17 years	Yes	Questionable	Yes	
The Listening Test (1992)	6 to 11-11 years	No	No	Yes	
The WORD Test Adolescent (1989)	12 to 17-11 years	No	Questionable	No	
The WORD Test-R (1990)	7 to 11 -11 years	No	No	Questionable	
Token Test for Children (1978)	3 to 12-5 years	No	No	No	May be useful as a screening for auditory comprehension
Utah Test of Language Development-3 (1989)	3 to 9-11 years	Yes	No	Yes	
Verbal Language Development Scale (1971)	Birth to 15 years	No	Questionable	Yes	Too few items per age
Vocabulary Comprehension Scale (1975)	2 to 5-6 years	NA	NA	Yes	Criterion referenced
Voice Assessment Protocal for Children & Adults (1987)	4 to 18-11 years	NA	NA	NA	Informal measure
Wepman Auditory Discrimination Test – 2nd ed (1987)	4 to 8-11 years	Yes	Questionable	Questionable	Screening

Woodcock Language Battery (1991)		Questionable	Yes	Yes	Clusters can be used for eligibility
Woodcock Munoz Language Survey Normative Update (2001)	4 years – adult	Yes	Questionable	Questionable	Clusters OK for eligibility. Measures oral language, reading, writing; good for ESL students
INDIVIDUALLY ADMINISTERED MOTOR TESTS	**Age/Grade Levels**	**Adequate Standardization**	**Adequate Reliability**	**Adequate Validity**	**Comments**
Bruiniks-Oseretsky Test of Motor Proficiency (1985)	4-5 to 14-5 years	Questionable	Yes	Yes	
Developmental Test of Visual Motor Integration-4 (1997)	3 – 18 years	Yes	Questionable	No	
Developmental Test of Visual Perception – 2 (1993)	4 - 10 years	Yes	Yes	Yes	
Evaluation Tool of Children's Handwriting	1st – 6th grade	NA	NA	NA	Informal
Motor Development Checklist (1976)	1 – 15 months	NA	NA	NA	Informal
Motor-Free Visual Perception Test-R (1996)	4 to 11-11 years	Yes	Yes	Questionable	
Movement Assessment of Infants (1980)	B – 3 years	No	Questionable	Yes	
Peabody Developmental Motor Scales – II (19)			Yes	Yes	
Sensory Integration & Praxis Test (1989)	4 to 8-11 years	Questionable	Questionable	Yes	
Slingerland Screening Test for Identifying Children with Specific Language Disability (1993)	1 – 6th grade	NA	Questionable	Questionable	Diagnostic – a test of auditory, visual, & motor skills related to specific academic areas
Test of Gross Motor Development – 2 (1999)	3 – 10 years	Yes	Yes	Yes	
Test of Visual-Motor Skills –R (1995)	2 – 13 years	No	Questionable	Yes	
Test of Visual-Perceptual Skills (non-motor) (1988)	4 – 12 years	No	No	Questionable	
INDIVIDUALLY ADMINISTERED INTELLIGENCE TESTS	**Age/Grade Levels**	**Adequate Standardization**	**Adequate Reliability**	**Adequate Validity**	**Comments**
Assessment for Persons Profoundly or Severely Impaired (APPSI) (1998)	Functioning at B to 8 months	NA	NA	NA	Diagnostic measure
Bayley Scales of Infant Development-II (1993)	1 to 42 months	Yes	Yes	Yes	
The Cognitive Abilities Scale-Second Edition (2001)	3-23 & 24-47 month	Yes	Yes	Yes, validity of infant form not fully established	Play-based measure

The Cognitive Assessment System (1997)	5 to 17 years	Yes	Yes	Questionable	Sattler has concerns about the validity of the 4 factors
Columbia Mental Maturity Scale (1972)	3-5 to 9-5 years	Yes	Questionable	Yes	Non-Verbal
Comprehensive Test of Nonverbal Intelligence (1997)	6 to 89 years	Yes	Yes	Yes	Non-Verbal; some limitations noted in Sattler
Detroit Test of Learning Aptitude-4(1998)	6 to 17-11 years	Yes	Yes	Yes	
Detroit Test of Learning Aptitude-Primary 2nd. Ed. (1991)	3 to 9 years	Yes	Yes	Yes	
Differential Abilities Scale (1990)	2-6 to 17-11 years	Yes	Yes	Yes	
Extended Merrill-Palmer Scales (1978)	3 to 5-11 years	Questionable	No	No	
Goodenough-Harris Drawing Test (draw-a-man test) (1963)	3 to 15-11 years	No	No	No	Little justification for use as a measure of IQ
Hiskey-Nebraska Test of Learning Aptitude (1966)	3 to 6 years	No	Questionable	Yes	good for children with hearing impairments
Kaufman Adolescent & Adult Intelligence Test (1993)	11 to 94 years	Yes	Yes	Yes	
Kaufman Assessment Battery for Children, 2nd Edition (2004)	3 to 18 years	Yes	Yes	Yes	can obtain a non-verbal score
Kaufman Brief Intelligence Test (1990)	4 to 90 years	Yes	Yes	Yes	
Leiter International Performance Scale-Revised (1997)	2 to 20 years	Yes	Yes	Yes	non-verbal; according to Sattler, useful with individuals with speech or fine motor difficulties
McCarthy's Scale of Children's Abilities(1972)	2-5 to 8-5 years	Yes	Yes	Yes	
Merrill-Palmer Scale of Mental Test (1948)	1-6 to 5-11 years	No	No	No	
Pictorial Test of Intelligence Second Edition	3 to 8-11 years	Yes	Questionable	Questionable	Useful for children with

(2001)					speech, motor, and attention problems
Raven's Progressive Matrices (1986)	6 to adult	No	Questionable	No	Non-verbal, only Measures figural reasoning
Slosson Intelligence Test-Primary(1999)	2 to 7 years	No	No	No	Limited utility
Slosson Intelligence Test-Revised(1998)	4 to 18+ years	Questionable	Yes	Questionable	Useful as a screener only
Stanford-Binet Intelligence Scale: 5th Ed. (2003)	2 to 85+ years	Yes	Yes	Yes	Too new for a review
System of Multicultural Pluralistic Assessment (1979)	5 to 11 years	No	No	No	
Test of Memory & Learning (1994)	5 to 9-11 years	No	Yes	Questionable	
Test of Nonverbal Intelligence -3 (1997)	5 to 89 years	Yes	Yes	Questionable	Useful as a screener only
The Blind Learning Aptitude Test (1969)	6 to 12 years	Yes	Yes	Questionable	
Universal Nonverbal Intelligence Test (1998)	5 to 17 years	Yes	Yes	Yes	Nonverbal intelligence measure
Wechsler Abbreviated Scale of Intelligence (1999)	6 to 89 years	Yes	Yes	Yes	Useful as a screener only
Wechsler Adult Intelligence Scale-Third Edition (1997)	16 to 89-11 years	Yes	Yes	Yes	
Wechsler Intelligence Scale for Children-IV (2003)	6 to 16-11 years	Yes	Yes	Yes	
Wechsler Intelligence Scale for Children-IV Integrated (2004)	6 to 16-11 years	Yes	Yes	Yes	Assesses neuro-psychology of cognition
Wechsler Preschool & Primary Scale of Intelligence-3rd Edition (2003)	2.6 to 7.3 years	Yes	Yes	Yes	
Woodcock-Johnson-III (2001)	2 to 89 years	Yes	Yes	Yes	
SOCIAL/BEHAVIORAL/ PERSONALITY ASSESSMENTS	Age/Grade Levels	Adequate Standardization	Adequate Reliability	Adequate Validity	Comments
ADDES-2nd Ed. (1995)	4 to 19 years	Yes	Yes	Yes	Screening

Home/School Versions					instrument
ADOS (2002)	Preschool-Adult	Yes	Yes	Yes	Team administration with familiarity of instrument. Consensus coding
Asperger Syndrome Diagnostic Scale (2001)	5 to 18 years	Questionable	Questionable	No	
Achenbach Child Behavior Checklist Teacher Report Form	4 to 16 years 5 to 18 years	Yes	Yes	Yes	
Youth Self-Report (1991)	11 to 18 years	Yes	Questionable	Questionable	
Behavior Assessment System for Children (BASC) (1992)	4 to 18 years	Yes	Yes	Yes	
Beck Youth Inventories (2001)	7 to 14 years	Yes	Yes	Yes	
The Behavior Dimensions Scale (BDS) (1995)	3 to 19 years	Yes	Yes	Yes	
Behavior Evaluation Scale-2 (1990)	K – 12	Yes	Yes	Yes	
Behavior Problem Checklist – R (1990)	K - 8	No	Yes	Yes	
Behavior Rating Profile Second Addition (1990)	6-6 to 18-6 years	Yes	Yes	Yes	
Child Symptom Inventories (1994) (with Adolescent Supplement)	5 to 13 years 12 to 18 years	Yes	Yes	Yes	Helpful with Differential Diagnosis (Clinical)
Children's Depression Inventory (1992)	7 to 17 years	No	Questionable	Yes	
Childhood Autism Rating Scale (1988)	Birth to 11 years	Questionable	Yes	Yes	Autism
Conners' Rating Scale-Revised (1997)	3 to 17 years	Questionable	Questionable	Questionable	Useful in assessing ADHD
Cooper-Farran Behavioral Kindergarten Rating Scales (1991)	Kindergarten	No	No	No	Designed to be standard locally
Devereux Child Behavior Rating Scale (1993)	5 to 18 years	Yes	Yes (5-12) Questionable (13- 18)	No	
Disruptive Behavior Rating Scale (1993)	7 to 18-11 years	Questionable	Yes	Yes	Low SES, low rural & minority
The Early Childhood (1991)	3 to 5-11 years	Yes	Yes	Yes	
Emotional Behavioral Problem Scale-2 (2001)	5 to 18 years	Yes	Yes	Yes	
Gilliam Autism Rating Scale (1995)	3 to 22 years	Yes	Questionable	Yes	Autism
House-Tree-Person Projective Tech. (1946)	3 years and up	No	No	No	Informational value

Minnesota Multiphasic Personality Inventory (1967)	14 years and up	Yes	Yes	Yes	Outdated norms
Multiscene Depression Inventory for Children (1996)	8 to 17 years 3 – 12 grades	Questionable	Yes	Yes	
Multidimensional Self Concept Scale (1992)	9 to 19 years	Questionable	Questionable	Questionable	
Revised Children's Manifest Anxiety Scales (RCMAS) (1994)	6 to 19 years	Questionable	Yes	Yes	
Roberts Apperception Test for Children	6 to 15 years	No	No	Questionable	Informational value
School Social Behavior Scales (1993)	K – 12 grade	Questionable	Yes	Questionable	
Self Esteem Index (1991)	8 to 18-11 years	Yes	Questionable	Yes	
Social Skills Rating System (1990)	Preschool - HS	Yes	Yes	Yes	
Student Self Concept Scale (1993)	3 – 12 grades	Questionable	No	Yes	

Note:

It is recommended that examiners not only administer but also interpret scores. As a general rule, test administrators should have an understanding of the basic principles and limitations of psychological testing, particularly psychological test interpretation. Although instruments can be easily administered and scored, the ultimate responsibility for interpretation must be assumed by a professional who realizes the limitations in such screening and assessment procedures.

Given outdated or questionable norms, instruments listed below should be considered cautiously for the use of eligibility determination. These instruments may be better suited for programmatic purposes:

AML Behavior Rating Scales (1975)
Analysis of Coping Style (1981)
Assessment of Interpersonal Relations (1993)
Autism Screening Instrument for Educational Planning (1980)
Behavior Dimensions Rating Scale (1989)
Behavior Evaluation Scale {Kozloff} (1974)
Bristol Social Adjustment Guides (1970)
Burk's Behavior Rating Scale (1977)
California Psychological Inventory (19750
California Test of Personality (1953)
Child Anxiety Scale (1980)
Child Behavior Profile (1986)
Child Behavior Rating Scale (1962)
Children Version of the Family Environment Scale (1984)
Children's Apperception Test (1972)
Children's Personality Questionnaire (1975)
Conners' Behavior Rating Scale (1985)
Coopersmith Self Esteem Inventory (1967)
Depression Inventory for Children & Adults (1987)
Devereux Child Behavior Rating Scale (1966)
Early School Personality Questionnaire (1976)
Health Resources Inventory (1976)
High School Personality Questionnaire (1983)
Hopelessness Behavior Checklist (1971)
Inferred Self Concept Scale (1973)

Kinetic Family Drawings (1970)
Peer Nomination Inventory for Depression (1980)
Piers-Harris Self Concept Scale (1969)
Personality Inventory for Children – R (1984)
Portland Problem Behavior Checklist
Psycho-educational Profile (1979)
Revised Behavior Problem (1987)
Revised Children's Manifest Anxiety Scale (1983)
School Behavior Checklist (1977)
Social Emotional Dimension Scale (1986)
Test of Early Socioemotional Development (1984)
The Temperament Assessment Battery for Children (1988)
Thematic Apperception Test (1943)
Walker Problem Behavior Checklist (1976)

INDIVIDUALLY ADMINISTERED SOCIAL/BEHAVIORAL/ PERSONALITY TESTS	AGE/GRADE LEVELS	ADEQUATE STANDARDIZATION	ADEQUATE RELIABILITY	ADEQUATE VALIDITY	COMMENTS
Adolescent Symptom Inventory 4th Ed (1998)	12 to 18-11 years	No	No	Questionable	The manual states this is a screening instrument.
Autism Behavior Checklist (ABC) (1993)	All ages	Questionable	Questionable	Yes	
Autism Diagnostic Observation System (ADOS) (1999)	Toddlers – Adult	Questionable	Yes	Yes	Team administration
Autism Screening Instrument for Educational Planning 2nd Ed (ASIEP) (1993)	3 to 49 years	No	Yes	Yes	
Child Behavior Checklist – Preschool (2000)	1.5 to 5 years	Yes	Yes	Yes	
Child Behavior Checklist – School Age (2001)	6 to 18 years	Yes	Yes	Yes	
Child Symptom Inventory 4th Ed (2002)	5 to 12 years	No	Questionable	No	Authors state the CSI-4 was developed to serve as a screening instrument for a clinic-referred population rather than the general population.
Krug Asperger's Disorder Index (2003)	6 to 22-11 years	No	Questionable	Questionable	
Personality Inventory for Children-2 (2001)	5 through 19 years	Yes	Yes	Yes	
Psychoeducational Profile-R (PEP-R)(1988)	6 months – 7 years or <12 years	No	Questionable	No	Diagnostic measure for individuals with ASD
Social Communication Questionnaire (2003)	4 years – adult, mental age >2years	No	NA	NA	Screening for autism spectrum disorders
INDIVIDUALLY ADMINISTERED ADAPTIVE BEHAVIOR TESTS	**AGE/GRADE LEVELS**	**ADEQUATE STANDARDIZATION**	**ADEQUATE RELIABILITY**	**ADEQUATE VALIDITY**	**COMMENTS**
Adaptive Behavior Assessment System 2nd Ed (2003)	Birth to 89 years	Yes	Yes	Yes	
AAMD Adaptive Behavior Scale-School Edition (1981)	7 – 13 years	No	No	Questionable	
AAMR Adaptive Behavior Scale-School 2nd Ed (ABS-S:2) (1993)	3 to 18 years	No	Questionable	Yes	
Adaptive Behavior Evaluation Scale-R (1995)	5 to 18 years	Questionable	Questionable	Questionable	
Adaptive Behavior Inventory (1986)	5 to 18-11 years, students with MR 6 to 18-	Yes	Yes	Yes	

	11 years				
Assessment for Persons Profoundly or Severely Impaired (1998)	Birth – 8 months	NA	Yes	Yes	Criterion referenced
Assessment of Adaptive Areas (1996)	3 to 17-11 (non MR), 3 – 79 years (MR)	Yes	Yes	Yes	
Checklist of Adaptive Living Skills (1991)	Birth – adult	NA	NA	Yes	Criterion referenced
Children's Adaptive Behavior Scale (1980)	5 to 10-11 years	No	No	No	
Comprehensive Test of Adaptive Behavior (1984)	Birth - 21 years	No	Questionable	Questionable	
Developmental Assessment for Students with Severe Disabilities 2nd Ed (1999)	Birth to 6-11 years	NA	NA	Yes	Criterion referenced
Inventory for Client & Agency Planning (ICAP) (1986)	Birth – adult	No	Questionable	Yes	
Normative Adaptive Behavior Checklist (1984)	Birth – 21 years	NA	NA	No	Criterion referenced
Pyramid Scales (1984)	Birth to adult	NA	Yes	Yes	Criterion referenced, esp useful for individuals w/ severe disabilities
Responsibility & Independence Scale for Adolescents (1990)	12 to 19-11 years	NA	NA	NA	Diagnostic measure useful for program planning
Scales of Independent Behavior-R (1996)	Birth – adult	Yes	Questionable	Yes	
School Function Assessment (1998)	K to 6th grade	NA	NA	Yes	Criterion referenced
Street Survival Skills Inventory (1980)	14 – 18 years or 15 – 55 years for individuals/ MR	No	Questionable	Yes	
Street Survival Skills Questionnaire (SSSQ) (1993)	9 years – adult	No	Questionable	Yes	
TARC Assessment for Severely Handicapped (1975)	All individuals with severe disabilities	NA	NA	No	Criterion referenced
Uniform Performance Assessment System (UPAS) (1981)	For individuals learning skills typically mastered b/w birth – 6 yrs	NA	NA	Yes	Criterion referenced

Vineland Adaptive Behavior Scales: Survey & Expanded (1984)	Birth to 18-11 years	Yes	Yes	Yes	
Vineland Adaptive Behavior Scales:Classroom (1984)	3 to 12-11 years	Yes	No	Yes	

ASSESSMENT DEVICES THAT CAN BE USED TO IDENTIFY A STUDENT'S NEED FOR TRANSITION SERVICES

This section is currently being updated. Please check back.

Following is a list of assessment devices that can be used by evaluators to determine a student's need for transition services. The list is not exhaustive, contains both formal and informal assessment devices, and represents devices that are available and affordable. The transition skills measured by each device are marked with an X.

Individuals who regularly assess student vocational and academic skills should be consulted concerning the availability, reliability, and usefulness of the assessment devices. When the student's current or triennial assessment team conducts a comprehensive evaluation of the student's need for transition services, the placement committee can develop an effective and functional educational program for the student.

Special Education Programs has purchased a representative sample of the devices listed below. They have been placed at the Black Hills Special Services Cooperative – Pierre Office (☎ 605-224-6287 or 800-224-5336) for previewing.

The assessments available for previewing are marked with a ☑.

ASSESSMENT DEVICE	Voc. Interest or Work Readiness	Independent Living	Recreation/ Leisure	Community Participation	Adult Services	Post Secondary Education
☑ AAMD Adaptive Behavior Scale – School Edition PRO - ED 8700 Shoal Creek Boulevard Austin, TX 78758 - 9965 ☎ 512-451-3246	X	X	X	X		
ACT (Tests can be modified to meet the needs of students with disabilities. See your guidance counselor for details.)						X

ASSESSMENT DEVICE	Voc. Interest or Work Readiness	Independent Living	Recreation/ Leisure	Community Participation	Adult Services	Post Secondary Education
☑ Adaptive Behavior Inventory/ Functional Living Skills PRO - ED 8700 Shoal Creek Boulevard Austin, TX 8758 - 9965 ☎ 512-451-3246	X	X	X	X		
ASVAB - Armed Services Aptitude Battery (Available through your school's Guidance Counselor)					X	X
Assessment of Career Decision Making Western Psychological Services 12031 Willshire Boulevard Los Angeles, CA 90025 - 1251 ☎ 1-800-648-8857	X					X
☑ Becoming Independent EDMARK PO Box 97021 Redmond, WA 98073 - 9721 ☎ 1-800-362-2890	X	X		X		
☑ Brigance Employability Skills Inventory Curriculum Associates, Inc. 5 Esquire Road North Billerica, MA 01862 - 0901 ☎ 1-800-225-0248	X					

ASSESSMENT DEVICE	Voc. Interest or Work Readiness	Independent Living	Recreation/ Leisure	Community Participation	Adult Services	Post Secondary Education
☑ Brigance Life Skills Inventory Curriculum Associates, Inc. 5 Esquire Road PO Box 2001 North Billerica, MA 01862 - 0901 ☎ 1-800-225-0248	X	X		X		
☑ Brigance Inventory of Essential Skills Curriculum Associates, Inc. (Address as above)	X	X	X	X		
☑ CALS (Checklist of Adaptive Living Skills) Clinical Customer Service Dept. Riverside Publishing Co. 8420 Bryn Mawr Avenue Chicago, IL 60631 ☎ 1-800-767-8378	X	X	X	X		
Career Assessment Inventory (Available at your local South Dakota Job Service Office)	X				X	
Career Decision Making Sys.-R American Guidance Serv. 4201 Woodland Road PO Box 99 Circle Pines, MN 55014 - 1796 ☎ 1-800-328-2560	X					

ASSESSMENT DEVICE	Voc. Interest or Work Readiness	Independent Living	Recreation/ Leisure	Community Participation	Adult Services	Post Secondary Education
☑ Career Exploration Inventory Jist Works, Inc. 720 North Park Avenue Indianapolis, IN 46202 - 3431 ☎ 1-800-648-JIST	X		X			X
Career Interest Inventory The Psychological Corporation Order Service Center PO Box 839954 San Antonio, TX 78283 - 3954 ☎ 1-800-228-0752	X					
Career Planning Program (CPP) (Available through your school's Guidance Counselor)	X					X
DISCOVER - computer -based program (Available through the South Dakota Office of Vocational/ Technical Educ)	X					X
Discover What You're Best At Paperbacks for Educators 26 West Front Street Washington, MO 63090 ☎ 1-800-227-2591	X					

ASSESSMENT DEVICE	Voc. Interest or Work Readiness	Independent Living	Recreation/ Leisure	Community Participation	Adult Services	Post Secondary Education
ENDEAVOR - computer-based program (Available through the South Dakota Department of Labor in Aberdeen)	**X**				**X**	**X**
From School to Adulthood - Special Education Students in Transition Informal Questionnaires (Available through the South Dakota Special Education Programs)	**X**	**X**	**X**	**X**	**X**	**X**
☑ Gordon Occupational Checklist II (1981) The Psychological Corporation Order Service Center PO Box 839954 San Antonio, TX 78283 - 3954 ☎ 1-800-228-0752	**X**					
☑ Geist Picture Interest Inventory Western Psychological Services 12031 Willshire Boulevard Los Angeles, CA 90025 - 1251 ☎ 1-800-648-8857	**X**					

ASSESSMENT DEVICE	Voc. Interest or Work Readiness	Independent Living	Recreation/ Leisure	Community Participation	Adult Services	Post Secondary Education
ICAP - Inventory of Client and Agency Planning (Contact your area Adjustment Training Center for information)		X	X	X	X	
JOB - O Career Interests/Tests Jist Works, Inc. 720 North Park Avenue Indianapolis, IN 46202 - 3431 ☎ 1-800-648-JIST	X					X
☑ Knowing Yourself Jist Works, Inc. 720 North Park Avenue Indianapolis, IN 46202 - 3431 ☎ 1-800-648-JIST	X					
☑ Life Centered Career Education Fearon / Janus 500 Harbor Boulevard Belmont, CA 94002 ☎ 1-800-877-4283	X	X	X	X		
Minnesota Rate of Manipulation Tests American Guidance Services 4201 Woodland Road PO Box 99 Circle Pines, MN 55014 - 1796 ☎ 1 800 328 2560	X	X				

ASSESSMENT DEVICE	Voc. Interest or Work Readiness	Independent Living	Recreation/ Leisure	Community Participation	Adult Services	Post Secondary Education
Minnesota Spatial Relations Tests - R American Guidance Service (Address same as above)	**X**	**X**				
My Vocational Situation Jist Works, Inc. 720 North Park Avenue Indianapolis, IN 46202 - 3431 ☎ 1-800-648-JIST	**X**					
Occupational Aptitude Survey and Interest Schedule (1991) PRO - ED 8700 Shoal Creek Boulevard Austin, TX 78758 - 9965 ☎ 512-451-8542	**X**					**X**
Occupational Clues Educational Associates PO Box 35397 Phoenix, AZ 85069 ☎ 602-869-9223	**X**					**X**
☑ Piers - Harris Children's Self-Concept Scale Western Psychological Services 12031 Willshire Boulevard Los Angeles, CA 90025 - 1251 ☎ 1-800-648-8857		**X**		**X**		

ASSESSMENT DEVICE	Voc. Interest or Work Readiness	Independent Living	Recreation/ Leisure	Community Participation	Adult Services	Post Secondary Education
STEP School Transition to Employment Partnership (Available through the South Dakota Department of Labor and your school's STEP Coordinator.)	**X**	**X**			**X**	**X**
☑ Self - Directed Search Jist Works, Inc. 720 North Park Avenue Indianapolis, IN 46202 - 3431 ☎ 1-800-648-JIST	**X**					
☑ Self - Directed Search Career Explorer The Psychological Corp Order Service Center PO Box 839954 San Antonio, TX 78283 - 3954 ☎ 1-800-228-0752	**X**					
☑ Social Skills Rating System American Guidance Service 4201 Woodland Road PO Box 99 Circle Pines, MN 55014 - 9989 ☎ 1-800-328-2560	**X**		**X**	**X**		

ASSESSMENT DEVICE	Voc. Interest or Work Readiness	Independent Living	Recreation/ Leisure	Community Participation	Adult Services	Post Secondary Education
Street Survival Skills Questionnaire The Psychological Corp Order Service Center PO Box 839954 San Antonio, TX 78283 - 3954 ☎ 1-800-228-0752		**X**		**X**		
Strong Vocational Interest Blank for Men and Women The Psychological Corp (Address as above)	**X**					**X**
☑ Student Transition Questionnaire (Technical assistance guide, <u>From School To Adulthood: Special Education Students in Transition)</u> Special Education Programs 700 Governors Drive Pierre, SD 57501 - 2291 ☎ 605-773-3678	**X**	**X**	**X**	**X**		**X**
☑ Teaching Functional Academics EDMARK PO Box 97021 Redmond, WA 98073 - 9721 ☎ 1-800-362-						

2890						

ASSESSMENT DEVICE	Voc. Interest or Work Readiness	Independent Living	Recreation/ Leisure	Community Participation	Adult Services	Post Secondary Education
Test Your Own Job Aptitude: Exploring Your Career Potential Paperbacks for Educators 426 West Front Street Washington, MO 63090 ☎ 1-800-227-2591	**X**					
The Real Life Aptitude Test: How to Find Out What You Want - and Get It! Paperbacks for Educators (Address as above)	**X**					
☑ Transition Behavior Scale Hawthorne Educational Services 800 Gray Oak Drive Columbia, MO 65205 ☎1-800-542-1673	**X**	**X**				
Transition Competence Battery for Deaf and Hard of Hearing Adolescents and Adults James Stanfield Co., Inc. PO Box 41058 Santa Barbara, CA 93140 ☎ 1-800-421-6534	**X**	**X**	**X**	**X**		

ASSESSMENT DEVICE	Voc. Interest or Work Readiness	Independent Living	Recreation/ Leisure	Community Participation	Adult Services	Post Secondary Education
Vocational Adaptation Rating Scale (Maladaptive behavior in work setting) Western Psychological Services 12031 Willshire Boulevard Los Angeles, CA 90025 - 1251 ☎ 1-800-648-8857	**X**					
Vocational Learning Styles Software EBSCO Curriculum Materials Division of EBSCO Industries, Inc. PO Box 486 Birmingham, AL 35201 ☎ 1-800-633-8623	**X**					**X**
Vocational Preference Inventory Western Psychological Services 12301 Willshire Boulevard Los Angeles, CA 90025 - 1251 ☎ 1-800-648-8857	**X**					**X**
Wide Range Interest - Opinion Test The Psychological Corp Order Service Center PO Box 839954 San Antonio, TX 78283 - 3954 ☎ 1-800-228-0752	**X**					**X**

ASSESSMENT DEVICE	Voc. Interest or Work Readiness	Independent Living	Recreation/ Leisure	Community Participation	Adult Services	Post Secondary Education
Work Adjustment Inventory The Psychological Corp (Address as above)	**X**					
Zen and the Art of Making a Living: A Practical Guide to Creative Career Design Paperbacks for Educators 426 West Front Street Washington, MO 63090 ☎ 1-800-227-2591	**X**					

AUTISM

SD Administrative Rules pertaining to eligibility criteria for autism:

24:05:24.01:02. Screening procedures for autism. If a student is suspected of having autism, screening procedures for autism shall include a review of any medical, hearing, and vision data on the student; the history of the student's behavior; and the student's current patterns of behavior related to autism.

