

Resources for Assessment of Students Who are Deaf and  
Hard of Hearing

Fall 2008



Assessment of Students Who are Deaf and Hard of Hearing

.....

Fall 2008

Prepared by:

Susan Rose, Ph.D. • University of Minnesota

Lauren Barkmeier • University of Minnesota

Sherry Landrud, M.Ed. • Intermediate School District 287

Valerie Klansek-Kyllo, Ph.D. • Consultant

Patricia McAnally, Ph.D. • Consultant

Kristen G. Larson, M.Ed. • Intermediate School District 196

Valerie Hoekstra, M.A. • Minnesota State Academy of the Deaf

Original – 1998

Coordinated by;

Mary Cashman-Bakken, J.D.

Minnesota Department of Education

Minnesota Resource Center for the Deaf and Hard of Hearing

615 Olof Hanson Drive

P.O. Box 308

Faribault, MN 55021-0308

## Introduction

.....

This manual was prepared through the support of the Minnesota Department of Education, Minnesota Resource Center: Deaf/Hard of Hearing, Coordinated by Mary Cashman-Bakken.

The purpose of this manual is to provide information and guidance for conducting assessments and monitoring student progress as required for all children by federal, state or local mandates developed since the passage of No Child Left Behind (NCLB).

Assessment and evaluation of progress among children who are deaf or hard of hearing is a complex process. Challenges often go undetected by individuals unfamiliar with the hidden impact of a hearing loss. Challenges to professionals in the field of D/HH education are particularly notable in the areas of information access, communication modalities, language, selection and application of assessment tools, technology, and access to highly qualified personnel. The local educational agency (LEA) continues to be responsible for providing a team comprised of a) qualified professionals and b) the parents to collect multiple sources of information relevant to determining eligibility for specialized services and then developing an educational program that is not only individualized but leads to measurable increases in learning.

For the first time, general education accountability legislation has had significant connection to children with disabilities, including children who are deaf and hard of hearing. No Child Left Behind (NCLB) has had an impact on the title as well as language in the 2004 re-authorization of the federal special education law. The 2004 Individuals with Disabilities Education Improvement Act (also known as Individuals with Disabilities Education Act or IDEA) clarified or modified various aspects of its original language on evaluation since this manual was last revised. These modifications include: a) requirements for highly qualified personnel, b) the types of measurement tools or technology approved for use, c) the relevance of general education information, d) the role and responsibilities of parents, e) the impact of student transfers within or outside a state, f) when re-evaluation is required, and g) access to general education instruction in reading and other selected curriculum areas.

Effective teachers of students who are deaf or hard of hearing have always understood the link between evaluation and instruction that results in increased learning, however, never before have these teachers faced the current level of mandates related to measuring their students' academic achievement levels, rate of progress and the reporting of their assessment results to so many constituencies. This manual is intended to support teachers in meeting their obligations to appropriately evaluate their students who are deaf or hard of hearing.

## Table of Contents

.....

Assessment Requirements	5
State Rules and Regulations	7
A. Overview of Assessment with Students Who are Deaf and Hard of Hearing	9
• Formal versus Informal	11
• Curriculum-Based Assessment	12
• Observation	13
• Interviews	16
• Student Progress Monitoring	17
B. Specialized Assessment Protocols	19
• Part 1: Intellectual and Social Emotional	19
• Part 2: Language and Reading	30
• Part 3: Early Childhood (Part C)	44
C. Transition	56
D. Web Resources Related to Assessment	57
E. Appendices	
a. Definitions and examples of systematic observation techniques	59
b. Observational record of behavior	63
c. Guidelines for determining the need for an educational interpreter/transliterators	70
d. IEP accommodations	71
e. Questions for conducting a student interview	73
f. Sample evaluation report	74
F. Glossary of Terms	81
G. References	82

## Assessment Requirements

.....

Several important laws require the participation of learners with disabilities, including those who are deaf or hard of hearing, in standards-based instruction and assessment initiatives. These federal laws, notably No Child Left Behind 2001 (NCLB) and the Individuals with Disabilities Education Improvement Act of 2004 (IDEA), provide direction for statewide assessment development and implementation at the local level. These requirements directly impact the special education teams working with children who are deaf or hard of hearing.

The *accountability movement for results* spearheaded the growth of statewide assessments. NCLB became the watershed mandate for public accountability in K-12 public education at the school, district and state levels for all students, including those students with disabilities. IDEA clearly addresses facilitating all-student access to grade level instruction and state assessments and requires assurances from the states on these requirements. Providing high-quality, annual assessments was the result of a federal policy drive for stronger accountability for results for all learners by providing important information on student learning at the grade, school, district and state levels. Reporting is now extensive and public as a result of NCLB.

Statewide assessments have existed in Minnesota in various forms for selected grades in selected curricular areas for some time. Those requirements have grown in number and in specificity over the past seven years. Minnesota, like many other states, has both revised and augmented the number and kinds of assessments required of students in response to NCLB. While this law is not without some controversy and targeted criticism, there is no longer any question that children with disabilities, including those who are deaf or hard of hearing, must participate in these types of assessments.

Reasonable adaptations and accommodations for students with disabilities have been defined in IDEA. Other IDEA provisions related to accountability address the development of the long-standing IEP for accountability at the individual level, the requirement to include in the IEP a statement of any individual modifications in the administration of state or district-wide assessments of student achievement that are needed in order for the learner to participate in such assessment; and *if the IEP team determines that the learner will not participate in a particular state or district-wide assessment of student achievement (or part of such an assessment), a statement of why that assessment is not appropriate for the learner; and how the learner will be assessed* [Sec. 614 (d) (1) (A) (V) and VI].