24:05:24.01:03. Autism defined. Autism is a developmental disability that significantly affects verbal and nonverbal communication and social interaction and results in adverse effects on the student's educational performance.

Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences.

The term does not apply if the student's educational performance is adversely affected primarily because the student has an emotional disturbance as defined under Part B of Individuals with Disabilities Education Act.

24:05:24.01:04. Diagnostic criteria for autism. An autistic disorder is present in a student if at least six of the following twelve characteristics are expressed by a student with at least two of the characteristics from subdivision (1), one characteristic from subdivision (2), and one characteristic from subdivision (3):

(1) Qualitative impairment in social interaction, as manifested by at least two of the following:

(a) Marked impairment in the use of multiple nonverbal behaviors, such as eye-to-eye gaze, facial expression, body postures, and gestures, to regulate social interaction;

(b) Failure to develop peer relationships appropriate to developmental level;

(c) A lack of spontaneous seeking to share enjoyment, interests, or achievements with other people, such as a lack of showing, bringing, or pointing out objects of interest;

(d) Lack of social or emotional reciprocity;

(2) Qualitative impairment in communication as manifested by at least one of the following:

(a) Delay in, or total lack of, the development of spoken language not accommodated by an attempt to compensate through alternative modes of communication, such as gesture or mime;

(b) In an individual with adequate speech, marked impairment in the ability to initiate or sustain a conversation with others;

(c) Stereotyped and repetitive use of language or idiosyncratic language;

(d) Lack of varied, spontaneous make-believe play or social imitative play appropriate to developmental level;

(3) Restricted repetitive and stereotyped patterns of behavior, interests, and activities as manifested by at least one of the following:

(a) Encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus;

(b) Apparently inflexible adherence to specific, nonfunctional routines or rituals;

(c) Stereotyped and repetitive motor mannerisms, such as hand or finger flapping or twisting, or complex whole-body movements;

(d) Persistent preoccupation with parts of objects.

A student with autism also exhibits delays or abnormal functioning in at least one of the following areas, with onset generally prior to age three: social interaction, language used as a social communication, or symbolic or imaginative play. A student who manifests the characteristics of autism after age three could be diagnosed as having autism if the criteria in this section are satisfied.

24:05:24.01:05. Diagnostic procedures for autism. School districts shall refer students suspected as having autism for a diagnostic evaluation to an agency specializing in the diagnostic and educational evaluation of autism or to another multidisciplinary team or group of persons who are trained and experienced in the diagnosis and educational evaluation of persons with autism.

A student suspected of autism must be evaluated in all areas related to the suspected disability, including, where appropriate, health, vision, hearing, social and emotional status, general intelligence, academic performance, communicative status, and motor abilities.

The evaluation shall utilize multiple sources of data, including information from parents and other caretakers, direct observation, performance on standardized tests of language/communication and cognitive functioning and other tests of skills and performance, including specialized instruments specifically developed for the evaluation of students with autism.

24:05:24.01:06. Instruments used in diagnosis of autism. Instruments used in the diagnosis of students suspected of having autism include those which are based on structured interviews with parents and other caregivers, behavior rating scales, and other objective behavior assessment systems.

Instruments used in the diagnosis of students with autism must be administered by trained personnel in conformance with the instructions provided by their producer.

No single instrument or test may be used in determining diagnosis or educational need. Specific consideration must be given to the following issues in choosing instruments or methods to use in evaluating students who are suspected of having autism:

(1) The student's developmental level and possible deviations from normal development across developmental domains;

(2) The student's primary mode of communication;

(3) The extent to which instruments and methods identify strengths as well as deficits; and

(4) The extent that instruments and methods are tailored to assess skills in relationship to everyday activities and settings.

Suggested evaluations to be conducted based on autism as a suspected disability-
Note: the evaluation must be completed by a group of persons who are trained, knowledgeable and experienced in the diagnosis and educational evaluation of persons with autism. -Ability -Academic achievement -Speech/language -Adaptive behavior -Social skills -Behavior -If the team decides there are other areas of suspected disability, other evaluations must be given including, if appropriate, motor, hearing, etc.
REMINDER- • Transition evaluations will need to be conducted if the student is age 16, or at a younger age as determined by the IEP team. • Evaluations must be based upon the child's needs as determined by the IEP team. The purpose of conducting evaluations is to generate information in order to make decisions about eligibility, educational strategies and placement options.

COMMONLY ASKED QUESTIONS

1. What requirements are in place to certify a group of persons as being "trained, knowledgeable and experienced in the diagnosis and educational evaluation of persons with autism?"

Chapter 24:05:23, Requirements for child evaluators, outlines the administrative rule requirements for evaluators. No specific certification is available to certify a group of persons as "trained, knowledgeable and experienced in the diagnosis and educational evaluation of persons with autism." It is up to each school district or agency to verify that the group of persons who diagnose and evaluate students with autism are trained and experienced in this area.

2. How does this criteria differ from the criteria previously in effect for diagnosing autism as a disabling condition, which results in the student's need for special education or special education and related services?

The criteria now in effect reflects the most current DSM-IV (Diagnostic and Statistical Manual) definition for autism. The previous criteria for autism was from a previous version of DSM. SDCL 13-137-28, passed by the 1996 Legislature, requires the department to use the DSM-IV definition of autism.

3. Where can professionals and families go to obtain more information about the diagnosis of autism and current intervention techniques?

One source of information is the South Dakota University Affiliated Program (SDUAP) which provides training in intervention techniques through the Autism Program. Additionally, the SDUAP has clinical resources and personnel available to assist in the assessment of individuals suspected of having autism.

The SDUAP maintains a large resource center called the Wegner Health Science Information Center. This center contains books, videos, and files on a large variety of topics, including autism. These items will be mailed out for a three week lending period. Cost is return postage to the resource center.

To contact the SDUAP, call 1-800-658-3080.

To contact the Wegner Center call 1-800-521-2987 or 1-605-357-1400

DEAF-BLINDNESS

SD Administrative Rules pertaining to eligibility criteria for deaf-blindness:

24:05:24.01:07. Deaf-blindness defined. Deaf-blindness means that hearing and visual impairments affect a student at the same time. Students may be identified as deaf-blind when both vision and hearing impairments exist which are so severe that their sensory acuity cannot be determined and adaptations in both auditory and visual modes are required, or there is no response to auditory and visual stimuli.

Suggested evaluations to be conducted based on deaf-blindness as a suspected disability-
-Ophthalmological and audiological -Ability -Academic achievement -Speech/language -Adaptive behavior -Braille assessment (the team shall consider based upon age-appropriateness) -Orientation and mobility -If the team decides there are other areas of suspected disability, other evaluations must be given including, if appropriate, motor, hearing, etc.
REMINDER- • Transition evaluations will need to be conducted if the student is age 16, or at a younger age as determined by the IEP team. • Evaluations must be based upon the child's needs as determined by the IEP team. The purpose of conducting evaluations is to generate information in order to make decisions about eligibility, educational strategies and placement options.

COMMONLY ASKED QUESTIONS

1. At what age is it considered appropriate for the team to assess the child in the areas of Braille?

It is a good idea for the IEP team to discuss Braille assessment early in the child's educational program. For a preschool-aged child, the team may consider incorporating sensory experiences or pre-Braille activities to develop a base for future Braille use. When the child is ready to learn to read, the team should begin to discuss which medium should be used for the child.

A number of methods may be used by the team to determine what medium for reading and writing is best suited to the child's individual needs. For some

children, reading may not come up as a primary need until later in their educational program. As with all elements of the individualized educational program, the needs of the child will determine program characteristics. For every child, the program will be different.

2. **Is it necessary for a child, due for a 3 year reevaluation, to be seen again by the ophthalmologist and audiologist, if deaf-blindness has already been determined as a disabling condition?**

   The team must determine which areas need to be assessed for current information purposes. Many children who are identified as deaf-blind see these professionals on an annual or even more frequent basis. As with any disabling condition, change can and will occur over time. It is important to maintain current information to make appropriate educational decisions.

DEAFNESS

SD Administrative Rules pertaining to eligibility criteria for deafness:

24:05:24.01:08. Deafness defined. Deafness is a hearing impairment that is so severe that the student is impaired in processing linguistic information through hearing, even with amplification.

A student may be identified as deaf when the unaided hearing loss is in excess of 70 decibels and precludes understanding of speech through the auditory mechanism, even with amplification, and demonstrates an inability to process linguistic information through hearing, even with amplification.

Suggested evaluations to be conducted based on deafness as a suspected disability-
-Audiological evaluation -Ability -Academic achievement -Speech/language -If the team decides there are other areas of suspected disability, other evaluations must be given including, if appropriate, adaptive behavior, social skills, etc.
REMINDER- • Transition evaluations will need to be conducted if the student is age 16, or at a younger age as determined by the IEP team. • Evaluations must be based upon the child's needs as determined by the IEP team. The purpose of conducting evaluations is to generate information in order to make decisions about eligibility, educational strategies and placement options.

COMMONLY ASKED QUESTIONS

1. Is a student who is deaf automatically eligible for special education?

Any student, regardless of his identified disability, must meet a two prong test to be considered eligible for special education in South Dakota. First, the student must have an identified disability which meets the criteria outlined in administrative rule. Second, the disability must adversely affect educational performance which results in the need for special education or special education and related services. Therefore, it is possible that a student could meet the eligibility criteria and have an identified disability, however, evaluation shows that the student's disability does not adversely affect educational performance. Therefore, that student would not be considered in need of special education under South Dakota Administrative Rule.

2. If a student is identified as being deaf by an audiologist, does the student have to be evaluated any further?

Yes, the student would need to have a comprehensive evaluation completed in accordance with ARSD 24:05:25:04. Evaluation Procedures. This rule outlines the requirement that no single procedure is to be used as the sole criterion for determining an appropriate educational program for a child.

HEARING IMPAIRMENT

SD administrative Rules pertaining to eligibility criteria for hearing impaired:

24:05:24.01:10. Hearing impairment defined. A student may be identified as hearing impaired if an unaided hearing loss of 35 to 69 decibels is present that makes the acquisition of receptive and expressive language skills difficult with or without the help of amplification.

Suggested evaluations to be conducted based on hearing impairment as a suspected disability-
-Audiological evaluation -Ability -Academic achievement -Speech/language -If the team decides there are other areas of suspected disability, other evaluations must be given including, if appropriate, adaptive behavior, social skills, etc.
REMINDER- • Transition evaluations will need to be conducted if the student is age 16, or at a younger age as determined by the IEP team. • Evaluations must be based upon the child's needs as determined by the IEP team. The purpose of conducting evaluations is to generate information in order to make decisions about eligibility, educational strategies and placement options.

COMMONLY ASKED QUESTIONS

1. If a student is identified with a hearing impairment by an audiologist, are they automatically eligible for special education?

Any student, regardless of his identified disability, must meet a two prong test to be considered eligible for special education in South Dakota. First, the student must have an identified disability which meets the criteria outlined in administrative rule. Second, the disability must adversely affect educational performance which results in the need for special education or special education and related services. Therefore, it is possible that a student could meet the eligibility criteria and have an identified disability, however, evaluation shows that the student's disability does not adversely affect educational performance. Therefore, that student would not be considered in need of special education under South Dakota Administrative Rule.

2. Some students have fluctuating hearing loss. Are they eligible under the category of hearing impaired?

They may be eligible. The federal definition states "hearing impairment means an impairment in hearing, whether permanent or fluctuating, that adversely affects a child's educational performance."

MENTAL RETARDATION

SD Administrative Rules pertaining to eligibility criteria for mental retardation:

24:05:24.01:11. Mental retardation defined. Mental retardation is significantly below-average intellectual functioning existing concurrently with deficits in adaptive behavior and is generally manifested before age eighteen. The required evaluative components for identifying a student with mental retardation are as follows:

(1) General intellectual functioning two standard deviations or more below the mean as determined by the full scale score on an individual cognitive evaluation, plus or minus standard error of measurement, as determined in accordance with § 24:05:25:04; and

(2) Exhibits deficits in adaptive behavior and academic or preacademic skills as determined by an individual evaluation in accordance with § 24:05:25:04.

Suggested evaluations to be conducted based on mental retardation as a suspected disability-
-Ability -Academic achievement -Adaptive behavior -Social Skills -If the team decides there are other areas of suspected disability, other evaluations must be given including, if appropriate, motor, hearing, etc.
REMINDER- • Transition evaluations will need to be conducted if the student is age 16, or at a younger age as determined by the IEP team. • Evaluations must be based upon the child's needs as determined by the IEP team. The purpose of conducting evaluations is to generate information in order to make decisions about eligibility, educational strategies and placement options.

COMMONLY ASKED QUESTIONS

1. What does the term "plus or minus standard error of measurement" mean when figuring the two standard deviations below the mean as determined by individual cognitive evaluation?

One standard deviations equals 15 points, therefore two standard deviations equals 30 points on most commonly used instruments. On a mean of 100, the two

standard deviations subtracted equals a score of 70. This means the team is looking for a score of 70 or below.

The student's standard score is tabulated for general intellectual functioning (typically, this is an ability measure). Then, the standard error of measurement (SEM) plus or minus is figured into the received standard score. The result provides a range of scoring. This range of general intellectual function must fall within a 70 or below to meet this portion of the criteria. For example, on an ability measure, the student receives a standard score of 73. The standard error of measurement is plus(+) or minus(-) 5. The range of general intellectual functioning would be 68 to 78. Therefore, this student meets this portion of the mental retardation criteria, as the range falls with a 70 or below.

REMINDER: The category of mental retardation is the only category in which the standard error of measurement is to be figured into determining eligibility for special education or special education and related services.

2. Can the IEP team use subtests to figure the range?

No, subtest scores do not provide a comprehensive picture of the individuals ability or achievement. The total score received through the evaluation process must be used.

3. If a student does not qualify as a student in need of special education under this disability category, what assistance can be given?

Students who exhibit educational difficulties, but do not meet the requirements of eligibility criteria, may still need assistance. The types of assistance will vary greatly based on the individual's needs. Responding to the diverse learner's needs calls for school districts to be flexible and creative. Districts will need to consider if such a student qualifies for services under the Section 504 of the Rehabilitation Act of 1973. This is a civil rights act which requires that school districts make programs and activities accessible and useable to all eligible individuals with disabilities. Eligibility for Section 504 services must be determined through the team process, and the student must meet a specific set of criteria. Just as with special education, not every child who has a disability will be considered disabled under the definition of Section 504.

Developing and implementing an array of intervention techniques, including instructional support teams (sometimes called teacher assistance or student assistance teams) developing modifications within the classroom, utilizing peer tutors, and other such methods are all ways to meet the diverse learner's needs. These methods not only assist the student with learning difficulties, but also provide support and assistance for staff.

MULTIPLE DISABILITIES

SD Administrative Rules pertaining to eligibility criteria for multiple disabilities:

24:05:24.01:12. Multiple disabilities defined. Multiple disabilities means that two or more of the following disabilities affect the student at the same time: deafness, mental retardation, orthopedic impairment, other health impairment, serious emotional disturbance, speech or language impairment, traumatic brain injury, and visual impairment including blindness. The term does not include deaf-blindness.

Suggested evaluations to be conducted based on multiple disabilities as a suspected disability-
-Refer to the two (or more) disability category sections which the student is suspected of having for suggested evaluations
REMINDER- • Transition evaluations will need to be conducted if the student is age 16, or at a younger age as determined by the IEP team. • Evaluations must be based upon the child's needs as determined by the IEP team. The purpose of conducting evaluations is to generate information in order to make decisions about eligibility, educational strategies and placement options.

COMMONLY ASKED QUESTIONS

1. What students qualify under this disability category?

This category is for students who have a combination (two or more) of the following disabilities at the same time: deafness, mental retardation, orthopedic impairment, other health impairment, serious emotional disturbance, speech or language impairment, traumatic brain injury and visual impairment including blindness. Therefore, the student must have two or more of the previously listed disabilities occurring simultaneously. If a student has an identified disability not listed above, they can not be considered as having a multiple disability.
REMINDER: A student with deaf-blindness does not qualify under this category.

2. Does the student have to meet the criteria under each of the disability categories in order to be considered as having a multiple disability?

Yes, the student would have to meet the requirements of each disabling condition. Each disabling condition listed has specific criteria under administrative rule. In order to be considered as a student with the disabling condition, those criteria must be met.

ORTHOPEDIC IMPAIRMENT

SD Administrative Rules pertaining to eligibility criteria for orthopedic impairment:

24:05:24.01:13. Orthopedic impairment defined. Orthopedic impairment is an impairment caused by a congenital anomaly, such as club foot or absence of some member; a disease, such as poliomyelitis, or bone tuberculosis; or another cause, such as cerebral palsy, an amputation, or a fracture or burn that causes contractures.

There must be evidence of the following:

(1) That the student's impaired motor functioning significantly interferes with educational performance;
(2) That the student exhibits deficits in muscular or neuromuscular functioning that significantly limit the student's ability to move about, sit, or manipulate materials required for learning;
(3) That the student's bone, joint, or muscle problems affect ambulation, posture, or gross and fine motor skills; and
(4) That current medical data by a qualified medical evaluator describes and confirms an orthopedic impairment.

Suggested evaluations to be conducted based on orthopedic impairment as a suspected disability-
-Ability -Academic achievement -Gross/fine motor -Adaptive behavior -The team has available current medical data from a qualified medical evaluator -If the team decides there are other areas of suspected disability, other evaluations must be given including, if appropriate, speech language , hearing, etc.
REMINDER- • Transition evaluations will need to be conducted if the student is age 16, or at a younger age as determined by the IEP team. • Evaluations must be based upon the child's needs as determined by the IEP team. The purpose of conducting evaluations is to generate information in order to make decisions about eligibility, educational strategies and placement options.

COMMONLY ASKED QUESTIONS

1. **The administrative rule lists a number of orthopedic impairments. Are these the only identified orthopedic impairments a student may have in order to be considered eligible under this category?**

   The list provided in administrative rule 24:05:24:13 is not an all inclusive list. It provides examples, "such as club foot or absence of some member…." A student may have another type of orthopedic impairment not specifically listed in the rule, but still meet all the criteria of having an orthopedic impairment.

2. **Does the student have to meet all four elements of the administrative rule in order to meet the criteria for having an orthopedic impairment:**
   - (1) impaired motor functioning interfering with educational performance;
   - (2) exhibits deficits in muscular or neuromuscular functioning that limits the student's ability to move about, sit or manipulate materials for learning;
   - (3) the student's bone, joint or muscle problems affect ambulation, posture or gross and fine motor skills; and
   - (4) current medical data by a qualified medical evaluator describes and confirms an orthopedic impairment?

   Yes, there must be evidence supporting all four elements in ARSD 24:05:24:01.13 Orthopedic impairment defined.

3. **Who is considered a qualified medical evaluator?**

   A medical evaluator must be licensed to practice medicine or osteopathy by the State Board of Medical and Osteopathic Examiners.

4. **Would a student with a temporary disability, such as a broken leg, qualify as a student with an orthopedic impairment?**

   A student with a temporary disability, such as a broken leg, would have to meet the two prong test in order to be considered as a student in need of special education or special education and related services. First, the student would have to have an identified disability which meets the criteria outlined in administrative rule. Second, as a result of the disability, it has adversely affected his educational performance, and the student needs special education or special education and related services. Typically, a student with an injury that is short-term would not be in need of special education. However, the student might be in need of some short-term accommodations, perhaps under Section 504, and adaptations in order to continue to participate fully in his educational program. Every student must be referred and evaluated on an individual basis, therefore, no one answer will meet every situation. It must be a team decision in terms of what steps to take.

OTHER HEALTH IMPAIRED

SD Administrative Rule pertaining to eligibility criteria for other health impaired:

24:05:24.01:14. Other health impaired defined. Other health impaired means having limited strength, vitality, or alertness, including a heightened alertness to environmental stimuli that results in limited alertness with respect to the educational environment, because of a chronic or acute health problem, such as a heart condition, tuberculosis, rheumatic fever, nephritis, asthma, attention deficit disorder or attention deficit hyperactivity disorder, sickle cell anemia, hemophilia, epilepsy, lead poisoning, leukemia, or diabetes, that adversely affects a student's educational performance.

Adverse effects in educational performance must be verified through the multidisciplinary evaluation process as defined in §24:05:13:01(18).

Suggested evaluations to be conducted based on other health impaired as a suspected disability-
-Ability -Academic achievement **-Documentation of a chronic or acute health problem** -If the team decides there are other areas of suspected disability, other evaluations must be given including, if appropriate, adaptive behavior, social skills, speech language, hearing, etc.
REMINDER- • Transition evaluations will need to be conducted if the student is age 16, or at a younger age as determined by the IEP team. • Evaluations must be based upon the child's needs as determined by the IEP team. The purpose of conducting evaluations is to generate information in order to make decisions about eligibility, educational strategies and placement options.

COMMONLY ASKED QUESTIONS

1. The administrative rule lists a number of health impairments. Are these the only identified health impairments a student may have in order to be considered eligible under this category?

The list provided in ARSD 24:05:24:14 Other health impaired defined. is not an all inclusive list. It provides examples, "such as a heart condition, tuberculosis, rheumatic fever, nephritis, asthma, attention deficit disorder or attention deficit hyperactivity disorder, sickle cell anemia, hemophilia, epilepsy, lead poisoning, leukemia, or diabetes." A student may have another type of health impairment not

specifically listed in the rule, but still meets all the criteria of having an health impairment (limited strength, vitality or alertness, including a heightened alertness to environmental stimuli that results in limited alertness with respect to the educational environment, because of a chronic or acute health problem) that adversely affects a student's educational performance.

2. Is this a category under which a student with attention-deficit disorder (ADD) or attention deficit hyperactivity disorder (ADHD) could be eligible?

ADD/ADHD are not specific disabling conditions under the IDEA, although a student with ADD/ADHD may be eligible as "other health impaired: or another specific disability under 34 CFR 300.7 (c) by reason of the condition(s).

The classification of ADD/ADHD depends on the particular presentation of the disorder in an individual student and must be determined on a case-by-case basis. Thus, a student could have a qualifying "other health impairment" under CFR 300.7 (c) if the ADD or ADHD limits the student's alertness and adversely impacts his academic performance. The 1999 IDEA regulations affirm prior OSEP interpretation of the law in this regard. *E.g., Letter to Cohen*, 20 IDELR 73 (OSEP 1993) (limited alertness must be viewed in terms of its effect on educational performance). Again, section 300.7(c)(9) defines an other health impairment as "including a heightened alertness to environmental stimuli, that results in limited alertness with respect to the educational environment."

In other instances, a student with ADD or ADHD may be eligible for services under the classification of an "emotional disturbance" (ED), 34 CFR 300.7 (c)(4), or a "specific learning disability" (SLD), 34 CFR 300.7 (c)(10). It is important to note that a student with ADD or ADHD will not qualify for classification under either of those latter categories unless he meets the specific eligibility criteria for the condition.

3. How severe of a problem must a student have in order to meet the criteria for the disability category of other health impaired?

The administrative rules require that a chronic or acute health problem be present which adversely affects the educational performance of the student. This is verified through the IEP team decision-making process. Documentation of the chronic or acute health problem must be present, as well as evidence that the health problem adversely affects the student's ability to gain benefit from the educational program.

4. Is it a requirement to have a medical doctor provide a diagnosis in order to identify a student as being other health impaired?

There should be documentation available which verifies a chronic and/or acute health problem exists. This information could come from a medical doctor or from other evaluations.

EMOTIONAL DISTURBANCE

SD Administrative Rule pertaining to eligibility criteria for emotional disturbance:

24:05:24.01:16. Emotional disturbance defined. Emotional disturbance is a condition that exhibits one or more of the following characteristics to a marked degree over a long period of time:

(1) An inability to learn that cannot be explained by intellectual, sensory, or health factors;
(2) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers;
(3) Inappropriate types of behavior or feelings under normal circumstances;
(4) A general pervasive mood of unhappiness or depression; or
(5) A tendency to develop physical symptoms or fears associated with personal or school problems.

An emotional disturbance is not a transient expected response to stressors in the individual's environment; or misbehavior that can generally be corrected by environmental intervention. Environmental intervention includes feedback to the individual, advice to parents, and modifications and strategies addressed through teacher assistance team programs, or similar programs.

The term, emotional disturbance, includes schizophrenia. The term does not apply to a student who is socially maladjusted unless a multidisciplinary evaluation team determines pursuant to §24:05:24.01:17 that the student has an emotional disturbance.

24:05:24.01:17. Criteria for emotional disturbance. A student may be identified as emotionally disturbed if the following requirements are met:

(1) The student demonstrates serious behavior problems over a long period of time, generally at least six months, with documentation from the school and one or more other sources of the frequency and severity of the targeted behaviors;
(2) The student's performance falls two standard deviations or more below the mean in emotional functions, as measured in school, home, and community on nationally normed technically adequate measures; and
(3) An adverse effect on educational performance is verified through the multidisciplinary evaluation process as defined in §24:05:13:01(18).

A student may not be identified as having an emotional disturbance if common disciplinary problem behaviors, such as truancy, smoking, or breaking school conduct rules, are the sole criteria for determining the existence of an emotional disturbance.

Suggested evaluations to be conducted based on emotional disturbance as a suspected disability-
-Ability -Academic achievement -Observation -Emotional function (behavior) As most tests are not well normed and can be very subjective providing two measures at a minimum can show the validity of the scores and support the results. -Social Skills -If the team decides there are other areas of suspected disability, other evaluations must be given including, if appropriate, adaptive behavior, speech or language.
REMINDER- • Transition evaluations will need to be conducted if the student is age 16, or at a younger age as determined by the IEP team. • Evaluations must be based upon the child's needs as determined by the IEP team. The purpose of conducting evaluations is to generate information in order to make decisions about eligibility, educational strategies and placement options.

COMMONLY ASKED QUESTIONS ABOUT EMOTIONAL DISTURBANCE

1. **ARSD 24:05:24.01.16 Emotional disturbance defined. lists five sets of characteristics pertinent to emotional disturbance. Does this mean in order to identify a student as having an emotional disturbance that he must have all five sets of characteristics?**

   No, the student may exhibit one or more of any of the characteristics listed over a long period of time and to a marked degree.

2. **To meet the criteria for having an emotional disturbance, the team may only identify a student when they have demonstrated a serious behavior problem over a long period of time, generally not less that 6 months. Does this mean the team is restricted from doing any interventions or evaluations during that 6 month period?**

   No, the team is not restricted from attempting interventions or beginning to evaluate a student. This time period would typically be a time for interventions. These interventions might include the use of behavior management plans, attempting various educational modifications, or utilizing the instructional assistance team model (sometimes called teacher assistance team). The team is

not limited in any fashion from attempting to remediate the student's behavioral and educational difficulties during this six month time frame. This time period assists the evaluation team in making the determination of whether the student's serious behavioral problems are temporary or long lasting.

3. **<u>ARSD 24:05:24.01.17 Criteria for emotional disturbance</u> calls for the documentation from school, and one or more other sources, of the frequency and severity of the targeted behavior. Where should the other sources come from?**

   The other sources may be from the student's home, community or other agencies who are directly working with the student. It is assumed that the sources would be those in which the student is known, and who have evidence of the frequency and severity of the behavior.

4. **Is there a required form to use for documenting targeted behavior?**

   No, the administrative rule requires that the serious behavior problem be documented, but there is no mandated form for use. The documentation must show the serious behavior has been demonstrated over a long period of time, and that there is two or more sources (one from the school) of the frequency and severity of the targeted behaviors.

5. **The student's performance must fall two standard deviations or more below the mean in an emotional functions. What does this mean?**

   This means that the student will be given at least one normed measure of behavior. The student's score must fall two standard deviations below the mean. If the measure has a mean of 100, and a standard deviation of 15 points, the student's score would have to be at 70 or below.

6. **Can students be identified as having an emotional disturbance and be in need of special education if they are performing academically well in the classroom?**

   In order to be identified as being in need of special education services, an adverse effect on the student's educational performance must be present. For a student with an emotional disturbance, the following are examples of adverse educational effects:

   - a discrepancy between individual achievement and classroom performance;
   - wide variability (inconsistency) in daily achievement/performance that is not based on an identified learning disability or developmental delay;
   - a significant decline in overall academic performance as outlined by the district grading practices;

- an inability to concentrate and/or participate as directed by the adult which is not consistent with developmental level;
- an inability to attend school for emotional reasons;
- unrealistic perceptions of school and/or home expectations; and
- an inability to maintain relationships with adults and peers, which prevents the student from participating in classroom learning.

7. How does the IEP team tell the difference between a student who has an emotional disturbance and a student who is simply having conduct problems?

It is imperative that the team does a thorough job of observing and documenting the student's difficulties. Generally, if conduct related concerns are the only areas which show up as significant on a behavioral assessment, this may be an indicator that the student is not emotionally disturbed.

Listed below are some distinctions the IEP team may wish to consider when determining if the behavior is related to conduct problems versus emotional disturbance:

A. Students with conduct disorders exhibit such overt behavior problems as acting out, an inability to conform to school rules and/or impulsive antisocial actions. In the context of such behaviors, they consistently:

- disrupt other children;
- are disrespectful or discourteous to others;
- do not do what is required;
- are rough or noisy;
- are destructive to their own or others belongings;
- indicate bad feelings about school;
- use profanity excessively;
- do not obey commands from authority figures;
- are uncooperative in group activities;
- are hot tempered - fighting with others without provocation;
- are undependable and/or irresponsible; and/or
- test classroom and school rules to extreme limits; (Mann, Suiter and McClung, 1979).

B. No matter how outrageous, students with a conduct disorder do not typically assume responsibility for their behavior, its implications or consequences. They perceive themselves as essentially normal, that they have the right to behave as they do. They do not "own their problems," thus, when they are confronted about some behavioral problem, they are likely to respond "what problem?" and proceed to shift it's onus to the teacher or other students.

C. Students who are emotionally disturbed, on the other hand, express ownership of their problem. In effect, either directly or subtly, they reflect internalized self-identity, self-concept and related problems which convey expressions of internalized affective disturbances ("I don't feel good about myself because..."). Such expressions may be seen through difficulties in contact with reality, in thinking, or mood; in conflicted and/or bizarre interpersonal interactions, and in manifestly neurotic (phobic, obsessive, compulsive, disassociative and related) behaviors.

SPECIFIC LEARNING DISABILITY

SD Administrative Rule pertaining to eligibility criteria for specific learning disabilities:

24:05:24.01:18. Specific learning disability defined. Specific learning disability is a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. The term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The terms does not apply to students who have learning problems that are primarily the result of visual, hearing, or motor disabilities; mental retardation; emotional disturbance; or environmental, cultural, or economic disadvantage.

24:05:24.01:19. Criteria for specific learning disability. A student may be identified as having a specific learning disability under the following circumstances:

(1) The student does not achieve commensurate with the student's age and ability levels in one or more of the areas listed in subdivision (2) of this section when provided with learning experiences appropriate for the student's age and ability levels; and

(2) The team finds that a student has a severe discrepancy of 1.5 standard deviations between achievement and intellectual ability in one or more of the following areas:

(a) Oral expression;
(b) Listening comprehension;
(c) Written expression;
(d) Basic reading skill;
(e) Reading comprehension;
(f) Mathematical calculation; or
(g) Mathematical reasoning.

The team must consider regression to the mean in determining the above discrepancy.

When using a measure of intellectual functioning which has verbal and performance subscales, the total score must be used unless there is a difference of more than one standard deviation between the two scores. If there is a difference of more than one standard deviation between the two subscales, the higher scale must be used.

Suggested evaluations to be conducted based on specific learning disability as a suspected disability-
-Ability -Academic achievement -Observation -If the team decides there are other areas of suspected disability, other evaluations must

be given including, if appropriate, speech or language, social skills, etc.

REMINDER-

- Transition evaluations will need to be conducted if the student is age 16, or at a younger age as determined by the IEP team.
- Evaluations must be based upon the child's needs as determined by the IEP team. The purpose of conducting evaluations is to generate information in order to make decisions about eligibility, educational strategies and placement options.

COMMONLY ASKED QUESTIONS

1. ARSD 24:05:24:01.19 Criteria for specific learning disability states that the IEP team must consider regression to the mean in determining the existence of a severe discrepancy between ability and achievement. Why was this put into the rule?

IEP teams are directed to consider regression to the mean as it provides a more equitable method of determining whether or not a student has a learning disability. By considering the regression to the mean, this takes into account the variability, which can occur in testing situations.

2. When determining if a student has a severe discrepancy of 1.5 standard deviations, can grade or age equivalent scores be used?

No, grade or age equivalent scores cannot be used to establish a severe discrepancy. Standard scores must be used to establish the discrepancy between ability and achievement.

3. Can the IEP team use subtests to figure the range?

No, subtest scores do not provide a comprehensive picture of the individuals ability or achievement. The total score received through the evaluation process must be used

4. The WISC-III has three scores, a total score, a verbal score and a performance score. Which one should be used when to compare to the achievement score?

The total score should be used **UNLESS** the following occurs: when there is a difference of more than one standard deviation (which means 16 points) between the verbal score and the performance score, the higher of these two scores must be used to compare to the student's achievement score.

5. How is regression to the mean determined?

Regression to the mean is most commonly figured through the use of a computer program system or with the use of a regression chart, such as the one on the following page.

REGRESSED SCORES FOR DETERMINING A DISCREPANCY BETWEEN ABILITY (IQ) AND ACHIEVEMENT

For use with scores that have a mean of 100 and a standard deviation of 15.

Obtained IQ score	Achievement Standard Score 1.5 sd	Obtained IQ score	Achievement Standard Score 1.5 sd
130	95 or below	102	81 or below
129	95 or below	101	81 or below
128	94 or below	100	80 or below
127	94 or below	99	80 or below
126	93 or below	98	79 or below
125	93 or below	97	79 or below
124	92 or below	96	79 or below
123	92 or below	95	79 or below
122	91 or below	94	77 or below
121	91 or below	93	77 or below
120	90 or below	92	76 or below
119	90 or below	91	76 or below
118	89 or below	90	75 or below
117	89 or below	89	75 or below
116	88 or below	88	74 or below
115	88 or below	87	74 or below
114	87 or below	86	73 or below
113	87 or below	85	73 or below
112	86 or below	84	72 or below
111	86 or below	83	72 or below
110	85 or below	82	71 or below
109	85 or below	81	71 or below
108	84 or below	80	70 or below
107	84 or below	79	70 or below
106	83 or below	78	69 or below
105	83 or below	77	69 or below
104	82 or below	76	68 or below
103	82 or below	75	68 or below
		74	67 or below
		73	67 or below
		72	66 or below

SPEECH OR LANGUAGE IMPAIRMENT

SD Administrative Rules pertaining to eligibility criteria for speech or language impairments:

24:05:24.01:20. Speech or language disorder defined. Speech or language impairment is a communication disorder such as stuttering, impaired articulation, a language disorder, or a voice disorder.

Suggested evaluations to be conducted based on speech or language impairment as a suspected disability-
-Articulation: a standardized articulation test and observation -Fluency: as determined by the speech/language clinician -Voice: as determined by the speech/language clinician, medical evaluation may be necessary -Language up through age 8: language assessments, checklists, language samples -For language after age 9: standardized language assessment, ability measure must be given -If the team decides there are other areas of suspected disability, other evaluations must be given including, if appropriate, behavioral, etc.
REMINDER- • Transition evaluations will need to be conducted if the student is age 16, or at a younger age as determined by the IEP team. • Evaluations must be based upon the child's needs as determined by the IEP team. The purpose of conducting evaluations is to generate information in order to make decisions about eligibility, educational strategies and placement options.

COMMONLY ASKED QUESTIONS

1. Does a student have to meet the criteria for a speech or language impairment in order to receive speech and language therapy as a related service?

No, the criteria which is in place for speech or language impairments (articulation, fluency, voice and language disorders) is utilized when a speech or language impairment is the **PRIMARY** disabling condition. It is not required that a student in need of special education meet this criteria in order to receive speech or language services as a related service. To be provided as a related service, the IEP team must determine that the related service is necessary in order for the student to benefit from the special education program.

ARTICULATION DISORDERS

24:05:24.01:21. Articulation disorder defined. Articulation disorders include all non-maturational speech deviations based primarily on incorrect production of speech sounds. Articulation disorders include omissions, substitutions, additions, or distortions of phonemes within words. Articulation patterns that can be attributed to cultural or ethnic background are not disabilities.

24:05:24.01:22. Criteria for articulation disorder. A student may be identified as having an articulation disorder if one of the following criteria exist:

(1) Performance on a standardized articulation test falls two standard deviations below the mean and intelligibility is affected in conversation;
(2) Test performance is less than two standard deviations below the mean but the student is judged unintelligible by the speech and language clinician and one other adult;
(3) Performance on a phonological assessment falls in the profound or severe range and intelligibility is affected in conversation; or
(4) Performance on a phonological assessment falls in the moderate range, intelligibly is affected in conversation, and during a tracking period of between three and six months there was a lack of improvement in the number and type of errors; or
(5) An error persists six months to one year beyond the chronological age when 90 percent of students have typically acquired the sound based on developmental articulation norms.

COMMONLY ASKED QUESTIONS

1. ARSD 24:05:24:01.22 Criteria for articulation disorder. lists five ways a student may be identified as having an articulation disorder. Does a student have to meet all five criteria in order to be identified as speech or language impaired?

No. When reading the administrative rule, note that these are five different criteria in which a student could meet the eligibility criteria. The student need only meet one of the five criteria listed.

2. Does a standardized articulation test have to be given?

Yes, a standardized articulation test must be given. In administrative rule, the requirements for evaluation state specifically that the tests must be valid, using procedures that are appropriate for the diagnosis and appraisal of speech and language impairments.

FLUENCY DISORDER

24:05:24.01:23. Fluency disorder defined. A fluency disorder is an interruption in the flow of speaking characterized by atypical rate, rhythm, and repetitions in sounds, syllables, words, and phrases. This may be accompanied by excessive tension, struggle behavior, and secondary mannerisms.

24:05:24.01:24. Criteria for fluency disorder. A student may be identified as having a fluency disorder if:

(1) The student consistently exhibits one or more of the following symptomatic behaviors of dysfluency:

(a) Sound, symbolic, or word repetition;
(b) Prolongations of sounds, syllables, or words;
(c) Blockages; or
(d) Hesitations.

(2) There is a significant discrepancy from the norm as measured by speech sampling in a variety of contexts. A significant discrepancy from the norm is five dysfluencies a minute; or

(3) The disruption occurs to the degree that the individual or persons who listen to the individual react to the manner of speech and the disruptions in a way that impedes communication.

COMMONLY ASKED QUESTIONS

1. What does "significant discrepancy from the norm" mean?

This is defined in rule as five dysfluencies per minute. A speech observation is necessary to document the significant discrepancy.

2. Does a student have to exhibit one or more symptomatic behaviors, have a significant discrepancy from the norm and have impeded communication in order to be considered as meeting all the criteria under fluency disorders?

A student could meet the criteria by 1) exhibiting one or more symptomatic behaviors of dysfluency **AND** 2) having a significant discrepancy from the norm (average) **OR** 3) having disruptions to such a degree that communication is impeded.

VOICE DISORDER

24:05:24.01:25. Voice disorder defined. A voice disorder is characterized by the production absence of vocal quality, pitch, loudness, resonance, duration which is inappropriate for an individual's age or gender, or both.

24:05:24.01:26. Criteria for voice disorder. A student may be identified as having a voice disorder if:

(1) Consistent deviations exit in one or more of the parameters of voice: pitch, quality, or volume;

(2) The voice is discrepant from the norm for age, gender, or culture and is distracting to the listener; and

(3) The disorder is not the result of a temporary problem, such as normal voice changes, allergies, colds, or similar conditions.

COMMONLY ASKED QUESTIONS

1. Is a medical evaluation required to verify a voice disorder?

No. However many voice problems are based on medical concerns such as polyps on the vocal chord.

2. Can a student who has a voice disorder and is performing well in the classroom qualify for special education services?

Remember, eligibility for special education is a two prong test. First, the student must have an identified disability which meets the criteria defined in administrative rule. Second, as a result of the disability, educational performance is adversely affected, and therefore the student is in need of special education or special education and related services. If a student can make himself understood and communicate effectively despite the disorder, then educational performance is not adversely affected by the disorder.

2. To meet the criteria for voice disorder, must a student have all three of the following:

- **consistent deviations in one or more parameters of voice;**
- **the voice is discrepant from the norm and is distracting to the listener; and**
- **the disorder is not the result of a temporary problem.**

Yes, all elements listed must be met in accordance with ARSD 24:05:24:01.26. Criteria for voice disorder.

LANGUAGE DISORDER

24:05:24.01:27. Language disorder defined. A language disorder is a reduced ability, whether developmental or acquired, to comprehend or express ideas through spoken, written, or gestural language. The language disorder may be characterized by limited vocabulary, an inability to function through the use of words (pragmatics) and their meanings (semantics), faulty grammatical patterns (syntax and morphology), or the faulty reproduction of speech sounds (phonology). A language disorder may have a direct or indirect affect on a student's cognitive, social, emotional or educational development or performance and deviates from accepted norms. The term language disorder does not include students whose communication problems result solely from a native language other than English or from their dialectal differences.

24:05:24.01:28. Criteria for language disorder. A student may be identified as having a language disorder as a primary disability if:

(1) Through age eight, performance falls 1.5 standard deviations below the mean on standardized evaluation instruments; beginning at age nine, a difference is present of 1.5 standard deviations between performance on an individually administered standardized language assessment instrument and measured expected potential as measured by an individually administered intelligence test; and

(2) The student's pragmatic skills, as measured by checklists, language samples, or observation, adversely affect the student's academic and social interactions.

COMMONLY ASKED QUESTIONS

1. Does a student have to meet the criteria for a language disorder in order to receive speech and language services as a related service?

No, the criteria which is in place for speech or language impairments (language disorder) is utilized when speech or language impairments is the **PRIMARY** disabling condition. It is not required that a student in need of special education meet this criteria in order to receive speech and language as a related service. To be provided as a related service, the IEP team must determine that the related service is necessary in order for the student to benefit from his special education program.

2. What does "through age eight" mean?

"Through age eight" means students who have not yet turned age 9. For example, a student who is 8 years, 11 months old, is not yet 9.

3. For a suspected language disorder through age eight must the performance fall one and a half (1.5) standard deviations below the mean on standardized evaluation instruments?

Yes. For example an evaluation tool which has a mean of 100, the standard deviation is equal to 15 points. One and a half standard deviations equals 23 points, which means the student's standard score must be at 77 or below to meet this portion of the eligibility criteria for language disorder.

4. Can subtest scores be used when figuring eligibility for language disorders?

No, subtest scores may not be used when determining if a student meets the criteria for having a language disorder.

5. If a student has a speech or language impairment as his primary disabling condition and he receives language therapy, upon turning age 9, does he have to be reevaluated with an ability measure and standardized language assessment?

No. Reevaluation must be completed at least once every three years, or if the child's parent or teacher requests an evaluation or if conditions warrant.

6 Can clinical judgment be used when determining eligibility?

No. The administrative rule does not include the use of clinical judgment when determining eligibility.

7. Why are students required to take an ability measure after age nine?

After the age of nine, students are more likely to exhibit a specific learning disability rather than a language disorder. By requiring the use of an ability measure after the age of nine, the category of language disorder is aligned with the evaluative requirements of specific learning disabilities. This allows the IEP team to determine whether or not the educational difficulties are the results of a language disorder or learning disability.

TRAUMATIC BRAIN INJURY

SD Administrative Rules pertaining to eligibility criteria for traumatic brain injury:

24:05:24.01:29. Traumatic brain injury defined. A traumatic brain injury is an acquired injury to the brain caused by an external physical force, resulting in a total or partial functional disability or psychosocial impairment, or both, that adversely affects a student's educational performance. The term applies to open or closed head injuries resulting in impairments in one or more areas, such as cognition; language; memory; attention; reasoning; abstract thinking; judgment; problem solving; sensory, perceptual, and motor abilities; psychosocial behavior; physical functions; information processing; and speech. The terms does not apply to brain injuries that are congenital or degenerative, or brain injuries induced by birth trauma.

Adverse effects in educational performance must be verified through the multidisciplinary evaluation process as defined in §24:05:13:01(18).

Suggested evaluations to be conducted based on traumatic brain injury as a suspected disability-
-Ability -Academic achievement -Speech/language -Adaptive behavior -Motor -Social skills -Current medical data should be made available -If the team decides there are other areas of suspected disability, other evaluations must be given, including, if appropriate, hearing, behavior, etc.
REMINDER- • Transition evaluations will need to be conducted if the student is age 16, or at a younger age as determined by the IEP team. • Evaluations must be based upon the child's needs as determined by the IEP team. The purpose of conducting evaluations is to generate information in order to make decisions about eligibility, educational strategies and placement options.

COMMONLY ASKED QUESTIONS

1. Can a student who has suffered an internal brain injury, such as a stroke or aneurysm, meet the criteria for eligibility under the category traumatic brain injury?

Students who have had an internal brain injury, or who have a congenital or degenerative brain injury are not included in the definition of traumatic brain injury. This does not necessarily prohibit students with these conditions from receiving appropriate special education services. If a student with one of these conditions meets the eligibility criteria under another Individuals with Disabilities Education Act (IDEA) category of disability and is determined to be in need of special education, then the student's IEP must call for provision of special education and related services based on an assessment of the student's unique needs. The student's subsequent placement must be based on the IEP and not on the identified category of disability.

2. If an eligible student is returning from a long term rehabilitative situation, what procedural steps should the receiving district take to prepare for the student?

The steps a district will take vary with the intensity of the student's needs. It is a good idea for the receiving district to be in direct contact with the rehabilitation facility in order to facilitate a positive transfer back to the school setting. Work with the family to maintain the lines of communication. If it is possible, participate in staffings through Conference call or speak to the student's case manager from the facility. Keep actively involved and informed. The district may consider developing a short-term evaluation program to have in place upon an eligible student's return to school. The use of a short-term evaluation program provides the eligible student with special education services, while the district can observe and pursue additional evaluative information in order to develop an appropriate educational program.

VISUAL IMPAIRMENTS

SD Administrative Rule pertaining to eligibility criteria for visually impaired:

24:05:24.01:30. Visual impairment including blindness defined. Visual impairment including blindness is an impairment in vision that, even with correction, adversely affects a student's educational performance. The term includes both partial sight and blindness.

A student with a visual impairment has a deficiency in visual acuity that, even with the use of lenses or corrective devices, requires special education or special education and related services.

Partial sight is one or more deficiencies in visual acuity, as follows:

(1) Visual acuity of no better than 20/70 in the better eye after correction.
(2) Restricted visual field.
(3) Limited ability to move about safely in the environment because of visual disability.

Blindness is a deficiency in visual acuity of 20/200 or less in the better eye with correcting lenses or a limited field of vision in which the widest diameter subtends an angular distance of no greater than twenty degrees or has a medically indicated expectation of visual deterioration.

Suggested evaluations to be conducted based on visual impairments as a suspected disability-
-Ophthalmological evaluation -Ability -Academic achievement -Adaptive behavior -Braille assessment (the team shall consider based upon age-appropriateness) -If the team decides there are other areas of suspected disability, other evaluations must be given, including, if appropriate, orientation and mobility, social skills etc.
REMINDER- • Transition evaluations will need to be conducted if the student is age 16, or at a younger age as determined by the IEP team. • Evaluations must be based upon the child's needs as determined by the IEP team. The purpose of conducting evaluations is to generate information in order to make decisions about eligibility, educational strategies and placement options.

COMMONLY ASKED QUESTIONS

1. Does a student who has been medically identified as either visually impaired or blind automatically qualify for special education services?

Any student, regardless of his identified disability, must meet a two prong test to be considered eligible for special education in South Dakota. First, the student must have an identified disability which meets the criteria outlined in SD Administrative Rule. Second, the disability must adversely affect educational performance which results in the need for special education or special education and related services. Therefore, it would be possible that a student could meet the eligibility criteria and have an identified disability; however, evaluation shows that the student's disability does not adversely affect his educational performance. Therefore, the student would not be considered in need of special education under South Dakota Administrative Rule.

2. Where can families and professionals go to receive assistance with evaluations, training and program development when working with children who are visually impaired?

One source of information is the South Dakota School for the Blind and Visually Impaired. The school provides educational residential programs, outreach consulting services and comprehensive multidisciplinary assessments to evaluate a student's abilities and current skills. The address for the South Dakota School for the Blind and the Visually Impaired is:

South Dakota School for the Blind and Visually Impaired
423 17th Avenue SE
Aberdeen, SD 57401
(605) 626-2580

DEVELOPMENTAL DELAY

SD Administrative Rule pertaining to the eligibility criteria for developmental delay:

24:05:24.01:09. Developmental delay defined. A student three, four, or five years old may be identified as a student with a disability if the student has one of the major disabilities listed in §24:05:24.01:01 or if the student experiences a severe delay in development.

A student with a severe delay in development functions at a developmental level two or more standard deviations below the mean in any one area of development specified in this section or 1.5 standard deviations below the mean in two or more areas of development.