When IDEA was re-authorized in 2004, the augmented title of that law includes the word “improvement” which signaled the intention of national policy-makers that “all” really meant “all” in terms of accountability for results was not negotiable. Changes in requirements for teachers, including those licensed to teach students with special education needs, and revisions of curriculum standards buttressed the assessment for results policy changes. Teacher training programs responded to these

policy changes and material and training supports to teachers in the field had to be developed and provided. This manual is but one example of increasing support mechanisms for teachers.

The Minnesota Department of Education Website provides a variety of documents and training opportunities to support teachers with their responsibilities for assessment and accountability. Teachers should review these resources on a regular basis. Teachers are critical players in ensuring that learners who are deaf or hard of hearing have equal access to grade-level content standards and participate in the accountability measures that are increasingly required. Teachers of the deaf and hard of hearing bring their specialized skills and knowledge of specific instructional strategies needed by students with hearing loss as well as providing accommodations during instruction and assessments.

As indicated earlier, effective teachers of the deaf and hard of hearing have always recognized the critical link between assessment and instruction in curricular areas. Even though such linkage has been formalized in policy initiatives at the federal and state levels, it remains critical to individual learning and progress. The linkage for the individual student between instruction and assessment must not be neglected or forgotten as a result of efforts required to meet state and federal requirements. Success at the individual student level remains paramount to special education service design and delivery.

MINNESOTA CRITERION FOR DEAF AND HARD OF HEARING  
(MINNESOTA RULE SECTION: 3.3.6)

.....  
[https://www.revisor.leg.state.mn.us/rules\\_id=3525.1331](https://www.revisor.leg.state.mn.us/rules_id=3525.1331)

1. Definition. “Deaf and hard of hearing” means a diminished sensitivity to sound, or hearing loss, that is expressed in terms of standard audiological measures.

Hearing loss has the potential to affect educational, communicative, or social functioning that may result in the need for special education instruction and related services.

2. Criteria. A pupil who is deaf or hard of hearing is eligible for special education instruction and related services if the pupil meets one of the criteria in item A and one of the criteria in item B, C, or D.

- A. There is audiological documentation provided by a certified audiologist that a pupil has **one of the following**:

- (1) A sensorineural hearing loss with an unaided pure tone average, speech threshold, or auditory brainstem response threshold of 20 decibels hearing level (HL) or greater in the better ear;  
OR
- (2) A conductive hearing loss with an unaided pure tone average or speech threshold of 20 decibels hearing level (HL) or greater in the better ear persisting over three months or occurring at least three times during the previous 12 months as verified by audiograms with at least one measure provided by a certified audiologist;  
OR
- (3) A unilateral sensorineural or persistent conductive loss with an unaided pure tone average or speech threshold of 45 decibels hearing level (HL) or greater in the affected ear.  
OR
- (4) A sensorineural hearing loss with unaided pure tone thresholds at 35 decibels hearing level (HL) or greater at two or more adjacent frequencies (500 hertz, 1000 hertz, 2000 hertz, or 4000 hertz) in the better ear.

- B. The pupils hearing loss affects educational performance as demonstrated by **one of the following**:

- (1) A need to consistently use amplification appropriately in educational settings as determined by audiological measures and/or systematic observation;

OR

- (2) (a) Basic reading skills
- (b) Reading comprehension
- (c) Written language
- (d) General knowledge

C. The pupil's hearing loss affects the use or understanding of spoken English as documented by **one or both of the following**:

- (1) Under the pupil's typical classroom condition, the pupil's classroom interaction is limited as measured by systematic observation of communication behaviors;
- AND/OR
- (2) The pupil uses American Sign Language or one or more alternative or augmentative systems of communication alone or in combination with oral language as documented by parent or teacher reports and language sampling conducted by a professional with knowledge in the area of communication with persons who are deaf or hard of hearing.

D. The pupil's hearing loss affects the adaptive behavior required for age-appropriate social functioning (**both must be present**):

- (1) Documented systematic observation within the pupil's primary learning environments by a licensed professional and the pupil, when appropriate;
- AND
- (2) Scores on a standardized scale of social skill development are below average scores expected for same-aged peers.

## Overview of Assessment with Deaf and Hard of Hearing Learners

.....

This section addresses a general overview of issues, policies and principles that are pertinent to evaluating and assessing young children, and school-age learners who are deaf or hard of hearing in a manner that is consistent with legislative policy, rules and best practices.

### Purpose of Assessment and Evaluation

Assessment and evaluation include the process of collecting and interpreting information for the purpose of:

1) Identifying and verifying an educational disability;

AND

2) Making educational recommendations in keeping with the learner's strengths and needs.

Assessment and evaluation are required aspects of the current NCLB and IDEA-2004 that mandates the educational rights of children including those individuals with disabilities. These laws require, at minimum, that:

- Tests and other materials used are selected and administered in a non-discriminatory manner in terms of race and culture *by trained and knowledgeable personnel in accordance with the standards provided by the test developer* and, if not, include a description of the extent to which any accommodations or modifications were used in the written report.
- Tests and other procedures must be administered in a *learner's native language and/or mode of communication* unless not feasible.
- A single criterion may not be used for determining a disability (e.g., an audiogram alone cannot be used to determine if an individual is in need of special education services).
- A comprehensive assessment includes all areas appropriately related to all areas of concern or potential need and not just those areas commonly linked to hearing loss.
- Assessment results must be technically sound (valid and reliable).
- Relevant functional and developmental assessment about the learner must include information from the parent.

The federal law emphasizes the importance of:

- Information related to enabling the learner to be involved and progress in the general education curriculum or, in the case of a young child, appropriate preschool activities.
- The use of assessment tools and strategies to address the relative contribution of cognitive and behavioral factors, in addition to physical or developmental factors (e.g., a learner with a hearing loss may also have special education needs related to cognitive or behavioral factors).

Determination of eligibility or continuation in special education is a TEAM decision and cannot be made independently by an individual.

Teachers licensed to teach learners who are deaf or hard of hearing must follow all of IDEA's requirements for evaluation and re-evaluation including:

- The role and rights of parents in terms of evaluation/re-evaluation;  
The requirements for coordination with general education;
- The relationship to general education curricula; and,
- Who may request an evaluation or re-evaluation.

Federal law and regulations change, as do state law and rule. Keeping current with those changes is critical. While federal regulations supersede any State of Minnesota requirements, state rule may exceed federal requirements provided they are consistent with the definitions and intent of the federal law.

## Informal and Formal Assessments

.....

Identifying learners who are deaf/hard of hearing as eligible for special education services typically requires formal, standardized, norm-referenced testing, that reflects multifaceted aspects that impact learning, (e.g. sensory and intellectual evaluation). Informal assessment data (e.g., observation data, interviews with parents and learners) also plays a critical role in the determination of a learner's strengths and needs.

Assessments conducted for educational planning purposes include a variety of assessment procedures that may or may not include traditional norm-referenced, standardized assessments, direct observation, and progress monitoring procedures.

### Formal Assessments

.....

Formal assessments are measures that provide standardized procedures using statistically-based systems for comparisons.

The role of formal assessments:

- To make comparisons between groups of learners;
- To determine placement of learners;
- To monitor individual or group progress; and
- To provide accountability.

Formal assessment types:

#### Criterion-referenced

A measure that allows the comparison of a child's performance to a particular skill at a specified level (e.g., high school graduation examination).

#### Norm-referenced

A measure that allows comparison of the child's performance in comparison to his/her peers in a normative sample (e.g., achievement tests).

#### Standardized

A test that is administered in a consistent manner. All items, conditions, scoring and interpretations are controlled to remain consistent (e.g., Curriculum Based Measurement-CBM)

## Informal Assessments

.....

Informal assessments are important due to the difficulties encountered in traditional formal testing, and the limited set of technically adequate formal assessment tools appropriate for use with learners who are deaf or hard of hearing.

The role of informal assessments:

Confirm or dispute information obtained from formal assessment procedures;

Collect data not addressed or available through formal assessments; and,

Determine student's functional skills relative in familiar and unfamiliar environments.

Informal assessment process may include:

- Systematic observations
- Parent interviews
- Teacher interviews
- Student interviews
- Data collection from permanent products, such as:
  - Student performance on curriculum unit tasks
  - Student work samples
- Student portfolios
- Objective staff comments and observations

## Curriculum Based Assessment (CBA)

.....

What are Curriculum-Based Assessments?

Curriculum-based assessments (CBA) are any procedures that directly assess student performance within the course content (Tucker, 1985, p. 200). The purpose is to evaluate a student's skills on task-specific items or criterion-referenced performance measures within a particular curriculum.

## Why use Curriculum-Based Assessments (CBA)?

Curriculum-based assessments measure the students' learning as it relates to the requirements of a curriculum and are the most commonly used methods for assessment of content knowledge in the classroom. CBA incorporates a wide range of procedures used to evaluate student performance, including:

- Teacher-made tests;
- Criterion-referenced measures;
- Performance-based measures;
- Student reports, products, and portfolios;
- Behavioral observations; and
- Language samples.

One of the disadvantages of using a variety of CBA is that the results cannot be used effectively to demonstrate student progress. The academic performance standards or criteria for performance are continuously changing (e.g. different types of questions, level of difficulty may vary from week to week).

Curriculum Based Measurement (CBM) and Mastery Monitoring MM are two forms of CBA that provide technically sound approaches or indicators to monitor the effects of instruction and interventions. For more information regarding CBM and MM, see: <http://www.studentprogress.org>.

## Systematic Observations

.....

What is systematic observation?

Systematic observation may occur in a variety of settings. Typically the student is observed in his/her classroom or in school-based social settings. Systematic observations require the teacher of the deaf/hard of hearing to observe behaviors relative to the student's functioning. The data collected quantifies functional behaviors through frequency counts, rate of occurrence, duration, etc., in an objective, data-specific format.

- Data obtained through systematic classroom observations conducted by a teacher of the deaf/hard of hearing is one of the eligibility components in the Minnesota Criterion for Deaf and Hard of Hearing (Minnesota Rule Section 3.3.6)
- Section C (1) states: "The pupil's hearing loss affects the use or understanding of spoken English as documented by one or both of the following: (1) Under the pupil's typical classroom conditions, the pupil's classroom interaction is limited as measured by systematic observation of communication behaviors" (see Appendix A).

Why are systematic observations conducted?