The areas of development are cognitive development, physical development, communication development, social and emotional development, and adaptive functioning skills.

The student may not be identified as a student with a disability if the student's delay in development is due to factors related to environment, economic disadvantage, or cultural difference.

A district is not required to adopt and use the term developmental delay for any students within its jurisdiction. If a district uses the term developmental delay, the district must conform to both the division's definition of the term and to the age range that has been adopted by the division.

A district shall ensure that all of the student's special education and related services needs that have been identified through the evaluation procedures described under chapter 24:05:25 are appropriately addressed.

Suggested evaluations to be conducted based on developmental delay as a suspected disability-
-Standardized assessment provides information in the development areas, including cognitive, physical, communication, social and emotional or adaptive functioning. -If the team decides there are other areas of suspected disability, other evaluations must be given as appropriate.
REMINDER- • Evaluations must be based upon the child's needs as determined by the IEP team. The purpose of conducting evaluations is to generate information in order to make decisions about eligibility, educational strategies and placement options.

COMMONLY ASKED QUESTIONS

1. **The category of developmental delay is specifically for use with children who are ages 3, 4 and 5 who are in need of special education or special education and related services. Upon turning age 6, does the child have to be automatically reevaluated to determine which category he may now be eligible under?**

   Upon turning age 6, in order to receive special education services, the child must meet the criteria for eligibility outlined in administrative rules for the thirteen disability categories. It is the responsibility of the team to determine if they have current, appropriate evaluation information with which to make this determination. For some children, this may mean they will need to be reevaluated. For other children who have a current comprehensive assessment, reevaluation may not be necessary. The IEP team is responsible for ensuring that the child has been appropriately evaluated.

2. **Please explain the two different standard deviation measures given in ARSD 24:05:24:01.19 Developmental delay defined.**

   A student can meet the criteria for developmental delay two ways. First, a student can be functioning at a developmental level of 2 or more standard deviations below the mean (usually a score of 70 or below on a standardized measure) in any one area of development (cognitive, physical, communication, social and emotional or adaptive functioning). The second way a student could meet the criteria is by functioning at a developmental level of 1.5 standard deviations (usually a score of 78 or below on standardized tests) in any two areas of development (cognitive, physical, communication, social and emotional or adaptive functioning) .

3. **Is developmental delay the only disability category that can be used with students who are 3, 4 or 5 years old ?**

   No, a student who meets the criteria of any of the categories listed in administrative rule and who is determined to be in need of special education or special education and related services may be identified by that category.

PROLONGED ASSISTANCE

SD Administrative Rule pertaining to eligibility criteria for prolonged assistance:

24:05:24.01:15. Prolonged assistance defined. Children from birth through two may be identified as being in need of prolonged assistance if, through a multidisciplinary evaluation, they score two standard deviations or more below the mean in two or more of the following areas: cognitive development, physical development including vision and hearing, communication development, social or emotional development, and adaptive development.

Evaluations to be conducted based on prolonged assistance as a suspected disability-
-Standardized assessment which provides assessment in all developmental areas: cognitive, physical, communication, social and emotional, and adaptive functioning.

COMMONLY ASKED QUESTIONS

1. What age group does prolonged assistance apply to?

Prolonged assistance applies only to children, birth through age two. Upon turning three, the IEP team must utilize developmental delay and the other thirteen categories to determine if a child is in need of special education or special education and related services.

2. Who is responsible for paying for the evaluation of children who are suspected of being in need of prolonged assistance?

School district requirements related to child find and evaluation are included in each local school district's comprehensive plan. While school districts are only required to provide services to children in need of prolonged assistance, they are responsible for identification, location and evaluation of any child that would qualify under Part B of Individuals with Disabilities Education Act (IDEA) , regardless of the severity of his disability. This is true even for those children not suspected of being in need of prolonged assistance. A school district is required to evaluate any child that it suspects may be eligible as a "child with disabilities" under Part B of Individuals with Disabilities Education Act (IDEA) , not just those children in need of prolonged assistance. If a school district does not suspect a child would be eligible under Part B as a "child with a disability," then the district is not required to evaluate the child. However, the school district must notify the parents that they are not going to evaluate their child following the prior notice requirements found in ARSD Chapter 24:05:30, Procedural Safeguards.

IEP TEAM OVERRIDE

SD Administrative Rules pertaining to IEP team override:

24:05:24.01:31. IEP team override. If the IEP team determines that a student is eligible for special education or special education and related services because the student has a disability and needs special education even though the student does not meet specific requirements in this chapter, the IEP team must include documentation in the record as follows:

(1) The record must contain documents that explain why the standards and procedures that are used with the majority of students resulted in invalid findings for this student;
(2) The record must indicate what objective data were used to conclude that the student has a disability and is in need of special education. These data may include test scores, work products, self-reports, teacher comments, previous tests, observational data, and other developmental data;
(3) Since the eligibility decision is based on a synthesis of multiple data and not all data are equally valid, the team must indicate which data have the greatest relative importance for the eligibility decision; and
(4) The IEP team override decision must include a sign-off by the IEP team members agreeing to the override decision. If one or more IEP team members disagree with the override decision, the record must include a statement of why they disagree signed by those members.

The district director of special education shall keep a list of students on whom the IEP team override criteria were used in order to assist the state in evaluating the adequacy of student identification criteria.

COMMONLY ASKED QUESTIONS

1. If a district uses the IEP team override process, exactly what are they saying?

In utilizing the IEP team override process, the IEP team is saying that a student has a disabling condition and requires special education, even though the student does not meet all the eligibility criteria defined in administrative rule. The team is making the statement that although the tests given to the student were valid, reliable, and appropriate, they have resulted in invalid results for that student.

2. What are the procedures a district must follow when using the IEP team override?

The district must follow all the basic evaluation procedures outlined in ARSD Chapter 24:05:25, Evaluation and Placement Procedures, in order to determine a student's eligibility for special education services. The responsibility for conducting a student's evaluation rests with the IEP team. All of the decisions are made by the IEP team as a whole, including the parents, not by one individual alone.

Each student who is evaluated for a suspected disability must be measured against his own expected performance and not against some arbitrary general standard. The IEP team, including the parents, must determine which tests and evaluation materials are used to evaluate the student. In the evaluation process, professional judgment plays a role in decision making.

In order for a school district to consider the use of the IEP team override, the district must have completed all of the required evaluation procedures in ARSD Chapter 24:05:25, Evaluation and Placement Procedures. Only then, will the school district be in the position of documenting and explaining why the standards and procedures used with most students were not valid for the student in question. The documented explanation, coupled with objective data, will serve as the basis for determining eligibility. IEP team members who agree to the override decision must sign-off to this effect. Those members who disagree must make a statement as to why they disagree, include it with the record and sign off.

The district is responsible for maintaining a list of those students on whom a IEP team override decision was used for determining eligibility for special education services.

3. Can a student who has been determined to be eligible through the override process be listed on child count?

Yes. The student may be listed on child count if he is enrolled in school and has been receiving special education and related services as noted on the IEP as of December 1 of the count year.

4. We have a student who we have a "gut feeling" needs special education. Is this enough to document the placement committee override process?

No. The IEP team must document through objective data how they concluded the student has a disability and is in need of special education. The data may include test scores, work products, self-reports, teacher comments, previous tests, functional assessment, observational data, and other developmental data.

5. During the compliance monitoring process, can Special Education Programs overrule the local IEP team's decision of using an override? What sanctions will Special Education Programs use if a district incorrectly completes an override or has too many students on overrides?

The Special Education Programs staff will not overrule a local IEP team's decision. Through the monitoring process, staff will review the district's procedures and the use of the override process. In the compliance monitoring process, systemic problems are the area of focus. Therefore, if through monitoring the team finds that a district is not following all the administrative rule components for the IEP team override process, district staff can expect that the office will ask the district to pursue corrective action to correctly use the IEP team override process.

There is no set number of students allowed to be made eligible through the override process. The nature of the process dictates that it will be used very narrowly and infrequently. Districts are required to keep a list of the students made eligible through the override process to assist the state in evaluating the adequacy of the student identification criteria. In reviewing this list, the state will be able to have immediate information on the numbers of students identified and the disabling condition under which the override was applied. A high number of students made eligible through the override procedure might suggest that the district is not accurately applying the IEP team override process, as use of the override should occur on a limited basis. This type of information would prompt the monitoring team to review the override procedures used by the district to determine if it is being applied according to administrative requirements. If it is determined that the district has applied the override procedures correctly, no corrective action would be required.

Suggested IEP Team Override Form

STUDENT _____**BIRTHDATE**______
AGE_____**SEX** M / F
GRADE_____**SCHOOL**_____
PARENT/GUARDIAN_____
ADDRESS_____**ZIP**_____**PHONE**_____
DATE OF MEETING_________

The IEP team **must** document the following:

1. **Explain why the standards and procedures that are used with the majority of students resulted in invalid findings for this student.**

1. **Indicate what objective data were used to conclude that the student has a disability and is in need of special education. Data may include test scores, work products, self-reports, teacher comments, previous tests, observational data, and other developmental data.**

3. **Indicate which data have the greatest relative importance for the eligibility determination.**

4. **IEP team members must sign-off agreeing to the override decision. If one or more IEP team members disagree with the override decision, the disagreeing members must include a statement of why they disagree, signed by those members.**

IEP team member signatures:

Name	Title	Agree w/Override
_____	_____	Yes No-attach report
_____	_____	Yes No-attach report
_____	_____	Yes No-attach report
_____	_____	Yes No-attach report
_____	_____	Yes No-attach report
_____	_____	Yes No-attach report

Appendix B: Extended Standards

South Dakota Extended Standards

Special Education Programs
Mission Statement

Special Education Programs located in the South Dakota Department of Education advocates for the availability of the full range of personnel, programming, and placement options, including early intervention and transition services, required to assure that all individuals with disabilities are able to achieve maximum independence upon exiting from school.

August, 2004

Acknowledgements

The revised Extended Standards are a result of the contributions of many educators from across the state. Many hours of collaboration were devoted to ensure the extended standards would be appropriate for students of all ability levels. The Extended Standards committee members represent the many concerned individuals across the state dedicated to their profession and to high quality standards for South Dakota students with disabilities. Without their contributions the Extended Standards would not have been possible. The South Dakota Department of Education wishes to express appreciation and gratitude to the individuals and the organizations they represent who contributed expertise and time to write the Extended Standards.

South Dakota Extended Standards Committee

Glenna Books, Middle School Special Educator, Sioux Falls School District

Karen Clarke, Elementary General Educator, Wessington School District

Linda Drewes, Elementary General Educator, Stanley County School District

Lorrie Esmay, Elementary Special Educator, Jones County School District

Kathy Famestad, Elementary General Educator, Sioux Falls School District

Tamara Faw, Middle School Special Educator, Lower Brule School District

Karen Kissack, Elementary Special Educator, Spearfish School District

Val Minihan, Elementary Special Educator, Brandon Valley School District

Kathy Moore, Elementary General Educator, Redfield School District

Laura Olson, High School Special Education, Brandon Valley School District

Melvin Reiser, Middle School Special Educator, Eagle Butte School District

Carol Rowen, Middle School General Educator, Wessington School District

Deb Schulte, Elementary Special Educations, Redfield School District

Mary Skinner, High School Special Educator, Sioux Falls School District

Debbie Toms, Elementary Special Educator, Rapid City School District

Barb Unruh, High School General Educator, Sully Buttes School District

Kathy Valnes, Reading Curriculum Specialist, Curriculum, Technology and Assessment

Michele Wager, Elementary Special Educator, Spearfish School District

Julie Carpenter, Special Education Programs

Ann Larsen & Dawn Smith, Work Group Coordinators, Special Education Programs

The South Dakota Department of Education gratefully acknowledges the leadership of consultants Tammi Haverly from Children's Care Hospital and School and Ron Dughman from Mountain Plains Regional Resource Center for their vision and guidance in the development of this document.

TABLE OF CONTENTS

South Dakota Extended Standards

I. Introduction/Overview

II. Performance Levels

III. South Dakota Reading Goals and Indicators

IV. South Dakota Math Goals and Indicators

V. Guide to the Numbering and Symbol System for Extended Standards

VI. Extended Reading Standards

VII. Extended Math Standards

VIII. Glossary

To download the extended standards, visit the Special Education Programs website at http://www.state.sd.us/deca/Special/ For Further information or questions concerning the extended standards, contact the Special Education Programs at 605-773-3678

To download the general education content standards, visit the Office of Technical Assistance website at http://www.state.sd.us/deca/octa/index.htm For further information or questions concerning the general education content standards, contact the Office of Technical Assistance at 605-773-6400.

Overview of South Dakota Standards

Both state and federal law require educational content standards be developed for all children. In 1997, the South Dakota State Legislature passed a bill directing content standards to be developed for language arts, mathematics, social studies, and science across all grade levels. Reading and math standards were revised in 2004 and to date are being implemented statewide.

The Individuals with Disabilities Education Act of 1997 required states to establish goals to assess the performance of children with disabilities. These standards must be consistent with the goals and standards for all children (IDEA 300.137).

All South Dakotans are eager to ensure that graduates of South Dakota's public schools have the knowledge, skills, and competencies essential to leading productive, fulfilling, and successful lives as they continue their education, enter the workforce, and assume their civic responsibilities.

The Standards Committee revised the current South Dakota Content Standards and Performance Descriptors utilizing input from students, parents, teachers and South Dakota communities. Final documents evolved from: recent research in best practices, **No Child Left Behind** legislation, and classroom experience with existing South Dakota Content Standards, evolution of published standards from other states, numerous professional publications, and lengthy discussions by experienced K-16 South Dakota teachers.

The Purpose of the South Dakota Standards

The standards provide a listing of content to be taught and learned, and guide instructional planning and assessment of learning from kindergarten through twelfth grade. Performance descriptors provide information to teachers and students at particular levels, giving them specific targets for instruction and learning. The standards present a starting point for informed dialogue among those dedicated and committed to quality education in South Dakota. Providing a common set of goals and expectations for *all* students in *all* schools, will strengthen and enhance this dialogue.

SOUTH DAKOTA EXTENDED STANDARDS OVERVIEW

The Department of Education selected a diverse group of educators to develop extended standards and determine how they apply to the education of students with significant disabilities. The workgroup, charged with the task of developing the extended standards, used the South Dakota content standards as a reference document when developing the extended standards. The goals and indicators come directly from the South Dakota content standards. The extended standards emphasize skills progression rather than being grade specific to more appropriately address the diverse needs of students with disabilities.

When developing the extended standards, the workgroup carefully divided the skills into three categories: sensory, basic, and functional. The categories range on a scale of less complex to more complex. From these three categories several skills were developed. The skills were divided into target skills, developed in the context of grade level curriculum, which serve as entry points to the extended standards. For those students not able to meet the target skills, access skills were developed to provide a tool for students to work towards the target skills and to approach grade level expectations. These entry points provide a range of options at which a student with a disability can access the learning standards. The skills found in the extended standards introduce students to challenging new ideas and content, promoting movement to grade level standards.

Training for educators will assure all children have access to the South Dakota content standards through the extended standards. Educators will be trained in the correct use of target academic skills and lower level access skills with emphasis on how the skills should be taught in the context of grade level curriculum. Upon completion of training, participants will be able to describe the components of South Dakota's extended standards and their relationship to the South Dakota content standards, and understand the implementation requirements of the alternate assessment.

What are the Extended Standards?

Many students with disabilities are able to work toward the content standard goals. However, the standards, as developed, do not appropriately address the educational needs of all students. Therefore, extended content standards have been developed to meet individual student needs.

The extended standards expand the developmental spectrum of the South Dakota content standards. This allows all students the opportunity to access the general education curriculum.

The extended standards are:

- a user-friendly guide in assisting with IEP development
- a progression of skills necessary for independent functioning (birth through age 21)
- academically based (presently in reading and mathematics)
- based on (parallel) the state content standards

Who will use the Extended Standards?

The following are guidelines to assist the IEP team in determining which students will use the extended standards:

- Even with modifications and accommodations, the general education standards are deemed inappropriate for the student's cognitive ability and adaptive skill levels.

- The student requires extensive direct instruction in multiple settings to apply and transfer skills.

- The student requires substantial adjustment to grade level content standards.

- A student is not eligible to use the extended standards if the primary reason for consideration is the result of extended absences, visual, auditory or physical disabilities, social, cultural or economic differences.

How does the IEP team use the Extended Standards?

Once the IEP team determines extended standards are appropriate for a student, the team discusses the relationship of grade level standards to the extended standards appropriate for the student:

- to determine the impact on curriculum and instruction

- to use extended standards as a basis for the development of the individualized education plan

Educators will use the extended standards document to align and develop instruction for students who will not participate in the Dakota STEP, as determined by the IEP team. This document's access skills and target skills identify how and at what level of complexity students will address and attain learning standards. Educators can set realistic and challenging academic goals for individual students based on the *content standards.* The skills encourage teachers to reach for higher levels of achievement for their students.

As a reader becomes familiar with this document, they will discover the goal statements and indicators are retained from the South Dakota content standards. Extended standards are not referenced by grade level in order to more appropriately address the diverse needs of students. Each extended standard is intended to capture the "essence" of the South Dakota general education content standards. Access or target skills under each extended standard provide "entry points" towards attaining the extended standard.

"Entry Points" to the Extended Standards

The access or target skills can be viewed as entry points of student performance related to the extended standards. These "entry points" provide a range of options at which a student with a disability can access the learning standard <u>at a challenging level</u>. These "entry points" are a tool to be used by educators and parents to identify instructional goals and objectives for the student. Access skills and target skills are listed under each extended standard and represent a continuum of complexity.

Access skills are defined as motor, social and communication skills applied and practiced within the context of instructional activities based on the extended learning standards. This allows a

student with a severe disability to gain entrance (or access) to and participate in the general curriculum as required by Individuals with Disabilities Education Act 1997.

Target skills are defined as higher level skills that enable students with disabilities to individually utilize the extended standards in order to demonstrate a link to the South Dakota Content Standards.

Using access skills and target skills in the context of academic instruction benefits students in the following ways:

- Allows students access to the general education standards
- Introduces students to challenging new ideas and content
- Provides new opportunities to practice skills in a variety of settings using a range of instructional approaches
- Achieves outcomes that exceed expectations

Access and target skills are aligned to the extended standards. The extended standards are aligned to the general education goals/strands and indicators. Access and target skills are listed in order of complexity and allow the student with a severe disability to gain access to the general curriculum.

It should be noted that the extended standards capture the ***essence*** *of the content standards across grade levels rather than being defined as grade specific. This allows for the flexibility of placement within the content standard while honoring the diverse needs of the individual student.*

An IEP team then can use the access and target skills as examples to determine the next level of progress for the student which then becomes the basis for the assessment of the student for a given assessment period.

In other words, the IEP team can use the access and target skills, under each indicator to determine ***where the student is*** *at the beginning of the school term,* ***where the student may reasonably be taken through instruction*** *during the school term, and thus* ***determines the assessment item for progress reporting and assessment reporting.***

Performance Levels

The State of South Dakota has defined four levels of student achievement for the alternate academic achievement standards:
Introducing = Below Basic
Developing = Basic
Applying = Proficient
Advancing = Advanced
Extended content standards have been established for reading and math and will be approved by the State Board of Education in September 2004. Definitions of alternate achievement levels will be expressed through the performance descriptors. Cut scores for proficiency levels will be established in the summer of 2005. The Buros Institute, University of Lincoln, Nebraska,

will conduct a standards setting process with the Department of Education in establishing alternate achievement levels for reading and math.

Participating in the Alternate Achievement Standards

Examples:

I. The Reading level achievement standard E.R. 1.1 reads as follows: Using stimulus, environment, sounds, patterns and letters to make meaning from words.

Elementary example of using a target skill: The student will recognize words that can be used to describe an object. The student will match a corresponding word to a photo. Example: The student matches photo of dog to word dog. As the student progresses the student will identify the familiar word and properly pronounce the word. To build on this skill the student will identify an unfamiliar word and its meaning. The student will match the picture of the base word in the word doghouse to the corresponding picture of a doghouse.

II. The Math level achievement standard E.G.1.1 reads as follows: Characterizes geometric shapes.

Middle school example of using a target skill: When given six pictures of geometric shapes and prompted to indicate the triangle the student will name, touch, eye gaze to, or point to the correct picture object independently when given adequate wait time.

III. The reading level achievement standard E.R. 3.1 reads as follows: Recognizing, identifying, and responding to diversity in literature from different eras and cultures.

High school example of using an access skill: Upon completion of having a literary book read aloud the class visits a museum with exhibits from the era included in the book. As an activity to reinforce the information from the book the class views a slide show of museum exhibits. When shown a slide show the student reaches for an electronic switch to advance the slides when prompted.

These examples illustrate how students with disabilities participate in the alternate achievement standards and general curriculum activities in which the learning standards are addressed.

South Dakota Reading
Goals and Indicators

The following principles are philosophical statements that underlie every strand and standard of this content standard document. They should guide the instruction and evaluation of this reading curriculum. These goals and indicators are directly from the core reading content standards.

Goal 1: Students are able to read at increasing levels of complexity for a variety of reasons.

Indicator 1: Students are able to apply various reading strategies to comprehend and interpret text.

All readers decode or sound out words using knowledge of letter sounds, word parts, and word origins to understand written text. To do this requires the reader to use a variety of word-solving strategies. However, the ability to decode in itself does not guarantee comprehension of text. Recent research has provided teachers with guidance and tools to offer students instruction in strategies for comprehending. These strategies include monitoring for meaning, making connections, asking questions, using sensory images, determining importance, making inferences, and synthesizing.

Indicator 2: Students are able to evaluate text structures, literary elements, and literary devices within various genres to develop interpretations and form responses.

Reading various genres of literature helps students learn skills of interpretation and critical response. To facilitate this interpretation and response, students analyze and evaluate text structures, literary elements as they contribute to the whole of the piece of literature, and how literary devices affect the message. The identification and analysis of how authors use these concepts make it possible for students to think more critically, to respond in more complex ways, to reflect on meaning, and to compare various texts.

Indicator 3: Students are able to interpret and respond to diverse works from various cultures and time periods.

Literature is a record of culture and human experiences that puts us in touch with our humanity. By reading and responding to historically or culturally significant works of

literature, students clarify ideas and connect them to other literary works. It is through this exploration that students understand the human condition and ultimately can better understand themselves as human beings. As students validate or reconsider personal interpretations, they also realize the interconnectedness of the cultures of mankind throughout history.

Indicator 4: Students are able to retrieve, analyze, synthesize, and evaluate a variety of informational texts.

Students gather information from electronic reference sources, newspapers, magazines, journals, books and other non-fiction sources. Students synthesize by combining new information with existing knowledge to form original ideas or interpretations. Students evaluate the appropriateness and validity of the sources they find. Use of textual features and graphic features is essential. All of these concepts help to extend students' control in reading and writing informational text.

South Dakota Math Goals and Indicators

ALGEBRA STANDARDS

Goal 1: Students will use the language of algebra to explore, describe, represent, and analyze number expressions and relations that represent variable quantities.

An understanding of patterns is basic to all mathematical thinking. Early experiences in learning about, understanding, and using patterns is foundational to algebraic reasoning. This algebraic reasoning encompasses the relationships among quantities, the use of symbols, the modeling of phenomena, and the mathematical study of change. From investigations of the properties of whole numbers to the use of mathematical models to represent quantitative relationships, algebra is linked to all areas of mathematics. A strong foundation in algebra is an expectation for every South Dakota high school graduate.

Indicator 1: ***Use procedures to transform algebraic expressions.***

Indicator 2: ***Use a variety of algebraic concepts and methods to solve equations and inequalities.***

Indicator 3: ***Interpret and develop mathematical models.***

Indicator 4: ***Describe and use properties and behaviors of relations, functions and inverses.***

GEOMETRY STANDARDS

Goal 2: Students will use the language of geometry to discover, analyze, and communicate geometric concepts, properties, and relationships.

Spatial sense is fundamental to mathematics both as a means of interpreting and representing the physical environment, and as a tool for the study of other topics in mathematics and science. The study of relationships among shapes and their properties is essential to their representation in abstract form and their translation into definitions, theorems, and proofs. The study of geometry allows students to use visualization, spatial reasoning, and geometric modeling to solve problems.

Indicator 1: ***Use deductive and inductive reasoning to recognize and apply properties of geometric figures.***

Indicator 2: ***Use properties of geometric figures to solve problems from a variety of perspectives.***

MEASUREMENT STANDARDS

Goal 3: Students will apply systems of measurement and use appropriate measurement tools to describe and analyze the world around them.

The study of measurement is essential to an understanding of the measurable attributes of objects and the units, systems, and processes of measurement that are used in personal and professional work. In the early grades, students learn to use these measurable attributes of objects to compare them for relative length, weight, and other characteristics. Students increase their precision in collecting information about the measurable attributes of objects as they encounter increasing demands for these skills. Measurement skills and the accurate use of measurement tools and formulas become critical in other mathematical applications including geometry and statistics.

Indicator 1: ***Apply measurement concepts in practical applications.***

NUMBER SENSE STANDARDS

Goal 4: Students will develop and use number sense to investigate the characteristics of numbers in a variety of forms and modes of operation.

Number sense is the most basic skill of mathematics. From simple counting to the fluent use of computations skills, students use number sense to operationalize mathematics. An understanding of basic mathematics operations is critical to all other mathematical pursuits. Students should exhibit fluency in applying number sense to mathematical operations by the end of the

elementary years. Students should be able to perform computation through mental calculation, estimation, and paper-pencil calculations.