- Objective data resulting from a systematic observation may be gathered to assist the student’s team with educational planning when no other tools are appropriate, available or judged to be valid or reliable.
- Objective observational data may be used in selected Present Level of Educational Performance (PLEP) statements of the IEP. The PLEP requires the student’s educational team to address the student’s progress in the general education curriculum.

When are systematic observations conducted?

- For initial and three-year re-evaluations;
- To determine how much/to what degree a student is participating the in a general education setting;
- To determine IEP accommodations (e.g. electronic note-taking, a paraprofessional);
- To observe specific academic or social behaviors in response to parent or team member concerns;
- To describe student’s functional use of school-based amplification system (in concert with the educational audiologist); or,
- To determine the student’s information and communication access and participation in instructional/social settings (e.g., auditory-oral, transliterator - see Appendix B).

See Appendix C for considerations during systematic observations.

### Planning Systematic Observation .....

Who should observe the deaf or hard of hearing student and record the data?

Best practices recommend that the D/HH teacher observe, record and interpret the data gathered from a classroom observation. The D/HH teacher is prepared to observe the student who is deaf/hard of hearing through the “lens” of how the student’s language-related issues might be contributing to the student’s progress and can report and interpret the data relative to the educational needs of the student.

When should the student be observed?

The student should be observed during a lesson when both the teacher/s and the students will be contributing to the lesson. Choose a subject that is “language rich” and provides opportunities for the D/HH teacher to observe how the student’s hearing loss is impacting his/her learning. Typically subjects such as reading, social studies, science, health, language arts or a morning meeting time provide good systematic observations. Observe for the entire lesson.

How is the observation conducted?

The D/HH teacher determines, based on the purpose of the observation and the type of data required, the specific behaviors that need to be observed. The behavior of the student is recorded using charting or tally procedures or narrative forms. (See Appendix A.)

What method of data collection is most appropriate for use with students who are deaf/hard of hearing?

No one method is best, The purpose of the observation will determine the method. Determining the approach or method will depend on the areas of concern and the context in which they occur.

How many systematic observations should be completed?

The frequency is determined based on the purpose and the behavior being observed. The number and frequency of observations is dependent on several factors such as the degree and level of concern, and how the observational data will be used to adjust or modify instructional strategies.

How will the data resulting from the systematic observations be used?

The observational data must be evaluated by the student’s IEP team regarding the validity, reliability and relevance of the data as it relates to the student’s learning. Data resulting from the systematic observations, in conjunction with formal and informal data, can assist the student’s IEP team in developing the educational needs and accommodations that are correlated with classroom functioning. (See Appendix D.)

## Parent Interviews

.....

IDEA requires that parent input be obtained as part of the initial and three-year re-evaluation process. The Assessment Team determines what member of the team will interview the parent(s). Structured interviews, behavioral checklists and rating scales may be used. During the interview, the Assessment Team member must solicit information about issues or behaviors relevant to the reason for the referral, or situations in which the behaviors occur and the impact on the student's academic and social profile.

The D/HH teacher is frequently asked to interview the parents. In this case, the teacher may collaborate with other members of the team, (e.g., school nurse, speech therapist, general education teacher) to develop interview questions.

## Teacher Interviews

.....

Perspectives from the student's teachers and support staff (e.g., tutor, speech pathologist) are considered an important component of the assessment process. The D/HH teacher may design interview questions that are specific to the student. Commercial teacher interviews, developed for students who are deaf/hard of hearing can be used, such as the Preschool SIFTER, SIFTER, Secondary SIFTER, FAPI, and LIFE, which can be found at the following Website:

<a href="http://www.kandersonaudconsulting.com/TESTS.html">http://www.kandersonaudconsulting.com/TESTS.html</a>
---

## Student Interviews

.....

It may be appropriate to include information from the student regarding his/her impressions through a structured interview or checklist. Interview techniques may include information about how the student views his/her hearing loss, successes and challenges in the school environment, friendships, and opportunities for socialization. Student use of assistive technology at school and home, as well as the student's impression of his/her strengths and challenges are informative as well.

When using an interview format with a student who is deaf or hard of hearing, the interviewer must attend to the student's expressive and receptive language skills, the interview's ability to meet the student's communication needs, and how these language and communication factors may influence the self-reporting procedure.

See Appendix E for sample student interview questions.

## Student Progress Monitoring

.....

Why monitor student progress?

- Monitoring student progress assists teachers, parents and administrators in making informed instructional decisions.
- Monitoring student progress demonstrates the student's rate of growth toward meeting the annual instructional goals.
- Monitoring student progress provides documentation for informed decision making regarding placement, effective use of communication modalities, and language development.
- Monitoring student progress provides students with feedback and motivation to learn.
- Monitoring student progress provides D/HH teachers with objective evidence that the student is progressing academically.

IDEA-2004 mandates accountability at several levels including the demonstration of student progress. While achievement tests (e.g., SAT-HI, IBS) have been used for decades in the field of education with learners who are deaf or hard of hearing, there is a need and mandate to monitor student's academic growth at frequent and regular intervals. Documentation of student progress may include formal and informal assessments including those described previously (e.g. systematic observations, formal and informal assessments). The only evidenced-based measures currently available include Curriculum Based Measurement (CBM) and Mastery Monitoring (MM).

More than 20 years of research has been conducted focusing on the CBM process, format and effect on student growth. The principles of CBM have been applied for use with students who are deaf or hard of hearing only recently. For more information regarding the CBM and its application with learners who are deaf or hard of hearing visit: <http://www.progressmonitoring.net> website or visit <http://www.studentprogress.org>.