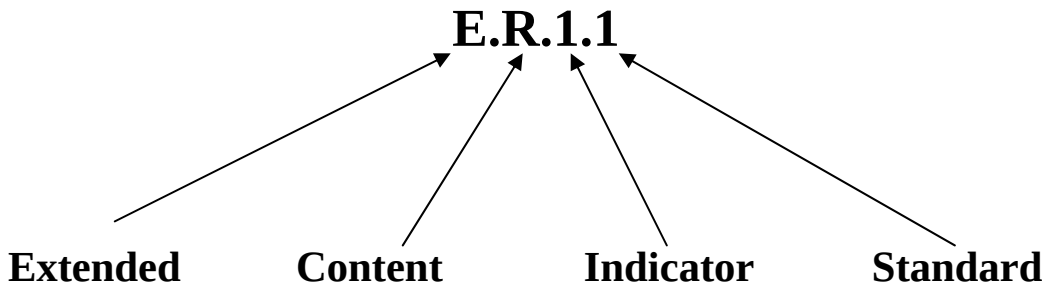
Indicator 1: ***Analyze the structural characteristics of the real number system and its various subsystems. Analyze the concept of value, magnitude, and relative magnitude of real numbers.***

Indicator 2: ***Apply number operations with real numbers and other number systems.***

Indicator 3: ***Develop conjectures, predictions, or estimations to solve problems and verify or justify the results.***

Guide to the Numbering and Symbol System Used with the Extended Reading and Extended Math Standards

Extended Standards are coded to cross reference content, indicators, and standards.



Extended refers to the extension of the general content goals and indicators.

Content refers to content area of reading and the major areas of mathematics.

R for Reading
A for Algebra
G for Geometry
M for Measurement
N for Number Sense
S for Statistics and Probability

Indicator refers to the general education indicator for each goal or strand. Each goal or strand has one or more related indicators that describe key aspects of the goal or strand.

Standard refers to number of the extended standard for the indicator. (Example: E.R.1.**1**, E.R.1.**2**, E.R.1.3) Each extended standard describes what the students will know and be able to do. The standard is the essence of the general education grade level instruction and curriculum standards.

Extended Standards
Reading

Goal 1: Students are able to read at increasing levels of complexity for a variety of reasons.

Indicator 1: Applying various reading strategies to comprehend and interpret text.

Extended Standard

E.R.1.1. Using stimulus, environment, sounds, patterns and letters to make meaning from words.

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Using stimulus, environment, sounds, patterns and letters to make meaning from words**. *(E.R.1.1.)*

- Matches a word or picture to an object (bingo)
- Listens to a story on a computer (CD ROM)
- Responds to picture cue (picture of a bus, student gets ready to go home)
- Explores a book
- Looks at book and reader while being read a story
- Points out named pictures (points to pictures in book)
- Shows emotions to favored stimuli (excitement when presented with a favorite page)
- Matches pictures to pictures in books (matches laminated pictures to corresponding pictures in book while being read a story)
- Locates specific stimuli in a book or on a page (lifts a flap covering an object or moves cursor on to specific object in a living book or activity)
- Locates specific button on a sound book (Barney on a page and locates associated sound button)
- Repeats texts in story
- Attends to pictures/symbols/objects pertinent to a story
- Attends to story from beginning to end
- Looks at pictures in a book while being read to
- Recognizes left to right or top to bottom patterns (workbasket systems, assembly line tasks)
- Learns to orient a book or picture right side up
- Turns pages one at a time in sequential order.
- Follows pointer or finger under word as text is read
- Pretends to read
- Recognizes left-to-right progression (print, objects)
- Identifies symbols (colors & shapes through pointing)

- Identifies symbols through naming
- Identifies letters though pointing (upper and lower case)
- Identifies letters through naming
- Identifies sounds/symbol relationships (specific letter sounds)
- Matches letters and sounds
- Blends sounds to make words
- Uses letter names to represent sounds, syllables or words
- Shows awareness of “sound” versus “word”
- Identifies sounds within a word
- Uses patterns to recall information (alphabet song)
- Sequences the letters of the alphabet
- Demonstrates understanding that letters and words relate to sounds (generates sounds of letters, blends and patterns)
- Uses knowledge of letters and letter patterns to read words
- Locates words in a story
- Labels or identifies objects, persons, or places
- Displays attention to people, surroundings, materials (looks at teacher during instruction, follows picture or object schedule)
- Shows understanding that sounds & words can be represented in print.
- Reads, prints, and spells own name
- Locates/identifies words
- Reads some words by sight (Dolch/Fry/high frequency words, Edmark words)
- Understands sentences are made up of separate words
- Reads simple sentences
- Reads using left to right, top to bottom progression
- Tells a story
- Matches written word to picture of word
- Identifies upper & lower case letters
- Demonstrates comprehension of alphabet (verbally, picture)
- Recites alphabet (ABC’s)
- Connects information found in text to personal experience
- Composes a story, letter or song
- Reads stories with repetitive patterns (Brown Bear, Brown Bear)
- Uses knowledge of letters and sounds to read text
- Uses phonological cues to read unfamiliar text
- Uses decoding and word recognition skills to develop vocabulary and increase fluency when reading unfamiliar text
- Applies knowledge of complex word patterns to determine meaning of unfamiliar words in order to acquire new vocabulary
- Uses knowledge of word categories and word parts to determine meaning of unknown words

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard ***of*** **Using stimulus, environment, sounds, patterns and letters to make meaning from words.** *(E.R.1.1.)*

M=Motor S=Social C=Communication A=All

- Demonstrates a differential response to books/cards tactile, visual or auditory stimuli (changes in heart rate, eye movement) [C]
- Attends to tactile, visual or auditory stimuli (listens to music, watches as someone talks) [S]
- Responds to tactile, visual or auditory stimuli (makes a sound or movement) [M]
- Holds head up to stimuli (holds head up while someone is talking to them) [M]
- Imitates gestures or cues in response to an outside stimulus (claps hands) [M]
- Imitates sounds in response to verbal stimulus (da, da, da) [C]
- Responds to name [C]
- Attends to presented stimulus/activity (looks at person during interaction, attends to teachers instructions) [S,C]
- Hits a switch to activate book on tape, CD player, radio [M]
- Uses technology to match a sound to picture (Intellitools programs, hits a switch when hears a pig snort) [M]
- Identifies a book in the environment [M,S]
- Feels tactile objects in books (touches the bunny in the story "Pats the Bunny") [M]

Extended Standard

E.R.1.2. Using stimulus, patterns, environment and written work from various media outlets for comprehension (oral &/or written)

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Using stimulus, patterns, environment and written work from various media outlets for comprehension (oral &/or written)** *(E.R.1.2.)*

- Identifies objects, actions (own body parts)
- Identifies (point to, show me, which is) objects, actions, persons, properties
- Answers questions/recalls information (characters, stating main idea in text)
- Uses picture symbols for a daily schedule
- Recognizes safety symbols
- Recognizes functional words in a variety of contexts
- Recognizes functional pictures (community signs, daily routine)

- Recognizes classroom and school rules
- States a consequence to a behavior in regards to school rules
- Recognizes foods on a picture menu
- Recognizes symbols for picture recipes
- Recognizes reward for good behavior on a behavior plan
- Recognizes important mail from junk mail
- Follows direction as stated (put on yellow outfit and sandals)
- Reads and describes meaning for safety, informational and warning signs
- Recites details from story
- Comprehends main ideas and supporting details in simple expository
- Identifies the characters in a story
- Seeks appropriate adult help when experiencing difficulties
- Describes cause and effect relationships in various text, (why, what if, how, when)
- Locates and paraphrase information with text to answer questions
- Recalls information after reading a paragraph
- Follows simple written directions in proper sequencing
- Reads and comprehends meaningful words such as name and functional vocabulary
- Uses verbal cues to remember pertinent information (calendars)
- Reads and follow a simple map
- Reads and understands components of a pay check (taxes, social security, etc.)
- Reads and understands the components of a bus schedule (times, pick up/drop off spots)
- Recognizes areas on a job application
- Knows components of IEP (goals, transition, related services, accommodations)
- Knows components of IEP process (rights, goals, transition)
- Compares and contrasts stories and poems by different authors
- Reads orally with accuracy, fluency, and comprehension
- Applies strategies to read and understand different types of text
- Uses comprehension strategies to read and understand unfamiliar words, phrases and passages
- Applies strategies to construct meaning from grade level text
- Applies comprehension strategies to construct meaning from literary and content area text

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Using stimulus, patterns, environment and written work from various media outlets for comprehension (oral &/or written)** *(E.R.1.2.)*

M=Motor S=Social C=Communication A=All

- Responds to speech by vocalizing (makes a sound when hearing a familiar voice) [C]
- Demonstrates comprehension and discrimination of familiar and unfamiliar people
- Responds to common environmental sounds (teacher's voice, bell rings, sounds for medical purposes) [M,C]
- Incorporates cause/effect into interaction with materials (switch toys, computer activities and interactions) [M]
- Responds to simple verbal requests [C]
- Identifies possession (touch…Susie's nose) [M]
- Shows enjoyment of books and stories [C]
- Recognizes that body movements and facial expressions represent feelings [S,C]
- Uses words to communicate ideas and feelings [S,C]

Extended Standard

E.R.1.3. Applying understanding of stimulus, patterns, environment and written work to form inferences.

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Applying understanding of stimulus, patterns, environment and written work to from inferences**. *(E.R.1.3.)*

- Infers possible consequences to prevent a possible behavior
- Sequences three pictures
- Identifies objects that are the same and different
- Recalls the sequence of events
- Recognizes patterns and can repeat them
- Selects reading literature appropriate for reading level, purpose and interest
- Defines the attributes of personally appealing reading materials
- Identifies everyday print materials that provide information (labels, newspapers)
- Uses appropriate sources to locate specific types of information (calendar, newspaper, encyclopedia, dictionary, atlas)
- Understands the function of organizational features and use them to locate information (table of contents, index, glossary)
- Uses written resources to gain information (TV guide, bus schedule)

- Uses text organizers such as type headings and graphics to predict and categorize information in print materials
- Uses written resources to gain information and use the information for his/her personal benefit
- Identifies relevant sources of information and use the information for his/her personal benefit
- Uses visual organizers to remember pertinent information
- Follows directions in pictorial format
- Reads a menu to order food at a restaurant
- Differentiates between important mail and junk mail
- Helps plan a trip with family or friends (uses bus schedules, plans a trip to another town)
- Finds a name and phone number using an address book or phone list
- Follows a picture recipe to make a meal
- Uses a bus schedule to plan a trip
- Fills out a job applications
- Fills out an apartment rental application
- Reads and understands lease agreements
- Helps plan and write IEP (shares with teacher personal goals)
- Reads and understands Transfer of Rights at age 18
- Identifies organizational features and their purpose in fiction and informational text
- Uses organizational features of fiction and informational text to make predictions about text
- Analyzes organizational features to determine important ideas and set background knowledge in fiction and informational text

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Applying understanding of stimulus, patterns, environment and written work to from inferences**. *(E.R.1.3.)*

M=Motor S=Social C=Communication A=All

- Demonstrates a differential response to indicate more [M,C]
- Responds to verbal requests [M,C]
- Responds to name (heart rate, eye movement, turn head to sound, eye contact) [C]
- Vocalizes attitudes other than crying (joy, anger) [S,C]
- Shows awareness of cause/effect relationship (if want to activate toy, then hit the switch) [S,C]
- Demonstrates understanding of comprehension of Individual Education Plan to allow for participation by answering questions and expressing needs

- Uses picture cards for grocery shopping [A]
- Uses picture recipes to prepare simple foods [A]
- Uses picture schedules for daily routine [A]
- Uses picture schedules to complete vocational tasks [A]
- Uses picture schedules to complete laundry tasks [A]
- Uses picture schedules to operate the dishwasher [A]
- Uses a picture menu to order food at a restaurant [A]

Extended Standards
Reading

Indicator 2: Students are able to evaluate text structures, literary elements, and literary devices within various genres to develop interpretations and form responses.

Extended Standard

E.R.2.1. Understanding and expanding meaning of stimuli, patterns, words, and literary works.

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Understanding and expanding meaning of stimuli, patterns, words and literary works.** *(E.R.2.1.)*

- Demonstrates comprehension of classroom rules
- Matches an object to an object
- Matches a picture to a picture
- Identifies pictures found in personal environment (communication book, daily schedule, name on personal belongings)
- Categorizes objects according to one attribute (color, size, function)
- Categorizes objects according to two attributes (color, size, function)
- Categorizes objects according to three attributes (color, size, function)
- Differentiates between objects by relying on descriptive qualities (a real apple vs. a banana)
- Differentiates between photos of objects by relying on descriptive qualities (photos of apples and bananas)
- Differentiates between drawings or picture symbols of objects by relying on descriptive qualities (illustrations of apples and bananas)
- Obtains meaning from a picture
- Associates printed word with a corresponding picture
- Initiates communication or voice output using a picture to indicate a want/need
- Differentiates between printed words (actual words apple and banana)

- Differentiates between printed words by relying on descriptive words (yellow banana, red apple)
- Communicates prior knowledge related to reading topic
- Describes an event, TV show, or field trip experience
- Responds to questions related to character, setting in a story using voice or voice output
- Connects information found in text to personal experience
- Identifies connections across texts in order to gain meaning (compares the family in one book with the family in another)
- Identifies real-world connections to text
- Retells a familiar story
- Describes characters and/or events in a story
- Sequences the main events in a story
- Locates descriptive words and phrases
- Describes the main problem and its solution

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Understanding and expanding meaning of stimuli, patterns, words and literary works.** *(E.R.2.1.)*

M=Motor S=Social C=Communication A=All

- Demonstrates a differential response to show understanding of presented stimuli (responds to auditory, visual, or tactile activities with changes in respirations, affect, movement, vocalizations) [M,C]
- Demonstrates sustained attention to indicate understanding of the presence of stimuli (listens as talked to, regards face during an interaction, movement) [M,C]
- Recognizes familiar stimuli (people, places, objects) [C,S]
- Demonstrates responses to various touch cues/gestures (looks at finger or in the distance when someone points, raises hands as lap tray is brought near to wheelchair) [M,C]
- Gains attention through vocalizations or augmentative communication [C,S]
- Responds to instruction (follows teacher with eyes) [C]
- Demonstrates visual or tactile awareness of tactile symbols, objects, pictures, picture books (looks at and touches books) [M]
- Indicates choice between a preferred and a non-preferred object or activity through facial expression, movement, vocalization, or using the appropriate symbol, picture, letter or word (hair brushed or combed, want to feel the fur or the Goop) [M,C]
- Indicates choice between two neutral objects or activities through facial expression, movement, vocalization, or using the appropriate symbol, picture, letter or word to indicate a preference or response to choices offered (want juice or water) [M,C]
- Shows interest in reading materials (listens to stories read aloud, chooses to look at books) [C]

- Uses assistive technology/single switches to bring about a desired response [A]
- Imitates an action (points to a picture) [M]
- States classroom rules [C]
- Places a form in a corresponding container [M]
- Fits a form to its corresponding shape (fits a puzzle piece into an inset puzzle) [M]

Extended Standard

E.R.2.2. Identifying and describing sequences, elements, and literary devices in a situation or story.

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Identifying and describing sequences, elements, and literary devices in a situation or story**. *(E.R.2.2.)*

- Contributes information to a conversation (may not be appropriate timing, but showing awareness of conversation)
- Participates in sequenced turn taking during conversation (vocal play, Step-By-Step communicator, Dynavox, Intellikeys)
- Restates rules and consequences
- Follows rules in order to avoid consequences
- Sequences steps to complete a daily living skill (hand washing, teeth brushing)
- Sequences steps to complete a daily working activity
- Sequences steps to complete a project (art project, craft, recipe)
- Sequences steps to complete work baskets, assembly- line tasks
- Corresponds an element from a story to an element in real life (a cookie in a book would be the same as a cookie you're holding)
- Responds (voice output, eye gaze, pictures, objects, etc.) to questions related to elements (plot, setting, character) from a presented story
- Recognizes and appropriately responds to humor in a situation, comedy, or joke
- Understands left to right, top to bottom
- Uses correct word order in sentences to determine meaning
- Identifies and describes characters, setting, and key events
- Identifies the problem or central idea in stories
- Uses graphic organizer to show similarities and differences
- Uses pictures, illustrations, and personal knowledge to make and confirm predictions about stories.
- Describes cause and effect relationships in various texts (why, what if, how, when)
- Compares character traits, goals, and plots in and between stories
- Describes setting similarities in two different stories by the same author

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Identifying and describing sequences, elements, and literary devices in a situation or story.** *(E.R.2.2.)*

M=Motor S=Social C=Communication A=All

- Sequences a stimulus with a response (student responds to touch with vibration) [M,C]
- Participates in instruction (puts picture cards in order) [M]
- Demonstrates an appropriate emotional response to presented stimuli (laughs at funny, silly material) [S,C]
- Responds to pleasurable event (smiles, laughs) [S,C]
- Responds to pain (frowns, cries) [S,C]
- Shows a differentiated response to a representation of a character from a familiar story, movie or program [S,C]
- Role plays facial expressions [C]
- Gains attention through single-syllable vocalization [S,C]
- Indicates “all done” after completing a sequence of tasks [C]
- Indicates desire for “more” to extend a sequence [C]
- Indicates a need for help when unable to complete a task [C]

Extended Standard

E.R.2.3 Using rhymes and patterned language.

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Using rhymes and patterned language.** *(E.R.2.3.)*

- Participates in readings of nursery rhymes, nonsense rhymes, finger plays, and poetry when paired with picture prompts through movement, facial expression, vocalization
- Participates in readings of nursery rhymes, nonsense rhymes, finger plays, and poetry paired with pictures and print to follow the pattern by movement, facial expression, vocalization
- Participates in readings of nursery rhymes, nonsense rhymes, finger plays, and poetry paired with print to follow the pattern by movement, facial expression, vocalization
- Produces or selects rhyming words given a spoken word, object, photo or illustration
- Identifies patterns of rhyming words and/or repeated phrases in various texts
- Creates rhymes and patterned verses
- Uses rhymes for enjoyment
- Reads stories with repetitive patterns (Brown Bear, Brown Bear)
- Uses rhymes to recall important information (i before e except after c)
- Compares rhyme patterns in different poems

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Using rhymes and patterned language**. *(E.R.2.3.)*

M=Motor S=Social C=Communication A=All

- Demonstrates awareness of visual patterns (light and dark stimulation, changes in environment, changes in immediate environment) [C]
- Uses patterned sequenced language to demonstrate recognition of familiar people (when you see someone familiar you say “hi, Joe” “hi, Susie) [S,C]
- Demonstrates awareness of variations in rhythm, tempo, and beat of stories and music (change affect, movement, respirations, vocalizations) [M]

- Demonstrates attention of variations in rhythm, tempo, and beat of stories and music (listens as sung or read to, looks at auditory stimulus, purposeful movement) [S]
- Demonstrates a response to variations in rhythm, tempo, and beat of stories and music (nods, taps foot, rocks, vocalizes) [A]
- Demonstrates ability to memorize and use specific socially appropriate words and phrases [S,C]
- Accesses switch to participate in a story with repetitive text [M]
- Imitates a demonstrated pattern (movement, expression, vocalization) [M,C]

Extended Standards
Reading

Indicator 3: Students are able to interpret and respond to diverse works from various cultures and time periods.

Extended Standard

E.R.3.1 Recognizing, identifying, and responding to diversity in literature from different eras and cultures.

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Recognizing, identifying, and responding to diversity in literature from different eras and cultures**. *(E.R.3.1.)*

- Demonstrates an understanding of rhythm found in poems, stories, and music (nods head, hums, taps to beat)
- Imitates pointing out a picture, either isolated or in a story
- Explores a book (turns pages, holds it)
- Associates names to other people
- Recognizes photos of familiar people
- Attends and participates in reading of nursery rhymes, nonsense rhymes, finger plays, and poetry
- Independently looks at picture books
- Enjoys being read to and looks at books independently
- Follows along when someone else reads (eyes on print, follows fingers under words, puts own finger under words)
- Pretends to read
- Matches pictures or objects to pictures in stories (stories of pilgrims, Native Americans, etc.)
- Matches objects, pictures and symbols (tomahawk to Native American, sombrero to Hispanic person)

- Sorts objects, pictures and symbols from different time periods (old cars and modern cars, clothing from different eras)
- Independently points to simple pictures in a multicultural story (points to the spider in Anansi books)
- Labels artifacts or pictures of artifacts from different cultures
- Identifies similar rhyme and rhythm in multicultural poetry and songs (clapping, nodding head, vocalization)
- Identifies book of interest based on story and or illustrations (chooses favorite book or topic)
- Listens/responds to a variety of multicultural texts read aloud
- Expresses likes and dislikes of a multicultural story (vocal, body language, facial expression, tastes ethnic foods i.e. fortune cookies, tortilla chips, mangos)
- Recognizes that symbols, pictures, and letters in the environment can be interpreted and provide us with information (identifies bathrooms, exits, warnings)
- Associates symbols, pictures, and letters with a word or idea (selects picture symbols to go with favorite books, medicine wheel for a Native American book)
- Shares information about a personal multicultural experience (makes homemade ice cream like Laura Ingalls Wilder).
- Demonstrates appropriate personal reaction to what is read, spoken, heard, or viewed
- Discriminates between same and different (igloos and houses are both homes, Muslim dress/American dress)
- Discriminates between real and fantasy, fact or fiction (fairy tales, fables, newspapers, magazines)
- Shows interest in reading by looking through multicultural or historical reading material in a purposeful manner (in class or during free time)
- Reads words that identify a familiar person, place, thing, action, or event (Abraham Lincoln, Benjamin Franklin and his kite, flight at Kitty Hawk)
- Reads materials that contain one or two word items (calendars, months that contain holidays)
- Uses knowledge of vocabulary to read words in different environments, in print, and in everyday life
- Explores a variety of worthy literary and narrative works (Caldecott books, picture books, print, auditory, or tactile/Braille).
- Creates or retells a multicultural story using picture cards
- Identifies characters in a story (historical, fables, fairy tales)
- Responds to multi-cultural literature by making personal connections between themselves and characters in a story (similar characteristics, morals, values, beliefs, interests, etc.)
- Participates in group dramatizations based on cultural stories
- Demonstrates an understanding of passages, poetry, and simple stories from other cultures and time periods
- Identifies similarities in plot, setting, and character among the works of an author or illustrator
- Distinguishes between what is fictional in a text and what is real life (fact or fiction, could this really happen?)

- Demonstrates an understanding of different cultures and time periods represented in text (elders, wars, holidays around the world, diversities)
- Compares different cultures and time periods represented in text
- Responds to literature by making text-text connections
- Responds to literature by making text-world connections
- Explains how literature can be used to better understand other time periods and events (myths, legends, Romans, Greeks)

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Recognizing, identifying, and responding to diversity in literature from different eras and cultures.** *(E.R.3.1.)*

M=Motor S=Social C=Communication A=All

- Recognizes verbal and nonverbal stimuli as seen through a differential response (heart rate, affect, facial expressions etc.) [M,C]
- Identifies through attending skills to verbal and nonverbal stimuli (listens to books, plays etc.) [C]
- Responds to verbal and nonverbal stimuli (smiles, thumbs up, etc.) [C]
- Demonstrates a response to indicate recognition or identification of familiar people, surroundings, or materials (eye contact, mood change, physical changes, etc.) [S,M]
- Expresses likes and dislikes (opens eyes, smiles, change in heart rate, etc.) [A]
- Responds to presentation or changes in stimuli (touch child with vibration, child demonstrates response to removal of vibration) [M,C]
- Demonstrates a response to different vocal intonations (loud, soft, happy, mad) [M,C]
- Recognizes and responds to their own name [A]
- Demonstrates recognition of a familiar activity/sequence (initiates movement related to activity, excitement or vocalization with presentation) [M,C]
- Vocalizes different sounds to demonstrate emotions, wants, and needs [C]
- Discriminates a choice between two objects (pointing, eye gaze, assistive technology) [M,C]
- Identifies a familiar object by eye gaze, pointing, or assistive technology (when presented with a book and a bear, will look at the named item) [M]
- Accesses assistive technology to create a desired response (pushes a voice output switch to hear a story) [M,C]
- Imitates an action on an object (turning a page, playing a drum, etc.) [M]
- Manipulates a book (holds it upright, turns front to back, one page at a time) [M]

Extended Standard

E.R.3.2 Recognizing the role that authors and illustrators have in the development of literary works.

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Recognizing the role that authors and illustrators have in the development of literary works.** *(E.R.3.2.)*

- Completes journaling with either words or pictures
- Explains what authors do
- Explains what illustrators do
- Locates the name of the author in a book
- Locates the name of an illustrator in a book
- Transcribes pictures or words to correspond with a picture (picture to word software)
- Draws pictures to illustrate words

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Recognizing the role that authors and illustrators have in the development of literary works.** *(E.R.3.2.)*

M=Motor S=Social C=Communication A=All

- Responds to auditory presentation of a book/story [S]
- Responds to visual presentation of pictures/illustrations [S]
- Explores, by touch, media associated with illustrations in a book (read a book about a bear and have a stuffed bear for student to touch) [M]
- Points out illustrations in a book [M]
- Points out words in a book [M]
- Uses assistive technology to illustrate a book (spin art, finger paint) [M,S]
- Uses assistive technology to access hearing a book [M]
- Uses assistive technology to author a personal story (copy from board with an alpha-smart) [M,C]

Extended Standards
Reading

Indicator 4: Students are able to retrieve, analyze, synthesize, and evaluate a variety of informational texts.

Extended Standard

E.R.4.1. Accessing (locating) information from a variety of sources.

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Accessing (locating) information from a variety of sources.** *(E.R.4.1.).*

- Locates a desired picture symbol
- Understands meaning of object or picture symbol
- Demonstrates understanding of proper positioning of literacy materials (holding book upright in front of face, etc.)
- Demonstrates understanding of orientation/directionality of print (left-to-right, top-to-bottom)
- Communicates preferred mode for accessing literacy materials
- Reads/listens to unfamiliar genres
- Locates a name and phone number using an address book or phone list
- Accesses prior knowledge to make predictions and synthesize information to solve problems (Susie is walking to school with overshoes and an umbrella, what is the weather)
- Understands the relationship between cause and effect (if I do this, that will happen)
- Identifies nonfiction as informational text
- Uses picture/context cues to determine unknown words
- Generalizes use of familiar words, pictures/symbols/objects to communicate meaning and need
- Integrates an unfamiliar word/symbol into current vocabulary
- Uses resources/reference materials (dictionary, teacher) to gain meaning of new words/pictures/symbols/objects
- Identifies elements of nonfiction genre (title page, table of contents, index, glossary)
- Identifies real-life situations vs. fantasy (could this happen to you)
- Distinguishes between fact (true statement) and opinion (belief or feeling about a subject)
- Identifies resources which provide factual information (looks up a telephone number)
- Reads text/picture symbols to accurately comprehend text
- Uses vocabulary, pictures/symbols/objects to relate information about text

- Identifies the main idea and supporting details in simple expository text (Susie is walking down the block with boots and an umbrella, what type of weather is it)
- Uses appropriate sources to locate specific types of information (calendar, newspaper, encyclopedia, dictionary, atlas)
- Creates graphic organizers to predict, categorize, and sequence information (follows recipes, directions, and schedules)
- Seeks appropriate adult help when experiencing difficulties with written materials (asks teacher for directions to library)
- Draws and labels a simple map (own house, classroom, etc)
- Uses dictionary or thesaurus to gain meaning of new words, picture symbols or objects in a reading passage
- Rereads and searches to confirm obvious information and meaning
- States appropriate theme for story
- Uses reading/rereading for fluency and understanding
- Asks questions for clarification of directions or instructions obtained from text (I don't get it)
- Communicates an opinion about the reading text
- Locates details/vocabulary in text to support personal opinion

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Accessing (locating) information from a variety of sources.** *(E.R.4.1.).*

M=Motor S=Social C=Communication A=All

- Demonstrates a differentiated awareness to access visual, tactile, auditory, and/or olfactory stimuli (shows a different response to mom than stranger, hospital than home) [M,C]
- Demonstrates a movement or visual response to access information [M]
- Understands meaning of a touch cue (touches foot and foot relaxes to put ankle-foot orthodics on) [M,C]
- Demonstrates the ability to discriminate/analyze differences between familiar and unfamiliar people and places
- Accesses assistive technology (single switch, step by step, voice output) to provide information [M,C]
- Demonstrates understanding of cause and effect through interactions with toys/activities [M,C]
- Demonstrates a communicative response to indicate a need for help [M,C]
- Recognizes symbols on an augmentative communication device [S,C]
- Locates or recognizes people, surroundings, or materials [M,C]
- Recognizes and responds to name [A]
- Demonstrates the ability to transition from one activity/environment to another with the use of a picture symbol, object, written word schedule [A]

Extended Standard

E.R. 4.2. Synthesizing (evaluating) information from a variety of sources.

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Synthesizing (evaluating) information from a variety of sources.** *(E.R.4.2.)*

- Recognizes that printed materials provide useful information
- Matches objects
- Matches pictures/complex designs
- Matches pictures to words
- Matches words to words
- Communicates prior knowledge regarding symbols/pictures
- Reads a calendar to determine the specific day of the week, month, year
- Retrieves materials specific to an activity
- Matches survival signs
- Demonstrates understanding of survival signs/words (STOP, RESTROOMS, EXIT)
- Identifies survival signs in the environment
- Follows a picture recipe to make a meal
- Identifies and describes informational and safety signs in the environment (picture cues)
- Recognizes everyday print materials that provide information (labels, newspapers, TV Guide, map, bus/movie schedules, recipe, Yellow Pages)
- Recognizes and describes patterns/purposes in a variety of informational texts
- Evaluates own performance (check work, self-monitoring of behavior)
- Monitors to self-correct miscues (I was John, should be, I saw John)
- Sorts information as it relates to a specific topic or purpose of a reading passage
- Identifies nonfiction as informational
- Identifies elements of nonfiction (Title Page, Table of Contents, Index, Glossary)
- Identifies real-life situation vs. fantasy (could this happen to you)
- Distinguishes between fact (true statement) and opinion (belief or feeling about a subject)
- Identifies resources which provide factual information (looks up a telephone number)
- Identifies the main idea and supporting details in simple expository text
- Identifies author’s purpose (why did the author write this text)
- Rereads and searches to confirm obvious information and meaning
- Communicates an opinion about the reading text

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Synthesizing (evaluating) information from a variety of sources**. *(E.R.4.2.)*

M=Motor S=Social C=Communication A=All

- Demonstrates attention to visual, tactile, auditory, and olfactory stimulus through verbal or non-verbal means [M,C]
- Demonstrates a verbal or non-verbal response to visual, tactile, auditory, and olfactory stimulus [M,C]
- Understands meaning of a touch cue (Touch foot and relaxes foot to put ankle-foot orthotics on) [M,C]
- Discriminates between familiar and unfamiliar people and places (has a different reaction to mom than stranger, hospital than home) [M,C]
- Demonstrates necessary pre-reading behaviors (prepares for headphones, turns to listen, looks at screen or reader) [M,C]
- Demonstrates the ability to attend to print media (looks at books, pictures, magazines etc.) [M,C]
- Demonstrates understanding that environmental print, pictures, symbols and objects have meaning [A]

Extended Standard

E.R. 4.3. Utilizing information from a variety of sources.

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Utilizing information from a variety of sources.** *(E.R.4.3.)*

- Demonstrates understanding that environmental print, pictures, symbols, and objects have meaning
- Matches objects
- Matches pictures/complex designs
- Matches words
- Communicates prior knowledge regarding symbols/pictures
- States daily rules
- Reads a calendar to determine the specific day of the week, month, year
- Retrieves materials specific to an activity
- Follows directions in pictorial format
- Helps plan a trip with family and friends
- Identifies the appropriate materials/resources needed to explore specific topics

- Demonstrates understanding of survival signs/words (STOP, RESTROOMS, EXIT)
- Matches warning, informational and safety signs with picture clues
- Recognizes and role-plays functional meaning of survival signs (STOP, EXIT, and DANGER)
- Evaluates own performance (checks work, self-monitoring of behavior)
- Relates personal experience related to reading topic
- Uses a variety of resources (computer, book, object, picture, symbol, dictionary, spell check, word prediction program) to answer questions about a reading passage
- Sorts information as it relates to a specific topic or purpose of a reading passage
- Uses prior knowledge to communicate and make connections to gain meaning from text
- Uses pictures and context to determine unknown words
- Uses familiar words, pictures/symbols/objects to communicate meaning and need
- Integrates unfamiliar words and symbols into current vocabulary
- Uses resources/reference materials to gain meaning of new words/pictures/symbols/objects (resources and references = dictionary, teacher)
- Distinguishes between fact (true statement) and opinion (belief or feeling about a subject)
- Reads texts/pictures/symbols to accurately comprehend text
- Uses vocabulary/pictures/symbols/objects to retell information about text
- Identifies the main idea and the supporting details in simple expository text (Suzie is walking down the block with boots and an umbrella,. what type of weather is it)
- Uses appropriate sources to locate specific types of information (calendar, newspaper, encyclopedia, dictionary, atlas)
- Creates graphic organizers to predict, categorize, and sequence information (following recipes, directions, schedules)
- Draws and labels a simple map (own house, classroom, etc.)
- Uses dictionary or thesaurus to gain meaning of new words, picture symbols, or objects in a reading passage
- States appropriate theme for story
- Uses reading/rereading for fluency and understanding
- Asks questions for clarification of directions/instructions obtained from a text
- Communicates an opinion about the reading text

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Utilizing information from a variety of sources.** *(E.R.4.3.)*

M=Motor S=Social C=Communication A=All

- Utilize a switch to access desired response from a source [M,C]
- Responds to visual, tactile, auditory, or olfactory stimuli (laughs, frowns, cries) [C,S]
- Demonstrates a response to indicate "more" of a desired activity [A]
- Demonstrates the ability to access assistive technology (single switch, step-by-step, voice output) to provide information [M,C]
- Attends to the reader and literacy-related materials in a purposeful manner (follows the story) [S]
- Attends to pictures/symbols/objects pertinent to a story (points to pictures) [S]
- Follows a story from beginning to end [S]
- Transitions from one activity/environment to another with the use of a picture symbol, object, written word schedule [M,C]
- Uses pictures/symbols/objects to communicate abstract meaning (touches switch/key or picture/objects to make a request) [A]

South Dakota Math Goals and Indicators

Extended Standards Algebra

Goal 1: Students will use the language of algebra to explore, describe, represent, and analyze number expressions and relations that represent variable quantities.

Indicator 1: Use procedures to transform algebraic expressions

Indicator 2: Use a variety of algebraic concepts and methods to solve equations and inequalities

Indicator 3: Interpret and develop mathematical models

Indicator 4: Describe and apply the properties and behaviors of relations, function and inverses

Extended Standards Geometry

Goal 2: Students will use the language of geometry to discover, analyze, and communicate geometric concepts, properties, and relationships.

Indicator 1: Use deductive and inductive reasoning to recognize and apply properties of geometric figures

Indicator 2: Use properties of geometric figures to solve problems from a variety of perspectives

Extended Standards
Measurement

Goal 3: Students will apply systems of measurement and use appropriate measurement tools to describe and analyze the world around them.

Indicator 1: Apply measurement concepts in practical applications

Extended Standards
Number Sense

Goal 4: Students will develop and use number sense to investigate the characteristics of numbers in a variety of forms and modes of operation.

Indicator 1: Analyze the structural characteristics of the real number system and its various subsystems. Analyze the concept of value, magnitude, and relative magnitude of real numbers

Indicator 2: Apply number operations with real numbers and other number systems

Indicator 3: Develop conjectures, predictions, or estimations to solve problems and verify or justify the results

Extended Standards
Statistics and Probability

Goal 5: Students will apply statistical methods to analyze data and explore probability for making decisions and predictions.

Indicator 1: Use statistical models to gather data, analyze and display data to draw conclusions

Indicator 2: Apply the concepts of probability to predict events/outcomes and solve problems

Guide to the Numbering and Symbol System Used with the Extended Math Alternate Achievement Standards

Standards are coded to cross reference strands, indicators, and standards

Example: **EA.1.1**

EA.1.1 Refers to the extended standard goal strand (in this case Extended Algebra). The strands for the major area of mathematics are: algebra, geometry, measurement, number sense, statistics, and probability. The strands are coded:

A for Algebra
G for Geometry
M for Measurement
N for Number Sense
S for Statistics and Probability

EA.**1.**1 The first number indicates the number of the indicator for the extended math standard. Each goal has one or more related indicators that describe key aspects of the goal.

*It should be noted that the indicators may have been reworded from the core content standards to capture the **essence** of the indicator across grade levels rather than being defined as grade specific. This allows for the flexibility of placement within the content standard while honoring the diverse needs of the individual student.*

EA.1.**1** The second number in the coding represents the ***standards, supporting skills***, or ***example***s related to the indicator. Each indicator has one or more standard, supporting skill or example that describes what students will know and be able to do related to the indicator. They are aligned to the goal and are listed in order of complexity that can be used to determine an ***entry point*** for a student based on present level of performance. An IEP team then can use the supporting skills and examples to determine the next level of progress for the student which then becomes the basis for the assessment of the student for a given assessment period.

In other words; IEP team uses the supporting skills, and examples under each indicator to determine **where the student is** at the beginning of the school term, **where the student may be reasonably taken through instruction** during the school term, and thus **determines the assessment item for progress reporting and assessment reporting.**

Extended Standards
Algebra

Goal 1: Students will use the language of algebra to explore, describe, represent, and analyze number expressions and relations that represent variable quantities

Indicator 1: Use procedures to transform algebraic expressions.

Extended Standard

E.A.1.1. Recognize, create and extend pattern

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Recognize, create and extend pattern.** *(E.A.1.1)*

- Uses same/different to describe objects or pictures (small, medium, large (food sizes, restaurant), clothing sizes)
- Matches identical simple pictures of objects (matches money, socks, silverware, etc.)
- Matches/Sorts attributes using objects or pictures (money, socks/laundry, names to pictures (staff/students)
- Matches/Manipulates objects and pictures to create sets and make comparisons between sets. (toothbrush/toothpaste salt/pepper above/under
- Sorts blocks, identifies colors and puts into correct pile; vocational tasks, money
- Compares sets of objects to determine more, less or equal (uses various objects to show more, less, equal)
- Indicates two sets of objects, identifies which is more, less or equal (food, measuring systems)
- Recognizes plus or minus symbols (uses +/- manipulatives)
- Uses comparatives words to describe or show understanding of objects or pictures (<,>, =, symmetry, +,-,*, /)
- Recognizes and creates a variety of sets and patterns using symbols ($$$ > $$)
- Identifies symbols used in common situations (survival signs)
- Demonstrates techniques used in adding (checkbook register, total value of merchandise, ordering food)
- Demonstrates techniques used in subtracting (checkbook register, menu, working towards counting change back)
- Solves simple problems involving multiplication and division without a calculator (2*3=6, 6/3)
- Recognizes and uses the communicative property of multiplication (3*2 = 6 2*3 = 6)
- Identifies which is more, less or equal when given two sets of numerals (4 >3)
- Uses concepts of greater than, less than to compare numbers and sets (4>2, $5.00 < $20.00)
- Applies/uses the zero and one in a problem situation with or without a calculator
- Uses addition 1+0; Uses subtraction 1-0, 1-1; Uses multiplication 1*0, 1*1; Uses division 0/1, 1/1
- Supplies missing numbers to solve mathematical problems (( ) + 4 = 9)

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Recognize, create and extend pattern.** *(E.A.1.1)*

M= Motor *S=Social* *C=Communication* *A=All*

- Tolerates objects with tactile stimulation (reaches for specific objects of different textures, allows self to be touched) [M]
- Tolerates schedule/routines incorporated throughout the day (class bells, variety of stimuli throughout the day, different staff and student interaction, schedule change) [S]
- Hits switch to activate computer programs, music, adapted equipment (computer programs, stories on tape, blender, mixer) [M]
- Indicates clothing choice for each day (when getting ready for school, the student will be given two choices of a shirt and pants to wear for that day) [C]
- Determines more or done to extend a pattern or repeat a task (eating, work tasks) [C]
- Recognizes patterns using basic colors – yellow, blue, red, black, white (objects, food, clothing, crayons, markers) [M]
- Recognizes patterns in voices or specific sounds (recorded voices, animal sounds, telephone, class bells, using colors/pictures the student can sort with assistance) [C]

Indicator 2. Use a variety of algebraic concepts and methods to solve equations and inequalities.

Extended Standard

E.A.2.1. Use of inequalities/equalities (properties, variables, symbols)

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Use of inequalities/equalities (properties, variables, symbols).** *(E.A.2.1)*

- Uses concrete materials to model and solve equations (classifying, sorting, patterning) (Putting a puzzle together, uses beads to follow patterns, sorts silverware, sorts nuts/bolts(job tasks), follows a schedule or routine/pattern, workbaskets)
- Joins two sets together and identifies the total number (sums to 10) (counting pennies, clock counting by 5,s and minute hand)
- Removes objects from a set of objects and indicates number remaining (Use raisins or other objects)
- Solves addition and subtraction problems using number lines (create number lines, use objects to numerals)
- Identifies the meaning of +, -, and = signs

- Uses +, - and = symbols to write number sentences and solve problems (Create =, -, + manipulatives when working with number sentences.)
- Identifies key terms in word problems to determine the correct operation and solve the problem (know key terms, make note cards, addition: more than, sum, all together, in all, subtraction: Less than, minus, are left, take away, fewer than, equal: same as)
- Identifies problem situations that require addition and subtraction (shopping, budgeting, net/gross pay, eating out, recreation)
- Determines correct sequence and materials to complete an assembly line task
- Identifies and solves problem situations that match or do not match a given number sentence (real life story problems)
- Uses tables to model and solve equations with the use of a visual representation, graph, completes a problem (cooking, craft, re-arranging furniture, designing)
- Identifies relevant and irrelevant information in the statements of problem situations (social situations/problems, grocery store, rules/criminal justice(stealing, cheating), car accident, home care(bills))
- Demonstrates the ability to problem solve skills needed for specific environment and activities
- Writes and solves number sentences that represent word problems in addition and subtraction (determines negative and positive situations(pros/cons))
- Represents given problem situations using a diagram, model and symbolic expression (crafts, mechanics, Venn Diagram, Web chart, home accessories, assemble furniture, quilting)

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Use of inequalities/equalities (properties, variables, symbols)**. *(E.A.2.1)*

M= Motor *S=Social* *C=Communication* *A=All*

- Puts items away in the correct location [M]
- Demonstrates an action in order to continue an activity [M, C]
- Continues to respond to vocal directions [M, C]
- Repeats imitation activities (make equal number of sounds, blocks) [M]
- Repeats requested movement (hits switch on cue) [M]
- Tolerates environmental changes (weather, schedule changes, noises) (variables) [M]

Indicator 3: Interpret and develop mathematical models.

Extended Standard

E.A.3.1. Interpret and develop relationships between one to two step problems

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Interpret and develop relationships between one to two step problems.** *(E.A.3.1)*

- Divides a given a set of objects into equal groups. (Workbaskets)
- Solves a one-step problem (2+2=4 2*3=6)
- Follows simple directions (washes hands, zips pants, stays on task)
- Problem solves multiple steps to complete a task (hand-washing, workbaskets, assembly line, social issues, job duties, health situations, set-up appointments)
- Checks for accuracy after completing a task (kitchen appliances: silverware, pot holders, check off list, shopping/grocery list, receipts: counting change back, school work: calculator, planners)
- Problem solves that they need help (safety skills: fire, accidents, emergency situations, cuts, low lunch account, getting gas)
- Demonstrates responses appropriate to specific safety/survival skills
- Identifies positive and negative integers
- Solves problems with positive and negative integers
- Follows the order of operations (note cards showing steps)
- Solves one step equation (-3x=15)

.

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Interpret and develop relationships between one to two step problems.** *(E.A.3.1)*

M= Motor *S=Social* *C=Communication* *A=All*

- Completes different steps within a multiple component activity (story time, opening activities: calendar, pledge allegiance) [C]

- Indicates done after a task [C]
- When completed with one activity initiates a new activity
- Completes a multi-step work task
- Matches the patterns in pictures, objects, numbers, shapes (concentration, memory) [M]

•

Indicator 4: Describe and apply the properties and behaviors of relations, function and inverses

Extended Standard

E.A.4.1 Using patterns to solve problems (graphs, tables, equations)

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Using patterns to solve problems (graphs, tables, equations).** *(E.A.4.1)*

- Graphs, plots or marks numbers on a number line
- Follows a patterned response (raises hand, lines up at the door, sharpens pencil)
- Recreates manipulative patterns (unifix cubes, parquetry, tangrams, Legos. Lincoln Logs, puzzle, model cars)
- Charts simple data (tallies, attendance)
- Locates a specific item within a given pattern (Where's Waldo?)
- Negotiates their way around a familiar environment (finds the bathroom, locates items in a grocery store)
- Enters a number sequence into a key pad (phone numbers, ATM, door key pads)
- Matches key to correct key hole
- Laces shoes
- Charts data to solve problems or complete a task (behavior management, charting grades in each class, filling out planners)
- Determines a pattern within an alternate representation (calendar, number line)
- Follows written directions to a certain destination (reads a map, follows a schedule, follows a recipe, determines bus route)
- Plans/schedules for group gatherings/special events (meals, holidays, parties)
- Plans leisure or travel activities (cost, time off, travel time, movies, trip to grandma's)
- Uses pictures, models, tables, charts, graph words, number sentences and mathematical notations to interpret mathematical relationships (grows plants, develops science experiments, uses time cards, follows a calendar to pay bills)
- Identifies symbols to understand charts/graphs (north, south, east, west, maps)
- Reads tables and graphs (maps, quadrants, bar graph, pie graph, plot graph)
- Responds to yes or no questions and to problems presented pictorially or numerically in class (bar graphs, picture graphs, pie graphs)

+-

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Using patterns to solve problems (graphs, tables, equations).** *(E.A.4.1)*

M= Motor *S=Social* *C=Communication* *A=All*

- Understands the effects of change by recognizing the cause/effect between two elements (hits switch, number appears on screen) [M]
- Recognizes staff and students by hearing their voice or pictures [C]
- Identifies staff and students through pictures, pointing, eye gaze [M, C]
- Follows visual directions (daily schedule, work duties) [C]

Extended Standards
Geometry

Goal 2: Students will use the language of Geometry to discover, analyze and communicate geometric concepts, properties, and relationships.

Indicator 1: Use deductive and inductive reasoning to recognize and apply properties of geometric figures.

Extended Standard

E.G.1.1. Characterizes geometric shapes

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Characterizes geometric shapes**. *(E.G.1.1)*

- Points to the six basic shapes (circle, square, triangle, rectangle, ellipse, diamond)
- Identifies the six basic shapes (circle, square, triangle, rectangle, ellipse, diamond)
- Names the six basic shapes (circle, square, triangle, rectangle, ellipse, diamond)
- Describes the six basic shapes (circle, square, triangle, rectangle, ellipse, diamond)
- Identifies plain figure (circle, triangle, rectangle)
- Identifies solid figures (balls, cans)
- Names more complex shapes by name (star, semi-circle, oval)
- Matches more complex shapes by pattern (Perfection game)
- Names shapes of environmental objects (balls, party hats, soup cans)

- Identifies and describes examples of plain and solid figures in the environment (ball = sphere, soup can = cylinder)
- Recognizes safety signs by shape and/or symbol
- Recognizes safety signs by color and shape
- Recognizes community signs by shape and/or symbol
- Recognizes community signs by color and shape
- Identifies and describes geometric objects in the environment and describes their position (Identifies stop sign on a walk)
- Identifies geometric figures regardless of position and orientation in space.
- Identifies sides and corners of a solid/plane figure (points to a corner/sides of a rectangle or wall)
- Identifies and describe angles (acute, right, obtuse)
- Identifies multiple sided figures
- Identifies points, lines segments and rays
- Identifies parallel, perpendicular, and intersecting lines

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Characterizes geometric shapes**. *(E.G.1.1)*

M= Motor *S=Social* *C=Communication* *A=All*

- Recognized the properties of a predetermined object by demonstrating visual and/or tactile attention to an object (looks at or touches a specific shape) [M]
- Matches pairs of similar shapes of different sizes using a switch-operated program

Extended Standard

E.G.1.2. Works with geometric shapes

Target Skills

Target Skills for some student, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Works with geometric shapes.** *(E.G.1.2.)*

- Demonstrates a fit or match to a predetermined corresponding object or form with hand over hand assistance (peg board, puzzle boards, circle to a circle)
- Demonstrates a fit or match to a predetermined corresponding object or form independently (peg board, puzzle boards, circle to a circle)
- Matches corresponding geometric figures with multiple discriminators (various sizes, shapes, matches shapes into a ball, puzzles)
- Places geometric piece in form-board (shape puzzles)
- Traces/draws plane geometric figures (square, rectangle, circle, & triangle)
- Traces simple two-dimensional shapes
- Matches shapes (circle, triangle, and square)
- Matches similar shapes of different size and color
- Matches shapes with corresponding symbols and shapes in the environment (community sign games or community bingo)
- Matches lid with containers
- Sorts blocks, pegs, cubes and spheres
- Sorts six shapes (square, triangle, circle, rectangle, ellipse and diamond)
- Compares and sorts plane and solid figures (circle/sphere, square/cube, triangle/pyramid, rectangle/rectangular solid)
- Draws a line
- Draws a horizontal lines, vertical lines and plus sign independently with and without demonstration
- Connects dots with lines (dot to dot)
- Constructs shapes using various materials (legos)
- Assembles puzzles of various amounts

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Works with geometric shapes.** *(E.G.1.2)*

M= Motor *S=Social* *C=Communication* *A=All*

- Visually attends to geometric visual stimuli [M]
- When an object is placed in hand moves object to a specific location [M]

- Reaches for a geometric shape [M]
- Demonstrates a release of an object into a specific location [M]

Indicator 2 – Use properties of geometric figures to solve problems from a variety of perspectives.

Extended Standard

E.G.2.1. Applying relationships in geometric figures

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Applying relationships in geometric figures.** *(E.G.2.1)*

- Describes proximity of objects in space (near, far, up, down)
- Understands the position of objects in relation to one another by placing an object in response to a direction (in front of, behind)
- Identifies by eye gaze which of two similar objects is larger
- Identifies (by eye gaze, pointing, verbally labeling) the shortest route between two points using the legend a map
- Indicates an understanding of more/less, big/bigger/biggest, little/littler/littlest, and large/larger/largest
- Determines ways in which shapes can be divided into equal parts (halves, quarter, thirds)
- Folds paper in half
- Tri-folds paper
- Sorts material by size and/or shape needed for a group project
- Stocks storage shelves (groceries, auto parts) with items by shape or symbols
- Places items in appropriate size containers (leftovers, putting toys away, workbaskets)
- Indicates when cup is full/half-full/empty
- Arranges personal items in specified space (furniture, tools, etc.)
- Knows neighborhood boundaries
- Determines if personal wheelchair will fit through a space
- Compares size and quantity of products purchased
- Constructs shapes using various materials provided
- Identifies a slide turn or flip of a given figure
- Determines and compares lines of symmetry
- Demonstrates special relationships
- Compares geometric figures using congruency and similarity
- Uses coordinates on a grid to find locations

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Applying relationships in geometric figures.** *(E.G.2.1)*

M= Motor *S=Social* *C=Communication* *A=All*

- Recognizes different times of day with associated activity [M]
- Realizes their body's movement in space (awareness of hoyer transfer or lift) [M]
- Demonstrates awareness response to another person's presence [M, S]
- Demonstrates awareness of familiar and unfamiliar persons [M, S]

Extended Standards
Measurement

Goal 3: Students will apply systems of measurement and use appropriate measurement tools to describe and analyze the world around them.

Indicator 1: Apply measurement concepts in practical applications.