When should students be monitored for progress?

Progress monitoring using the CBM or MM process and indicators should occur ideally on a weekly basis and minimally, monthly.

How should student progress be monitored?

A variety of methods are available for monitoring student progress including:

- Functional Behavior Assessment (FBA) – to monitor students social behavior
- CBM- MAZE may be used to monitor students' progress in reading.

(NOTE: Oral reading measures should not be used with learners with hearing loss except in highly specialized circumstances. (View [www.edcheckup.com](http://www.edcheckup.com), or view, [www.aimsweb.com](http://www.aimsweb.com), website or visit [www.dibels.com](http://www.dibels.com) website.)

- Test of Silent Contextual Reading Fluency (TOSCRF) may be used with secondary students who are deaf or hard of hearing and who are reading at the 4+ grade level. (View the [www.proedinc.com](http://www.proedinc.com) website.)
- CBM- Correct Word-Incorrect Sequence (C-IWS) and Total Words Written (TWW) may be used to monitor students' progress in written English. (View [www.edcheckup.com](http://www.edcheckup.com) website or view [www.studentprogress.org](http://www.studentprogress.org) website.)
- CBM- Math (View [www.interventioncentral.org](http://www.interventioncentral.org), website or view [www.aimsweb.com](http://www.aimsweb.com) website.)
- Criterion- based assessment (e.g., Brigance, Syntactic Structures, DIBELS) may be used as Mastery Monitoring progress monitoring tools. (View [www.dibels.com](http://www.dibels.com) website or view [www.ggg.net](http://www.ggg.net) website.)

## Intelligence Assessments

.....

### Reasons to Assess

The intelligence test score should not be the only piece of information on which decisions are based. Intelligence tests are part of a comprehensive evaluation that draws from different information sources and combines with the results of other educational domains. Observation of the student in various settings (e.g., home, school, community) should be included in the evaluation to better understand and interpret the student's strengths and weaknesses and subsequent educational needs (AERA, APA, NCME, 1999). This multifaceted approach helps the team establish a pattern of the child's needs and strengths that guide program planning. An assessment is only conducted if cognitive ability is an area of concern expressed by the educational team. Testing may take place as part of an initial special education evaluation or as part of the learner's re-evaluation.

Other reasons to measure intelligence include:

- Coexisting disability, such as a developmental cognitive disability
- Appropriate identification, program or placement for the student
- Gifted status of the student

### Challenges During Testing

Many qualifications are required of school psychologists who work with D/HH learners. These include, but are not limited to:

- Fluency in the learner's primary language or mode of communication
- Understanding the interaction between child development and hearing loss
- Experience with measures that can be appropriately used with the D/HH learner

These skills/traits support the school psychologist's clinical judgment, which plays a crucial role in test selection, administration, scoring and interpretation of results. These qualifications are needed to address the lack of standardized testing procedures that address communication needs and modalities. Well-established standardized and norm-referenced tests include: 1) learners who are deaf and hard of hearing in the standardization sample, 2) trained and qualified personnel to work with learners who are D/HH, and 3) valid interpretation of test scores.

Who should assess cognitive abilities in learners who are deaf or hard of hearing?

A licensed school psychologist is the only person qualified to administer intelligence tests. School psychologists working with students who are deaf or hard of hearing should have the following qualifications:

- Familiarity with the impact of hearing loss on testing and classroom performance
- Familiarity with the diverse characteristics of children who are deaf or hard of hearing

- Experience with interventions for children who are deaf or hard of hearing
- Ability to communicate effectively with the child
- Access to the educational history and background information about the child

### Using Clinical Judgment

Standardized practices are designed to ensure that the student's score and test results can be compared to the scores and performance of the individuals within the test's norming sample. The assumption is that the student took the test under the same conditions as those in the normative group. The paucity of assessments designed for use with deaf and hard-of-hearing students makes this expectation nearly impossible to achieve. The school psychologist often needs to alter the administration, scoring and interpretation of assessment tools when using them with this population (Goffman, R.L., 2007). It is critical for the school psychologist to have a good understanding of how any changes to the test and/or test environment impact interpretation of results. The following is a list of actions that can alter standardized test procedures, weaken the assessor's confidence or invalidate the assessment results.

- Adaptation of test items.
- Adaptation of required time limits.
- Modification of the mode by which test instructions are communicated (e.g., ASL, Signed English, Cued Language pantomime or print in place of, or in combination with, spoken directions).
- Accepting responses different from those specified in the test directions.
- Ignoring the potential for differences in acculturation between persons who are deaf and persons comprising the standardization sample (Salvia & Ysseldyke, 2004).

### Points to Consider in Assessment Planning

When selecting a test, the school psychologist must have information about the reason for testing, level of acculturation, the presence of coexisting disabilities, and student background, which includes, but is not limited to:

- Age of diagnosis
- Degree of hearing loss
- Etiology
- Age of amplification
- History of amplification use/benefit
- Educational history
- Language history
- Primary mode of communication

A school psychologist assessing a child with a hearing loss must be able to understand how the following variables interact and impact the assessment process. Below are some examples of such interactions:

- Verbal intelligence tests are dependent on English language skills. Using spoken or written language scales or tests that rely on spoken or written instructions leads to questionable validity for learners who are D/HH (Maller & Braden, 1993). The assumption is that a learner who is D/HH has been exposed to the linguistic, semantic and pragmatic information inherent in the test items in a manner that is similar to those in the normative sample (Braden & Athanasiou, 2005). This is not a valid assumption due to the potential impact of hearing loss on access to language and auditory information. (Braden, 1994).
- On nonverbal tests of intelligence, learners who are D/HH tend to perform within the normal range. However, if the nonverbal test does not include the manipulation of materials (non-motor), D/HH learners, on average, may score lower than the mean for hearing learners on tests that are both non-motor and non-verbal (Braden, 1994; Braden, Kostrubala, & Reed, 1994).
- For young learners who are D/HH or if a cognitive disability is suspected, it is a best practice to conduct both an intellectual assessment and a functional skills assessment for comparison before making any educational decisions.
- Physical disabilities that affect motor skills are commonly present with some coexisting conditions (e.g., cerebral palsy, C.H.A.R.G.E syndrome, etc). It is important to consider the impact this can have on assessment results that require manipulation of materials such as blocks, chips and tiles.

Table A: Intellectual Assessment Tools Used with Learners Who are Deaf or Hard of Hearing.

Test	Author/Publisher	Timed?	Time*	Use of Fine Motor Skills	Communication Mode	Notes
LEITER-R	Roid & Miller, 1997 / Psychological Assessment Resources, Inc (PAR, Inc)	Minimal timing in 3 subtests. Most subtests are untimed.	25-40 minutes	No	Gestures; demonstration. Subtests provide initial training trials.	Ages 2 to 20-11 years; A small group of individuals with “severe hearing impairment” were included during test development
Wechsler Intelligence Scale for Children – Fourth Edition (WISC-IV)	Wechsler, 2004 / Pearson Education, Inc.	Yes (Block Design subtest only)	65-80 minutes	Yes (Block Design, Cancellation Subtests)	Auditory/signed instructions and demonstration	Age range 6 to 16-11 years; Caution is advised when using of the Digit Span subtests of the Wechsler measures and should be applied by using other tests that rely on short-term memory for sequential information due to the affect of language modality during administration. (Boutla, Supalla, Newport, & Bavelier, 2004); Careful interpretation of scores is advised – verbal results may be better used to predict academic achievement in an inclusive setting over intellectual ability
Wechsler Adult Intelligence Scale – Third Edition (WAIS-III)	Wechsler, 1997 / Pearson Education, Inc.	Yes	60-75 minutes	Yes	Auditory/signed instructions and demonstration	Age range 16 to 89 years; A new version of the WAIS coming out in late 2008; apply cautious interpretation of verbal results

Test	Author/Publisher	Timed?	Time*	Use of Fine Motor Skills	Communication Mode	Notes
Wechsler Scale of Nonverbal Ability (WNV)	Wechsler & Naglieri, 2006 / Pearson Education Inc.	No	20-45 minutes	Yes	Pictorial directions	Age range 4 to 21-11 years; Developed for linguistically diverse populations, including D/HH learners.
Universal Nonverbal Intelligence Test (UNIT)	Bracken & McCallum, 1998 / Nelson Education	No	30-45 minutes	Yes	Standardized gestures and demonstration	Age range 5 to 17-11 years; Assumes limited linguistic mediation or acculturation
Kaufman Assessment Battery for Children – 2nd Ed. (K-ABC II)	Kaufman & Kaufman, 1996 / Pearson Education	No	25-55 minutes	No	Pantomime; motor responses	Age range 3 to 18 years; Allows for teaching items; tips for pantomime in manual
Reynolds Intellectual Assessment Scales (RIAS)	Reynolds & Kamphaus, 2003 / Psychological Assessment Resources, Inc (PAR, Inc)	Yes	30-35 minutes	No	Auditory/signed instructions and demonstration	Age range 3 to 94 years; relatively brief test; has special testing considerations in the manual for D/HH learners; requires cautious interpretation of verbal results
Transdisciplinary Play-based Assessment	Linder, 1999 (and others) / Brookes Publishing	No	60-90 minutes	No	Mostly observation	Age range birth to 6 years; requires completion by a multi-disciplinary team

Spragins, A.B. (1998) <http://gri.gallaudet.edu/Assessment/intellect.php#tests>

**\*Use of alternative means of communication (i.e. ASL) can extend administration time**

## Social/Emotional Development and Behavior Skills Domain

.....

### Reasons to Assess

Social/emotional/behavioral assessment should be considered as part of the evaluation process due to potential limitations to language and social experiences imposed by hearing loss (Greenberg & Kusche, 1989). An evaluation should be considered when the learner exhibits social or emotional behaviors of concern that interfere with learning and prior interventions have not resulted in improved behavior (Goffman, 2007).

### Types of Social Emotional Assessments

There are a variety of methods to assess the social/emotional competencies of learners who are D/HH. Each method yields information about different aspects of learner behavior. For example, a functional behavior assessment is designed to understand the function of the learner's undesirable behavior and yields a positive behavior support plan, whereas a behavior rating scale is designed to identify the learner's strengths and weakness and delays in social skill development. More than one method is typically used during a student evaluation.

- Structured interviews
- Rating Scales
- Behavioral observations
- Functional Behavioral Assessment (FBA)

[http://www.fape.org/idea/what\\_idea\\_is/osher/main.htm](http://www.fape.org/idea/what_idea_is/osher/main.htm)

### Points to Consider in Assessment Planning

- A multi-method assessment approach that includes systematic observation of the targeted behavior(s), interviews with relevant informants using a structured interview procedures, behavioral checklists or rating scales, and norm-referenced tests as appropriate.
- Personality tests tend to be poor indicators when used with D/HH students and are not recommended.
- Assess student behavior across settings to provide valuable comparative data important for program planning.
- Identify environmental variables or conditions that may impact behavior (e.g., background noise, visual distractions, light source).
- Interpersonal communication between the learner and significant others at home and school.