Extended Standard

E.M.1.1. Understands concepts of time

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Understands concepts of time.** *(E.M.1.1)*

- Follows a routine
- Follows a picture symbol schedule
- Stays on task for a predetermined amount of time (behavior goals, vocational tasks)
- Completes a task in a predetermined amount of time
- Identifies seasonal changes
- Communicates what day today is, what tomorrow will be and what yesterday was
- Identifies days of week, month, & year
- Tells age correctly
- Identifies month and season of common holidays
- Tells which is longer, a minute, hour, day, week, month, and year
- Uses a timer to keep track of activities (behaviors, cooking, vocational skills)
- Reads and tells time on an analog and/or digital clock
- Writes dates in various forms
- Completes a weekly schedule (work days, shopping days, school activities, homework)
- Reads the clock in order to arrive at his job on time
- Uses a time clock correctly

- Shows up to work on time
- Takes work breaks for an appropriate amount of time
- Calculates number of hours worked
- Estimates amount of paycheck based on hours worked and hourly rate
- Uses a timer when cooking
- Uses a microwave (sets time)
- Sets a dryer to the correct time
- Requests when it is time to take medications
- Uses an alarm or device to signal medication time
- Uses resources (newspaper, tv guide, internet) to determine time of television show
- Uses resources (newspaper, call theatre, internet) to determine time of movie
- Uses resources (bus schedule, call bus depot) to determine a bus schedule

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Understands concepts of time.** *(E.M.1.1)*

M= Motor *S=Social* *C=Communication* *A=All*

- Opens eyes (reacts) to an alarm clock or/and stimulus [M]
- Recognizes change in environment (time to eat, gym, time to sleep, music room) [M]
- Associates environmental cues with daily activities from daily schedule (toothbrush to mouth) [C]
- Uses an alarm clock to get up at a designated time [M, C]

Extended Standard

E.M.1.2. Understands concepts of money

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Understands concepts of money.** *(E.M.1.2)*

- Identifies coins
- Identifies bills
- Demonstrates knowledge of penny, nickel, dime, & quarter

- Demonstrates knowledge of bills ($1, $5, $10 & $20 etc.)
- Identifies, sorts and names coins/bills and their values (penny = $.1, Dollar = $1)
- Demonstrates equivalent amounts of money (4 quarters = $1, 5 pennies = 1 nickel)
- Counts money of same values (counts nickels by 5's, dimes by 10's etc.)
- Counts money of different values (counts nickels, dimes, quarters in mixed groups)
- Uses a calculator to add money amounts
- Provides money, when requested, for purchasing an item or service (vending machines, pop machines, city bus, laundromat)
- Identifies the correct bus fare from a pool of coin
- Uses the "Dollar Up" method to determine the amount of money needed to purchase an item
- Determines amount of money needed to purchase an item and purchases it
- Recognizes, reads and writes prices of items
- Saves money or tokens to purchase an item (behavior interventions – save 10 tokens to get a pop)
- Uses ads to find sales on groceries or needed items at a store
- Uses coupons to save money on needed purchases
- Clips newspaper ads involving money to make a shopping list and compute how much money is needed
- Compares products to determine the best value (sales vs. non-sales, generic vs. brand name)
- Determines appropriate quantity of needed items (one bottle of shampoo, size of peanut butter)
- Endorses paychecks
- Understands components of a paycheck (hourly wage, taxes, benefits)
- Estimates the amount of paycheck based on salary and attendance
- Fills out a deposit slip for savings account
- Uses addition for a deposit with savings account
- Uses subtraction when withdrawing money from savings account
- Writes a check or designates someone to write a check (if someone is designated to write check it must be someone who is trustworthy)
- Uses addition for a deposit when balancing (checking account)
- Uses subtraction for a written check when balancing accounts
- Uses an ATM Machine
- Swipes card
- Enters ATM code
- Receives money
- Reads a bill (utilities, rent etc.)
- Pays a bill (utilities, rent etc.)
- Understands how to use dollar sign and cent sign ($.24 = 24¢)

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Understands concepts of money.** *(E.M.1.2)*

M= Motor *S=Social* *C=Communication* *A=All*

- Operates a switch for a greeting or getting assistance with a purchase [A]
- Demonstrates a recognition of money (make personal choice between two items when making a purchase) [M, C]
- Demonstrates a differential response in making a choice in a purchase (smiles, grins, keeps eye contact, increased respiration, decreased respirations) [A]

Extended Standard

E.M.1.3. Measurement, volume, capacity

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Measurement, volume, capacity** *(E.M.1.3)*

- Indicates when cup is full or empty
- Points to the smaller/larger of two different objects
- Demonstrates concept of long/short, big/tall
- Determines appropriate sizes for clothing, shoes, & undergarments
- Wears appropriate clothing for temperature (boots in snow, short for summer)
- Wears appropriate shoes for temperature (sandals, tennis shoes, snow boots)
- Applies appropriate amount of deodorant
- Determines appropriate amount of toothpaste
- Fills sink to appropriate level for washing dishes
- Fills bathtub to appropriate level for taking a bath
- Washes hands with warm/hot water
- Uses appropriate amount of soap (body, laundry, dish soap)
- Identifies measuring cups and spoons (1/2 cup, 1/3 cup, 1 cup, teaspoon, tablespoon)
- Chooses appropriate measuring tool to measure an object (scale, ruler)
- Fills and uses measuring cups correctly
- Follows a recipe using correct measuring tools and amounts
- Doubles a recipe containing (6) ingredients
- Measures ingredients for a recipe by counting the appropriate number of tbs., and/or cups
- Compares and orders a group of objects by measurable attributes (length, weight capacity, volume)
- Fills containers to appropriate levels (Tupperware, makes juice in the right size container)
- Picks the correct size of an item to fit into a particular container

- Writes and reads abbreviations of inch, foot, cup, teaspoon, yard, equivalents
- Converts measurement (inches to feet)
- Sets water temperature on a washing machine
- Fills washing machine to appropriate level (does not over load)
- Sorts laundry by colors (light, bright, darks)
- Sets dryer to appropriate temperature (permanent press, delicate)
- Determines if a wheelchair will fit into a space
- Orders small or large items at a restaurant
- Orders appropriate amount in a restaurant setting
- Places and carries items on cafeteria trays or eats at buffets
- Uses appropriate size linen to make a bed
- Knows when an object is too heavy to lift alone
- Determines if furniture will fit into a room
- Knows how to read own weight on a scale
- Identifies, marks a given temperature and reads a thermometer.
- Uses school map to get to different areas of school (office, nurse, bathroom, cafeteria)
- Uses school map to get to safety (fire drill, tornado drill, bomb drills)
- Solves problems involving perimeter, circumference, and/or volume of common geometric figures
- Measures length to the nearest quarter inch
- Selects correct measuring tool for length, weight, temperature, and capacity

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Measurement, volume, capacity.** *(E.M.1.3)*

M= Motor *S=Social* *C=Communication* *A=All*

- Demonstrates appropriate responses to change in room temperatures [M]
- Demonstrates appropriate response in environmental temperatures (summer and winter temps) [M]
- Demonstrates recognizable changes in water temperature (swimming pool, bath, washing face & hands) M]
- Tolerates/distinguishes different temperatures in food and drink [M]
- Communicates when something is too hot or too cold by reaction to the stimulus (eye contact, movement, yell) [M, C]
- Tolerates different consistencies of foods (chopped, pureed, cut) [M]
- Tolerates different consistencies of drinks (thickness) [M]
- Tolerates different weight of clothing (t-shirt for hot, sweater for cold) [M]
- Tolerates different textures of clothes (smooth, itchy, silky etc.) [M]
- Allows face/hands to be washed (allows someone in personal space) [M]
- Uses a communication device (allows for interaction while participating) [M,C]

- Allows deodorant to be applied [M, S]
- Moves close enough to a switch to activate [M]

.

Extended Standards
Number Sense

Goal 4: Students will develop and use number sense to investigate the characteristics of numbers in a variety of forms and modes of operation.

Indicator 1: Analyze the structural characteristics of the real number system and its various subsystems. Analyze the concept of values, magnitude, and relative magnitude of real numbers.

Extended Standard

E.N.1.1 Identify, Represent, Order and Compare Numbers

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Identify, represent, order and compare numbers.** *(E.N.1.1)*

- Imitates pronunciation of numbers and mathematical terms
- Demonstrates the concept of none or some
- Demonstrates one on one correspondence in grouping items with picture cues (matches 2 bolts to a picture of 2 bolts)
- Counts objects in a given set and write the corresponding number (visual 3 shapes equal 3)
- Transfers written number to key board or pad (phone, or ATM)
- Puts one object into container (one counter into container or one egg into each compartment of egg container)
- Groups/sorts objects into containers
- Participates in turn taking activities (first, second)
- Matches like objects (block to block)
- Recites personal information
- Writes check using expanded word form and symbols
- Transcribes personal numerical information
- Locates a page in book using page numbers
- Locates sections in newspaper (B6, D5)
- Counts by ones
- Says the number before and after a given number in a range

- Associates written word names with whole numbers
- Counts by number groups (2's, 5's, 10's)
- Identifies odd and even numbers
- Determines whether a set of objects has an odd or even number of elements
- Matches, identifies, and orders numerals 1-10, 10-20
- Identifies/points to /names numerals out of sequence (1-10, 10 and greater)
- Traces numerals
- Writes random numerals from dictation
- Prints numerals 1-3, 1-9, and 1-20 with/without a model
- Writes numerals in sequence to 100 with/without a model
- Demonstrates difference between first, middle, and last
- Identifies ordinal positions of objects in a set (1st, 2nd, 3rd) to 20th or higher
- Counts on from a given number
- Demonstrates an ability to ascertain quantity without counting (1-6) (estimation)
- Demonstrates understanding of commutative property (when numbers are rearranged number/weight/mass still the same)
- Compares size and/or quantity (big, little or small, medium, large)

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Identify, represent, order and compare numbers.** *(E.N.1.1)*

M= Motor *S=Social* *C=Communication* *A=All*

- Responds to counting sequence before initiating next step activity (countdown to feeding, eating) [M, C]
- Demonstrate visual and or tactical exploration of 3 dimensional numbers (foam, fur, etc.) [M]
- Demonstrates differential response when taken through counting activity (Nods head while teacher is counting) [M, C]
- Accesses switch to participate in counting activity when provided with switch [M, C]

- Presses on switch one time (as directed) to create action (instead of pressing it many times in succession) [M]

Extended Standard

E.N.1.2 Understand concept of place value, demonstrate an understanding of real numbers and fractions

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Understand concepts of place value, demonstrate an understanding of real numbers and fractions.** *(E.N.1.2)*

- Shares objects equally
- Identifies if object is a whole object or a part of an object (1/2 sandwich-whole sandwich)
- Manipulates objects to make 2 objects from 1 (whole pizza cut in half, put toys together)
- Interlocks puzzle pieces to create whole picture
- Completes 2 or 3 step assembly line task
- Package by quantity (group 10 soup labels)
- Splits objects into two or three equal parts
- Assembles parts of a task to make a whole (sets table, retrieves gym clothes, sets out art supplies, prepares for recess)
- Groups objects in sets of tens up to 100
- Divides discrete objects (such as pieces of candy) into ½
- Demonstrates an understanding of proportional relationships using manipulatives (1/2 of pizza is larger than ¼, ½ of ten inch pizza is larger than ½ of six inch pizza)
- Divides a continuous object (such as a piece of paper or a board) into ½
- Divides a whole unit into a required number of parts
- Divides whole units into equal portions (1/2, ¼, 1/3, 1/10)
- Recognizes that fractions and decimals are part of a whole
- Compares and orders common fractions using concrete materials (1/4 to ½ of cookie)
- Uses models to demonstrate addition and subtraction of fractions
- Compares and orders fractions and decimals on a number line
- Shows quantity in different ways, using tens and ones
- Understands that a 2 digit number is made up of groups of tens and ones
- Identifies place value in two digit numbers
- Uses pictures or objects grouped in 10's and 1's writes numbers using correct place value
- Represents two digit numbers up to 100 in an expanded form
- Follows a picture recipe to make a meal
- Demonstrates place value by grouping objects by 10's and 1's
- Orders a set of numbers based on value
- Uses and interprets negative numbers in simple contexts (thermometer)
- Uses number lines to represent negative numbers

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Understand concepts of place value, demonstrate an understanding of real numbers and fractions.** *(E.N.1.2)*

M= Motor *S=Social* *C=Communication* *A=All*

- Indicate when cup is full, half- full, empty. Drinks half the glass of milk [M]
- Differentiates between whole and half. Eats the whole sandwich [M]
- Demonstrates participatory responses (in seat, on task, attending) during part of activity to whole activity [A]
- Demonstrates knowledge of whole. Swallows entire sip or bite [M]

***Indicator 2: Apply number operations with real numbers and other number systems*.**

Extended Standard

E.N.2.1 Apply and Compute four basic mathematics concepts (addition, subtraction, multiplication, division)

Target Skills

For some student, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Apply and compute four basic mathematics concepts (addition, subtraction, multiplication, division).** *(E.N.2.1)*

- Adds things to containers when directed
- Takes things away from containers when directed
- Demonstrates an understanding of addition as adding to a collection
- Demonstrates an understanding of subtraction as taking away from a collection
- Forms sets of objects of up to ten
- Completes tasks in sequential order
- Identifies situations in which the order of events makes a difference and situations in which the order does not make a difference (difference: when taking a bath: clothes off before getting in water; no difference: ham or cheese first on a sandwich)
- Demonstrates understanding of some/more/take away/all gone/no more
- Translates written number to a set of objects, combine sets of objects, count objects
- Chooses the correct operation to the situation (needs more or less milk)
- Connects symbols to operations (uses calculator)
- Adds (puts together), subtracts (takes away) using the numbers 1, 2, 3
- Joins sets together and identifies the total number
- Removes objects from a set and indicates number remaining
- Uses concrete materials to compute addition problem

- Uses alternate computational strategies for addition and subtraction (addition table, calculator)
- Enters numbers correctly on calculator/write numbers correctly
- Adds two numbers together to find sums
- Illustrates the concept of multiplication using groups of objects
- Illustrates the concept of division using groups of object
- Adds one digit numbers written in vertical or horizontal form
- Uses +, -,and = symbols to write number sentences and solve problems
- Subtracts numbers in both vertical and horizontal form
- Solves two-and three-digit addition and subtraction problems with or without regrouping
- Multiplies/divides 1, 2, and 3 digit numbers using a calculator
- Learns and uses basic multiplication/division using concrete models and other tools

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Apply and compute four basic mathematics concepts (addition, subtraction, multiplication, division).** *(E.N.2.1)*

M= Motor *S=Social* *C=Communication* *A=All*

- Repeats an action to continue an activity (hits switch to reactivate music) [M, C]
- Demonstrates a response to indicate an activity has ended or is done (hits switch and music stops) [M, C]
- Demonstrates a grasp to hold an object [M]
- Demonstrates a release to let go of an object [M]

Indicator 3: Develop conjectures, predictions, or estimations to solve problems and verify or justify results.

E.N.3.1 Use various strategies to solve problems

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Use various strategies to solve problems.** *(E.N.3.1)*

- Determines appropriate amount for size of container (cereal in bowl, towels in load)
- Negotiates obstacles in environment (wheelchairs through doorways, door closed)
- Predicts appropriate clothing for weather conditions
- Uses visual schedule to predict when a favorite activity will occur
- Demonstrates problem solving skill to manipulate concrete objects for desired result (turn on light in dark room, adjust water temperature)
- Solves a one step problem (turns knob to go out, knocks before entering, changes class at sound of bell)
- Explains how one arrives at solutions to problems using concrete examples (Boys Town Model)
- Demonstrates the ability to determine the number of objects within a set/group
- Adds objects to a group until it matches an original grouping
- Identifies more or less
- Uses a quantitative label when making a guess (a bunch, a gazillion, seventeen)
- Identifies a reasonable quantity when guessing the amount in a given set
- Predicts outcome based on available information (if, then)
- Applies knowledge of probability to predict an outcome of an event
- Understands different combinations can be made when using elements from different set (2 shirts, 2 pants= 4 different outfits)
- Forms all distinct combinations with limited number of items (makes sure all objects are used)
- Explains how to solve picture problems
- Explains how to solve story problems
- Solves picture problems
- Solves story problems
- Identifies required math operation in a simple problem situation (addition, subtraction, multiplication and division)
- Solves story problems involving multi-step operations
- Rounds whole numbers to the nearest ten, hundred, thousand, etc.
- Uses rounding strategies to make estimates, including money
- Chooses whether an estimate or exact amount is needed in a given situation
- Determines when overestimation and underestimation are appropriate (buys objects and has enough for tax, cooks for a group)

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Use various strategies to solve problems.** *(E.N.3.1)*

M= Motor *S=Social* *C=Communication* *A=All*

- Demonstrates the ability to activate a switch/devise to produce a predictable response [M,C]
- Demonstrates a recognizable means to obtain a person's attention (verbal, nonverbal means) [M, C]
- Represents problem situations using concrete objects (demonstrates movement of area of body to express discomfort) [M, C]

Extended Standards
Statistics and Probability

Goal 5: Students will apply statistical methods to analyze data and explore probability for making decisions and predictions.

Indicator 1: Use statistical models to gather, analyze, and display data to draw conclusions.

Extended Standard

E.S.1.1 Gather and Organize Data

Target Skills

Target Skills for some student, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Gather and organize data.** *(E.S.1.1)*

- Collects, matches, and/or sorts objects with similar characteristics (matches/sorts items such as hats, gloves, nuts, bolts, etc.)
- Demonstrates ways to sort and/or group given sets of objects or data (puts like objects in baskets, object or picture based graphs)
- Identifies where to get data about a category (asks a nurse for medication, knows who to call in an emergency)
- Describes characteristics of an object, picture, or manipulative (soft pillow, cold ice, hot soup)
- Uses interviews, surveys, and observations to gather data (observes the sky conditions for 5 days, conducts a survey on classmates' eye colors)
- Describes and compares observable quantities of collected data (determines the flavor of ice cream that most people like)
- Collects data from various sources or situations using surveys and simple experiments

- Collects and records information using objects, tally, pictures, or other strategies (self-monitors behavior, displays timed intervals of appropriate behavior, crosses days off calendar)
- Records and organizes data into tally charts, picture graphs, and bar graphs

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Gather and organize data**. *(E.S.1.1)*

M= Motor *S=Social* *C=Communication* *A=All*

- Observes and sorts out differences between environments (behavioral-tolerates changes in environment, reacts to changes) [S]
- Responds to sensory methods (touch cue, auditory, etc.) to gain information about specific items or tasks (loud noises, cold or hot) [M, C]
- Understands that objects may be used to represent events (toothbrush to mouth means time to brush teeth, raises arms for lap tray or presentation of switch) [C]
- Indicates an awareness of collections within the environment (books, shoes, boys/girls, etc.) [M, C]

Extended Standard

E.S.1.2 Display and Use Data Information

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Display and use data Information.** *(E.S.1.2)*

- Chooses a symbol, picture, or object from four choices via eye gaze to represent his/her preference of a food item to add to a class graph
- Accesses assistive technology to display computer images
- Determines if data collected is relevant and/or appropriate (sorts picture symbols into correct categories, when sorting blue and red blocks does not use yellow blocks)
- Uses data about life situations to make predictions and justify reasoning (when it's cloudy, it will probably rain, so, I should take an umbrella)
- Uses data from traffic/traffic signals to predict ability to cross the street safely
- Uses data/information from a list (make deliveries, read room numbers, follow directions)
- Sorts data into general and subcategories to solve the problem or situation (how many students have hats, how many boys have hats)
- Tallies up token economy point system (Boys Town Model)
- Demonstrates the ability to key in numbers into a keypad from a visual source

- Places a symbol or concrete object in the correct position on a graph
- Represents data sets in more than one way (sorting, charts, line graphs, bar graphs)
- Labels data accurately (labeling axis' correctly, knows categories)
- Matches lists, tables, or graphs with actual set of data (matches pictures and/or symbols with real objects)
- Describes represented data in terms of most often, least often (mode)
- Creates and reads simple graphs representing meaningful information and relationships

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Display and use data Information**. *(E.S.1.2)*

M= Motor *S=Social* *C=Communication* *A=All*

- Demonstrates a predictable response to sensory cues (startles to loud noises, opens eyes to light, etc.) [M]
- Demonstrates a recognizable response to display emotions [A]
- Uses gestures, symbols, or pictures to relate information to represent communicative intent [C]

Extended Standard

E.S.1.3 Analyze Data

Target Skills

Target Skills for some student, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Analyze data.** *(E.S.1.3)*

- Indicates an understanding of comparison words within the natural environment such as: more, fewer, same, none, larger, smaller, least (minimum), most (maximum), middle (median)
- Responds to yes or no questions and to problems presented pictorially or numerically in class (do more kids like the color blue)
- Uses comparison words to describe the elements of a collection/group within the natural environment (larger, fewer, more, less, etc.)
- Determines the range of a set of data (how many students liked pizza, how many students did not like pizza, what is the difference between the two groups)
- Draws conclusions from various representations of data sets (tables, bar graphs, pictographs, etc.)
- Breaks tasks into smaller parts and makes connections to prior knowledge
- Reads and applies information from bar graphs and pictographs to answer mathematics questions using concepts of largest, smallest, most often (mode), and middle (median)

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Analyze data**. *(E.S.1.3)*

M= Motor *S=Social* *C=Communication* *A=All*

- Initiates a movement following analysis of a situation to assist with the completion of a routine activity (when diapering, student will open/close legs, seeing the lap tray student will raise their arms, etc.) [M, C]
- Indicates through movement, switch activation, or vocalization that an activity has begun, changed or stopped (opens eyes when spoken to, change in respiration when agitated or excited, cries when game is over or left alone) [M, C]
- Demonstrates a differentiated response to stimuli (recognizes and initiates a response when cold, hot or hungry, responds to fire alarm or tornado drill) [M, C]
- Demonstrates awareness that symbols may be used to represent objects or events (matches pictures and/or symbols to real objects) [M, C]

Indicator 2: Apply the concepts of probability to predict events/outcomes and solve problems.

Extended Standard

E.S.2.1 Predict outcomes, draw simple conclusions, and report results based on collected data.

Target Skills

For some students, target skills need to be applied and practiced within the context of instructional activities to allow students to reach the extended standard of **Predict outcomes, draw simple conclusions, and report results based on data collected.** *(E.S.2.1)*

- Predicts movements needed to negotiate obstacles in the environment (negotiates corners, doorways, curbs in a wheelchair or walker, lifts foot to climb or descend stair, etc.)
- Identifies by eye gaze, pointing, augmentative communication, or verbally labeling which is the winner/loser of a simple game of chance
- Role-plays real-life situations to determine if solution makes sense (number of chairs equals number of people who can sit at a table, number of eggs in an egg carton, number of treats for the class)
- Makes predictions about events/situations that are likely or certain (the sun rising every morning, choosing a yellow marble out of a bag of yellow marbles)
- Makes predictions about events/situations that are not likely or impossible (snowfall in August, choosing a blue marble from a bag of red marbles)
- Implements understanding of probability to demonstrate appropriate classroom behavior (sets up expectations, behavior contracts/plans)

- Uses strategies such as counting, measuring, etc. to determine possible outcomes in problem solving (uses exact amounts of ingredients when baking or the “cookies” won’t turn out right, too much water makes the juice taste weak)
- Performs simple cause and effect experiments (uses electronic switch, simple machine, or other objects, pictures, and/or manipulatives)
- Predicts the effect when given a cause (if I touch the hot stove, I will get burned; if I demonstrate appropriate behavior, I will get a reward; if I demonstrate inappropriate behavior, I will get timeout)
- Speculates on the cause when given an effect (band aid on finger—speculates an injury)
- Uses the concept of chance to demonstrate probability of actual events and game situations (I won last time, so I will probably win again)
- Predicts outcomes of activities involving chance (if you have 4 red marbles and 2 blue marbles in a bag, which color are you most likely to choose)
- Uses outcome information to predict future occurrences (which hits first when dropped, a feather or a rock)
- Demonstrates possible arrangements of a limited number of objects (how many ways can a blue, a red, and a green block be lined up)
- Demonstrates what happens to results when data is pooled (each person contributes their results to a class data set)
- Predicts the amount of his/her next paycheck based on his/her salary and attendance

Access Skills

For some students, motor, social, and communication skills need to be applied and practiced within the context of instructional activities to serve as an entry point to the extended learning standard of **Predict outcomes, draw simple conclusions, and report results based on data collected.** *(E.S.2.1)*

M= Motor *S=Social* *C=Communication* *A=All*

- Follows if-then or first-next statements (<u>if</u> I open my mouth, <u>then</u> I get fed; <u>first</u> I activate the switch, <u>next</u> the music starts) [A]
- Follows a pattern of prompts in order to predict the next or final event (morning routines, daily routines, classroom schedules) [M, C]
- Uses switch activated spinner to make choices in activities (chooses favorite game, favorite food, takes turns) [A]

Glossary

Alternate assessment—An assessment used in place of a regular test because of the nature of severity of a student's disability and the student's course of study.

Access skills are defined as motor, social and communication skills applied and practiced within the context of instructional activities based on the extended learning standards. This allows a student with a severe disability to gain entrance (or access) to and participate in the general curriculum as required by Individuals with Disabilities Education Act 1997.

Entry points— provide a range of options at which a student with a disability can access the learning standard at a challenging level.

IEP--Individualized Education Program

Large scale assessment—An approach to testing whereby an entire population of students (e.g., all fourth graders, all eighth graders) are administered an achievement test as part of an accountability system.

Modifications—Changes that alter the level or content of the test. Examples include giving a lower grade level of a test or deleting or changing the content of a test. Modifications are distinct from testing accommodations in that testing accommodations change non-content aspects of a test.

Nonstandard accommodation—is actually a modification. An accommodation that is not generally approved or endorsed, either due to lack of previous research, or because of educational policies guiding accommodations use.

Performance levels—an objective statement of level of performance required for students to demonstrate proficiency on content standards. Performance levels define how well students must do to demonstrate mastery of content standards.