- Barriers to accessing social information that are often conveyed through the auditory channel or through a combination of speech and body language.
- Cultural differences and expectations.

#### Challenges Assessing Learners with Hearing Loss

Professionals evaluating the learner who is deaf or hard of hearing must be sufficiently knowledgeable in the field of hearing loss. Interpersonal communication skills are a necessary part of the data collection process as the examiner must be able to communicate well with all relevant information providers.

Modification of test items may be needed to accommodate the learner's sensory needs and reading level. Inappropriate items (e.g., items that reference iPods or cell phone use) should be deleted or modified to include use of adaptive technology (e.g. videophones or text messaging) and these modifications must be addressed within the body of the report, including their impact on test result interpretation.

Table B: Social/Emotional Development and Behavior Skills Assessments

Test Name	Author/Publisher	Focus of Test	Time	Notes
Behavioral Assessment Scales for Children (BASC)-2	Reynolds & Kamphaus, 2004	Assesses the behaviors and emotions of children and adolescents	10-30 minutes	For ages 2 to 21-11 years
Swanson, Nolan, And Pelham (SNAP-4)	Swanson, Nolan, & Pelham, 1983/www.myadhd.net	A checklist to determine if symptoms of ADHD are present	10-20 minutes	Ages 6 to 12 years; ADHD screening; Internet-based
Meadow Kendall Social Emotional Assessment for Deaf Children	Meadow-Orlans, 1983 / Laurent Clerc National Deaf Education Center	Assesses domains of social adjustment, self-image, and emotional adjustment for deaf or hard of hearing learners	15-20 minutes	Designed for D/HH students; caution due to date of norms; caution also advised with use of self-image subscale (school-age inventory) with students with additional disabilities
Behavior Rating Inventory of Executive Functioning (BRIEF)	Giola, Isquith, Guy, & Kenworthy, 2000 / Psychological Assessment Resources, Inc (PAR, Inc)	Assesses impaired of executive function	10-20 minutes	Ages 5 to 18 years; assesses impairment of executive function
Matson Evaluation of Social Skills – D/HH version	Newburg-Rinn, 1995 / IDS Publishing	Assesses social skills	15-20 minutes	Ages 14 to 21 years; normative sample includes deaf youth, but very few hard-of-hearing youth

Test Name	Author/Publisher	Focus of Test	Time	Notes
Children's Depression Inventory (CDI)	Kovacs, 1992 / Pearson Education	A self-report test that assesses cognitive, affective, and behavioral signs of depression in learners	10-15 minutes	Ages 6 to 17 years; items can be read to learners
Social Skills Rating System (SSRS)	Gresham & Elliot, 1990 / Pearson Education	Multirater assessment of the learner's social behavior	15-25 minutes	Ages 3 to adult; 3 <sup>rd</sup> grade reading level required; Low reliability on some subscales
Piers-Harris Children's Self-Concept Scale, Second Edition	Piers, Harris, & Herzberg, 1969 / Western Psychological Services	Assesses the self-concept of the learner	10-15 minutes	Ages 7 to 18 years; 2 <sup>nd</sup> grade reading level required
Motivation Assessment Scale (MAS)	Durand & Crimmins, 1992 / <a href="http://www.monacoassociates.com">www.monacoassociates.com</a>	Assesses the function or motivations of behavior problems	10-20 minutes	All ages; useful when completing functional behavior assessment; examines the reasons behind problem behavior
Transdisciplinary Play-Based Assessment	Linder, 1999 (and others) / Brookes Publishing	To assess child development, notably in the social domain	60-90 minutes	Requires completion by a multidisciplinary team; Requires time to plan individualized activities and conducting assessment over multiple periods
Scales of Independent Behavior, Revised (SIB-R)	Bruininks, Woodcock, Weatherman, Hill, 1984 / Riverside Publishing	Comprehensive, norm-referenced assessment of adaptive and maladaptive behavior	45-60 minutes	Infancy to 80+ years; focus on social skills;

Test Name	Author/Publisher	Focus of Test	Time	Notes
Vineland Adaptive Behavior Scales, Second Edition (2005)	Sparrow, Balla, & Cicchetti, / Pearson Education	Measure of personal and social skills needed for everyday living	20-60 minutes	3 to 21 years; Classroom edition includes norms for deaf learners in grades K-6, and attending a residential school

## Language Assessments

.....

Language assessment provides information that allows teachers to establish goals and identify areas in language for focused instruction that will improve the communication process and literacy skills. Accurate assessment of deaf and hard-of-hearing learner's language development and proficiencies is critical for making placement, curriculum, program decisions and in determining instructional effectiveness. Educators need to consider several issues when selecting, administering and interpreting findings of language assessments for students with hearing loss.

### Approaches to Language Assessment

Informal assessments are considered to be “process-oriented” and are based on the assumptions that language performance should be observed in context and evaluated over time against the child's own baseline (Jamieson, 2003).

- Receptive Language
- Expressive Language
- Forms of Language (e.g., English, ASL)

Cued Speech, Signing Exact English, and Visual Phonics are not considered forms of language. Rather they are modes of communicating the phonemes or grammar of a standard language form (e.g., English, Hmong, ASL).