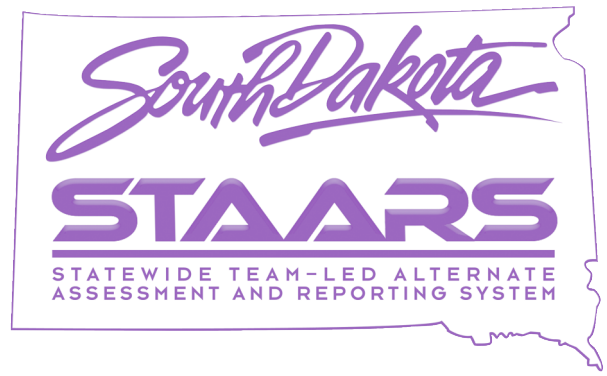
Standard accommodation- is an accommodation term used with our statewide assessments. It does not invalidate the test because it does not fundamentally alter it. It is leveling the playing field. A standard accommodation is also called a "reasonable accommodation."

Target skills are defined as higher level skills that enable students with disabilities to individually utilize the extended standards in order to demonstrate a link to the South Dakota Content Standards.

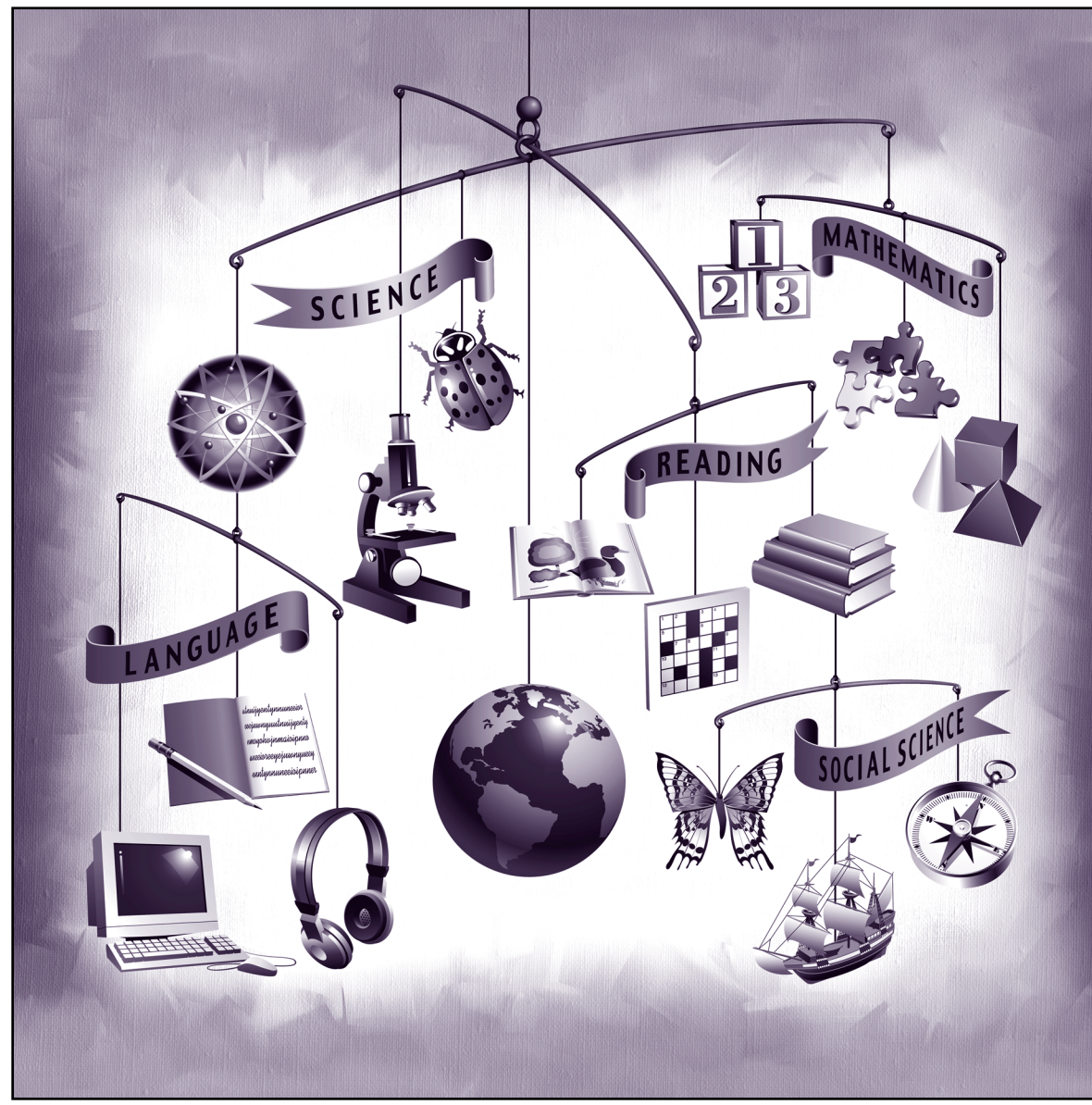
Testing accommodations-- Changes in the way a test is administered to a student or responded to by a student. Testing accommodations are intended to offset distortions in test scores caused by a disability without invalidating or changing what the test measures. Common testing accommodations involve extra time, assistance with directions, and assistance with reading.

Appendix C: Rating Scale

STAARS_r4_RatingForm_CWG.qxd 9/27/04 2:15 PM Page 1



STAARS Rating Form



Copyright © 2004 by Harcourt Assessment, Inc. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the publisher.

HARCOURT and the Harcourt logo are trademarks of Harcourt Assessment, Inc., registered in the United States and/or other jurisdictions.

Printed in the United States of America.

ISBN 999809823-8

9 789998 098237

Harcourt

Directions

The *STAARS Rating Form* is designed to measure important behaviors an individual displays at home, school, work, and other settings. The behaviors included on this scale range from those suitable for young children to those suitable for young adults. Some items may seem too difficult for some students while others may seem too easy for older students. Therefore, the student you are rating is likely to display some but not all behaviors included on this scale.

Please read and answer all items.

Rate the student according to how often he or she **correctly** performs a behavior, **without help**, when the behavior needs to be displayed. The rating you choose should reflect the frequency with which the child performs the behavior without help, **when it is needed**. Record your response for each item by circling one of the following:

0 **Is Not Able**

1 **Never** or **Almost Never When Needed**

2 **Sometimes When Needed**

3 **Always** or **Almost Always When Needed**

Then evaluate whether you have observed the behavior or if you are guessing about the frequency of its occurrence. If your rating is based on a guess, put a check (✓) in the box marked **Check If You Guessed**. If your answer is based on observation or direct knowledge, leave this column blank.

The following example shows how to complete the Rating Form:

		BEHAVIOR FREQUENCY				
	Is Not Able	**Never** When Needed	**Sometimes** When Needed	**Always** When Needed	**Check** If You Guessed	**Comments**
4. Tells teachers, friends, or others about his/her favorite activities.	0	1	2	3	☐	○
5. Says "Hello" and "Good-bye" to others.	0	1	2	3	☑	○
6. Uses sentences with a noun and a verb.	0	1	2	3	☐	○

In the example above, the student being rated **Always** (or Almost Always) tells teachers, friends or others about his/her favorite activities when needed; **Sometimes** says "Hello" and "Good-bye" to others; and **Is Not Able** to use sentences with a noun and a verb. The ratings of Items 4 and 6 are based on observation or direct knowledge; therefore the **Check If You Guessed** column is left blank. The rater guessed on Item 5, so the **Check If You Guessed** column is marked.

STAARS_r4_RatingForm_CWG.qxd 9/27/04 2:15 PM Page 3

Rating	The student:
0 **Is Not Able**	• cannot perform the behavior, • is too young to have tried the behavior, or • has a physical condition that prevents the behavior.
1 **Never** or **Almost Never When Needed**	**has the ability to perform the behavior, but** • never or almost never does it when needed, or • never or almost never does it on his/her own without being reminded.
2 **Sometimes When Needed**	**has the ability to perform the behavior, and** • only does it sometimes when needed; • sometimes does it without help, but sometimes needs help, or • sometimes does it on his/her own, but sometimes needs to be reminded.
3 **Always** or **Almost Always When Needed**	**has the ability to perform the behavior, and** • displays the behavior most or all of the time without being reminded, or • displayed the behavior at a younger age, but has now outgrown it.

Column	Check this column if:
Check If You Guessed	• your rating was an estimate. • you have never seen the student in a situation in which the behavior is needed. • the student has not had the opportunity to perform the behavior.
Comments	• you do not understand an item.* • you feel it would be helpful to discuss an item with the assessment professional.*

* *You may make a brief note of your concerns in the* **Notes** *box on the back page of this Rating Form.*

Communication

	Is Not Able	BEHAVIOR FREQUENCY: Never When Needed	Sometimes When Needed	Always When Needed	Check If You Guessed	Comments
1. Shakes head or says "yes" or "no" in response to a simple question, for example, "Do you want something to drink?"	0	1	2	3	☐	○
2. Says the names of other people, for example, teachers' or friends' names.	0	1	2	3	☐	○
3. Names 20 or more familiar objects.	0	1	2	3	☐	○
4. Tells teachers, friends, or others about his/her favorite activities.	0	1	2	3	☐	○
5. Says "Hello" and "Good-bye" to others.	0	1	2	3	☐	○
6. Uses sentences with a noun and a verb.	0	1	2	3	☐	○
7. Looks at others' faces when they are talking.	0	1	2	3	☐	○
8. Follows teacher's verbal instructions when undertaking tasks or activities, for example, a classroom project or a new game.	0	1	2	3	☐	○
9. Speaks clearly and distinctly.	0	1	2	3	☐	○
10. Listens closely for at least five minutes when the teacher talks.	0	1	2	3	☐	○
11. Pays attention during classroom discussions for as long as needed.	0	1	2	3	☐	○
12. Nods or smiles to encourage others when they are talking.	0	1	2	3	☐	○
13. Ends conversations appropriately.	0	1	2	3	☐	○
14. Takes turns talking during conversations with people (is not too talkative or too quiet).	0	1	2	3	☐	○
15. Says irregular plural nouns, for example, *knives* or *mice*.	0	1	2	3	☐	○

continued

STAARS_r4_RatingForm_CWG.qxd 9/27/04 2:15 PM Page 4

Communication *continued*

	Is Not Able	BEHAVIOR FREQUENCY Never When Needed	Sometimes When Needed	Always When Needed	Check If You Guessed	Comments
16. Gives verbal instructions that involve two or more steps or activities.	0	1	2	3	☐	○
17. Starts conversations on topics of interest to others.	0	1	2	3	☐	○
18. States his/her own telephone number.	0	1	2	3	☐	○
19. Talks about realistic future educational or career goals.	0	1	2	3	☐	○
20. States home address, including zip code.	0	1	2	3	☐	○
21. Answers complex questions that require careful thoughts and opinions, for example, questions about politics or current events.	0	1	2	3	☐	○
22. Uses up-to-date information to discuss current events.	0	1	2	3	☐	○
		Total		/66	Total Guessed	

Community Use

1. Finds the restrooms at school by himself/herself.	0	1	2	3	☐	○
2. Shows respect for school or public property, for example, throws trash in cans and does not damage playground equipment.	0	1	2	3	☐	○
3. Obeys authority of community officials, for example, police officers or teachers.	0	1	2	3	☐	○
4. Identifies hospital, gas station, fire department, and other community services during class discussions.	0	1	2	3	☐	○
5. Looks both ways before crossing school driveway or school parking lot.	0	1	2	3	☐	○
6. Runs errands to various locations in school building.	0	1	2	3	☐	○
7. Identifies services provided by professionals in community during class discussions, for example, medical personnel or law enforcement.	0	1	2	3	☐	○
8. Describes procedures for contacting community services in case of emergency.	0	1	2	3	☐	○
9. States which bus is taken to school.	0	1	2	3	☐	○
10. Uses the school or local library to check out books, use reference materials, or for other purposes.	0	1	2	3	☐	○
11. Travels with classmates and teachers to locations more than 50 miles from school, for example, school or field trips.	0	1	2	3	☐	○
12. Carries enough money to make small purchases, for example, a soft drink.	0	1	2	3	☐	○
13. Relies on himself/herself for travel in the community, for example, walks or uses public transportation, a bicycle, or a car.	0	1	2	3	☐	○
14. States general address of a travel destination, for example, "On Washington Avenue, near Lake Street."	0	1	2	3	☐	○
15. Tells others about a store's hours of operation, for example, "10 a.m. to 9 p.m."	0	1	2	3	☐	○
		Total		/45	Total Guessed	

STAARS_r4_RatingForm_CWG.qxd 9/27/04 2:15 PM Page 5

Functional Academics

	Is Not Able	BEHAVIOR FREQUENCY Never When Needed	Sometimes When Needed	Always When Needed	Check If You Guessed	Comments
1. Reads his/her own written name.	0	1	2	3	☐	○
2. States the days of the week in order.	0	1	2	3	☐	○
3. Writes his/her own first and last name.	0	1	2	3	☐	○
4. Reads and obeys common signs, for example, *Do Not Enter*, *Exit*, or *Stop*.	0	1	2	3	☐	○
5. Locates important dates on a calendar, for example, birthdays or holidays.	0	1	2	3	☐	○
6. Reads and follows a daily classroom schedule.	0	1	2	3	☐	○
7. Reads and follows instructions for classroom projects or activities.	0	1	2	3	☐	○
8. Measures length and height.	0	1	2	3	☐	○
9. Uses a scale to weigh objects.	0	1	2	3	☐	○
10. Writes his/her own address, including zip code.	0	1	2	3	☐	○
11. Reads school lunch menus.	0	1	2	3	☐	○
12. Tells time correctly, using a watch or a clock with hands.	0	1	2	3	☐	○
13. Combines coins to produce the correct amount of money, for example, a quarter plus a dime equals 35 cents.	0	1	2	3	☐	○
14. Writes letters, notes, or e-mails.	0	1	2	3	☐	○
15. Follows a favorite interest or current event by reading newspapers, books, or other materials.	0	1	2	3	☐	○
16. Writes down assignments as a reminder.	0	1	2	3	☐	○
17. Uses the index in a book to locate desired topic.	0	1	2	3	☐	○
18. Uses a dictionary or encyclopedia to find information.	0	1	2	3	☐	○
19. Takes notes during class.	0	1	2	3	☐	○
20. Writes a list of school supplies or assignments.	0	1	2	3	☐	○
21. Reads important documents, for example, class registration and announcements, or school conduct policies.	0	1	2	3	☐	○
22. Completes forms for school administrators by himself/herself, for example, medical, school, or field trip registration forms.	0	1	2	3	☐	○
		Total		/ 66	Total Guessed	

STAARS_r4_RatingForm_CWG.qxd 9/27/04 2:15 PM Page 6

Leisure

	Is Not Able	BEHAVIOR FREQUENCY Never When Needed	Sometimes When Needed	Always When Needed	Check If You Guessed	Comments
1. Plays with toys, games, or other fun items with classmates.	0	1	2	3	☐	○
2. Selects free-time activities to do alone in the classroom without asking the teacher to select them.	0	1	2	3	☐	○
3. Looks at pictures or reads books or magazines during free class time.	0	1	2	3	☐	○
4. Waits for his/her turn in games and other classroom activities.	0	1	2	3	☐	○
5. Plays alone in the classroom with toys, games, or other fun activities.	0	1	2	3	☐	○
6. Follows the rules in games and other classroom activities.	0	1	2	3	☐	○
7. Uses the free time during the school day productively.	0	1	2	3	☐	○
8. Participates with others in a game or other activity without needing encouragement.	0	1	2	3	☐	○
9. Invites others to join him/her in playing games and other activities.	0	1	2	3	☐	○
10. Participates in a specific fun activity on a routine basis, for example, listening to a certain type of music or playing a favorite computer game.	0	1	2	3	☐	○
11. Asks classmates what game or activity they would like to do during free time at school.	0	1	2	3	☐	○
12. Invites others to go first in games, play, or other activities.	0	1	2	3	☐	○
13. Tries a new activity to learn about something new.	0	1	2	3	☐	○
14. Remembers the game or activity a classmate likes and offers to participate.	0	1	2	3	☐	○
15. Participates in a club, sports team, or organized group activity, even when arranged by a teacher or parent.	0	1	2	3	☐	○
16. Participates in an organized program for a sport or hobby, for example, takes a music class or practices basketball.	0	1	2	3	☐	○
17. Organizes a game or other activity at school for a group of classmates without help from others.	0	1	2	3	☐	○
		Total		/51	Total Guessed	

STAARS_r4_RatingForm_CWG.qxd 9/27/04 2:15 PM Page 7

Social

	Is Not Able	BEHAVIOR FREQUENCY Never When Needed	Sometimes When Needed	Always When Needed	Check If You Guessed	Comments
1. Has good relationships with teachers and other adults.	0	1	2	3	☐	○
2. Seeks friendships with others in his/her age group.	0	1	2	3	☐	○
3. Has one or more friends.	0	1	2	3	☐	○
4. Says "Thank you" when given a gift.	0	1	2	3	☐	○
5. Laughs in response to funny comments or jokes.	0	1	2	3	☐	○
6. Stands a comfortable distance from others during conversations (not too close).	0	1	2	3	☐	○
7. Says when he/she feels happy, sad, scared, or angry.	0	1	2	3	☐	○
8. Keeps a stable group of friends.	0	1	2	3	☐	○
9. Waits in line at school.	0	1	2	3	☐	○
10. Says "Please" when asking for something.	0	1	2	3	☐	○
11. Offers assistance to classmates or teachers.	0	1	2	3	☐	○
12. Apologizes if he/she hurts the feelings of others.	0	1	2	3	☐	○
13. Moves out of another person's way without being asked.	0	1	2	3	☐	○
14. Places reasonable demands on friends, for example, does not become upset when a friend plays with another friend.	0	1	2	3	☐	○
15. Shows sympathy for others when they are sad or upset.	0	1	2	3	☐	○
16. Refrains from saying something that might embarrass or hurt others.	0	1	2	3	☐	○
17. Shows good judgment in selecting friends.	0	1	2	3	☐	○
18. States when others seem happy, sad, scared, or angry.	0	1	2	3	☐	○
19. Congratulates others when something good happens to them.	0	1	2	3	☐	○
20. Compliments others for good deeds or behavior, for example, honesty or kindness.	0	1	2	3	☐	○
		Total		/60	Total Guessed	

STAARS_r4_RatingForm_CWG.qxd 9/27/04 2:15 PM Page 8

Academic Skills—Reading/Language Arts

	Is Not Able	BEHAVIOR FREQUENCY Never When Needed	Sometimes When Needed	Always When Needed	Check If You Guessed	Comments
1. Aware of sounds/visual events near them	0	1	2	3	☐	○
2. Responds to own name.	0	1	2	3	☐	○
3. Comprehends at least 10 spoken words (nouns) without cues (e.g., dog, Mom, Dad)	0	1	2	3	☐	○
4. Recognizes alike and different shapes (precursor to letters; pre-reading)	0	1	2	3	☐	○
5. Responds to routine instructions.	0	1	2	3	☐	○
6. Follows routine verbal instructions (get in line)	0	1	2	3	☐	○
7. Demonstrates awareness of print materials	0	1	2	3	☐	○
8. Knows letters in name	0	1	2	3	☐	○
9. Knows spoken word to picture	0	1	2	3	☐	○
10. Knows alphabet	0	1	2	3	☐	○
11. Recognizes own name in print	0	1	2	3	☐	○
12. Knows 10 sight words	0	1	2	3	☐	○
13. Holds book right side up	0	1	2	3	☐	○
14. Able to repeat three-word sentence (pre-reading)	0	1	2	3	☐	○
15. Can produce rhymes for simple words (pre-reading)	0	1	2	3	☐	○
16. Has a sight vocabulary of 20 words in print	0	1	2	3	☐	○
17. Knows sounds of consonants	0	1	2	3	☐	○
18. Knows sounds of vowels	0	1	2	3	☐	○
19. Discriminates phonemes beginning sounds (pre-reading)	0	1	2	3	☐	○
20. Discriminates phonemes ending sounds (pre-reading)	0	1	2	3	☐	○
21. Matches phoneme to word (auditory/verbal) b for bat (pre-reading)	0	1	2	3	☐	○
22. Knows printed word to picture	0	1	2	3	☐	○
23. Knows multiple printed words to picture	0	1	2	3	☐	○
24. Can read simple sentence (less than 5 words)	0	1	2	3	☐	○
25. Can read two simple sentences together	0	1	2	3	☐	○
26. Comprehends two sentence stories	0	1	2	3	☐	○
27. Comprehends short passages with questions	0	1	2	3	☐	○
28. Can read short passages with questions	0	1	2	3	☐	○
29. Can read longer passages with questions	0	1	2	3	☐	○
30. Can follow menu	0	1	2	3	☐	○
31. Can read school/work schedule	0	1	2	3	☐	○
32. Can draw conclusions from simple written passage	0	1	2	3	☐	○
		Total		/96	Total Guessed	

STAARS_r4_RatingForm_CWG.qxd 9/27/04 2:15 PM Page 9

Academic Skills—Mathematics

	Is Not Able	BEHAVIOR FREQUENCY: Never When Needed	Sometimes When Needed	Always When Needed	Check If You Guessed	Comments
1. Can count to 5 using manipulatives	0	1	2	3	☐	○
2. Can count to 10 using manipulatives	0	1	2	3	☐	○
3. Can count to 10 verbally	0	1	2	3	☐	○
4. Can recognize numerals 1–10	0	1	2	3	☐	○
5. Can print numerals 1–10	0	1	2	3	☐	○
6. Recognizes that 1 = ■; 2 = ■■, up to 10	0	1	2	3	☐	○
7. Can count to 20 using manipulatives	0	1	2	3	☐	○
8. Can count to 50 using manipulatives	0	1	2	3	☐	○
9. Can count by 1's	0	1	2	3	☐	○
10. Can count by 5's	0	1	2	3	☐	○
11. Can count by 10's	0	1	2	3	☐	○
12. Demonstrates understanding of more/less using manipulatives or number line	0	1	2	3	☐	○
13. Can read a number chart to 100	0	1	2	3	☐	○
14. Understands concept of place value (e.g., using manipulatives, understands ones, tens, hundreds)	0	1	2	3	☐	○
15. Can recognize that numbers represent time	0	1	2	3	☐	○
16. Can recognize that numbers represent money	0	1	2	3	☐	○
17. Can do pattern analysis	0	1	2	3	☐	○
18. Can do simple addition: $\begin{array}{r}1\\+3\\\hline\end{array}$	0	1	2	3	☐	○
19. Can do more complex addition: (no carrying) $\begin{array}{r}22\\+33\\\hline\end{array}$ $\begin{array}{r}123\\+456\\\hline\end{array}$	0	1	2	3	☐	○
20. Can carry in simple addition	0	1	2	3	☐	○
21. Can do simple subtraction under 10: $\begin{array}{r}5\\-3\\\hline\end{array}$ $\begin{array}{r}9\\-5\\\hline\end{array}$	0	1	2	3	☐	○
22. Can do more complex subtraction: (no borrowing) $\begin{array}{r}25\\-13\\\hline\end{array}$	0	1	2	3	☐	○
23. Can borrow in subtraction	0	1	2	3	☐	○
24. Can do simple multiplication: (no carrying) $\begin{array}{r}3\\\times3\\\hline\end{array}$	0	1	2	3	☐	○
25. Can do multiplication with carrying: $\begin{array}{r}4\\\times3\\\hline\end{array}$	0	1	2	3	☐	○
26. Can do more complex multiplication: $\begin{array}{r}47\\\times3\\\hline\end{array}$	0	1	2	3	☐	○
27. Can do simple division under 10: $9 \div 3$	0	1	2	3	☐	○
28. Can do more complex division: $81 \div 9$	0	1	2	3	☐	○
29. Can do division with remainders	0	1	2	3	☐	○

continued

Academic Skills—Mathematics *continued*

	Is Not Able	BEHAVIOR FREQUENCY Never When Needed	Sometimes When Needed	Always When Needed	Check If You Guessed	Comments
30. Correctly identifies coins (penny, nickel, dime, quarter)	0	1	2	3	☐	○
31. Understands money is used to purchase things	0	1	2	3	☐	○
32. Can make change under $1.00	0	1	2	3	☐	○
33. Can make change under $5.00	0	1	2	3	☐	○
34. Can make change under $10.00	0	1	2	3	☐	○
35. Understands simple fractions in context: (_ candy bar, _ pizza)	0	1	2	3	☐	○
36. Can utilize fractions in measuring, as in cooking: (1/2 cup)	0	1	2	3	☐	○
37. Can read and understand mixed fractions in a practical/familiar context: as in working, cutting wood, measuring recipe items.	0	1	2	3	☐	○
38. Can use numbers to solve daily problems	0	1	2	3	☐	○
39. Tells time correctly	0	1	2	3	☐	○
40. Can write out checks	0	1	2	3	☐	○
		Total		/ 120	Total Guessed	

Please return your completed Rating Form to

_____

(Special Education Teacher)

STAARS_r4_RatingForm_CWG.qxd 9/27/04 2:15 PM Page 11

Notes:

STAARS_r4_RatingForm_CWG.qxd 9/27/04 2:15 PM Page 12

Demographic Data Page

Student's Name _____ Gender ☐ M ☐ F
First Middle Last

Student ID Number _____ Grade _____

School _____

Teacher _____

District _____

Resident school & district, if different _____

Age

	Year	Month	Day
Today's Date			
Date of Birth			
Age			

Check all that apply.

	Test Used		Plan		
	D-STEP	STAARS	IEP	504	LEP
Reading/ Language Arts					
Mathematics					

Race/Ethnicity

☐ American Indian or Alaskan Native
☐ Asian or Pacific Islander
☐ Black/African American (Non-Hispanic)
☐ Hispanic
☐ White (Non-Hispanic)

Accommodations needed/used

_____

_____

_____

_____

_____

Rater's Name _____

Position _____

Years in This Position _____ Years Experience _____ Date Certified _____

Phone: Day _____ Evening _____

Email _____

Directions: Please send all *used* materials to AccuData Services Inc., in December 2004 and April 2005.
Address: Harcourt c/o AccuData Services, Inc., 17317 Bell North Dr., Shertz, TX 78154.
Please use the labels provided in your STAARS Administration packet.

Appendix D: Directions for Administration

Appendix E: Test Coordinator's Manual