### Language Sampling

Informal assessment of spontaneous expressive spoken, signed, or written language can be used to determine a student's use of semantic relationships, and pragmatic use of language (Mercer & Mercer, 2001). Spontaneous spoken or written language samples may be used to identify the student's proficiency in the use of standard English grammar, semantics and pragmatic use of language.

Language samples may be obtained from written products incorporated in a portfolio or through direct observations of students in communicative environments. The absence of a language skill may not necessarily mean that the child has not mastered that skill; it may be that the child did not have the opportunity during the time of the observation or within the writing context to demonstrate it. McLean and Snyder-McLean (1978) listed the following procedures for obtaining a language sample:

- Use toys, objects, situational pictures or activities with which the student is familiar in an informal setting in which the student interacts with a familiar adult or peer.
- Videotape the student's interactions, obtaining a sample of 50 to 100 utterances.
- Maintain informal conversational interactions.

Written language samples may be analyzed using criterion-referenced checklists, Curriculum Based Measures (CBM), trait analysis scales or rubrics. The information obtained from a language sample:

- May be used to identify the learner's specific syntactic, semantic and pragmatic strengths.
- Should not be used to assess English lexical or syntactic skills if:
  - The language sample is transcribed from one modality to another, such as signs to written forms of English
  - The language sample is transcribed from one language to a second language, such as from American Sign Language to English because the transitions between modalities or language forms are not uniformly equivalent (Rose, McAnally, & Quigley, 2004, p. 201).

As with all language assessments, information gathered through language samples should be used in combination with other assessment data to develop the goals and objectives for language practice and to determine student progress (Rose et al., 2004, p. 201).

Language samples may be analyzed both qualitatively and quantitatively. Evaluation checklists such as rubrics and grammatical features can provide a general guideline for instructional planning. (Rose, et. al., (2004) list other qualitative indicators of language competencies which include:

- *Type-Token Ratio* (TTR) is a measure or ratio of the number of different words compared to the total number of words used.
- *Mean Sentence Length* (MSL) is the mean number of words used per sentence.
- *T-Unit Length* (T Units) is a measure or mean of the number of words per thought unit, that is, a complete phrase or simple statement (Hunt, 1965).
- *Correct Word Sequence* (CWS) is a measure of two adjacent, correctly spelled words syntactically and semantically acceptable to a native speaker of English.

## Language-Based Portfolio Assessment

.....

A portfolio is a collection of representative, ongoing and changing samples of student work and may include products from more than one academic area that demonstrates a student's highest level of performance (Paulson, Paulson, & Meyer, 1991). The student is actively involved with the teacher in determining the contents of the portfolio, in assessing performance, and in determining needs and goals. Developing and maintaining a portfolio is an exercise in developing an organized collection of work but, more importantly, it is a process in learning. Each product included in the portfolio represents learning experiences and goals determined by the student, sometimes in collaboration with the teacher and/or peers.

Language portfolios may include a variety of products, including:

- Written compositions
- Videos/CDs of storytelling and retelling
- Letters
- Student-produced newsletters
- Classroom tests and checklists
- Teacher-student conference notes
- Interactive computer peer conferencing notes
- Progress monitoring data

The learner's role in the portfolio assessment process includes working with the teacher and/or peers to:

- Review over time to determine the products which best demonstrate achievements
- Determine criteria to use in identifying progress
- Identify and discuss the progress made
- Determine future performance goals

The teacher's role in the portfolio assessment process is to:

- Observe and guide the student in the self-evaluation process
- Develop the student's ability to determine his or her own goals for language use
- Use the information learned about the student in the portfolio assessment process to select and develop instructional strategies in keeping with the student's strengths, interests, and needs (Mercer & Mercer, 2001)

Documenting progress will depend largely on the types of information included in the portfolio. The teacher and student may choose to use a progress monitoring procedure (e.g., CBM, rubrics, criterion referenced checklists) to document the student's progress toward achieving IEP language goals and benchmarks of progress. Most importantly, documented progress should be evidence-based, that is, objective, reliable and valid. Outside reviewers may also be included in the evaluation process and may include the student's parents, selected IEP team members or a mentor selected by the student (Rose et al., 2004).

## Systematic Observations

The primary focus of these observations is on the “interactions between the individual and the physical, social, and psychological environments” (Thurman & Widerstrom, 1990, p. 191). Two formal protocols that accommodate oral-auditory, sign communication, and provide a rubric for behavioral observations and parent reports are The *Ski-HI Language Development Scale* (2004) and the adaptation of *The MacArthur Communicative Development Inventory* (Fenson et al., 1994; see Anderson & Reilly [2002] for ASL normative data).

## Summary

Language is complex and encompasses many different aspects which all must be described to determine a student’s language skills and proficiency. No one test can provide all the information needed to accomplish this task. A multi-method approach should be used to obtain as much information as possible regarding the different aspects of a student’s language for educators to determine appropriate programming and instructional strategies.

## Reading Assessments

.....

Reading is a fundamental skill that underlies success in all academic areas. Students who experience difficulty reading likely will also experience difficulty in academic subject areas. Reading is a complex behavior that is composed of many skills, thus no single reading test assesses all aspects of reading completely.

Reading assessment should:

- Link directly to a widely accepted definition of reading
- Provide information regarding the strengths and needs of each student
- Inform goals for reading instruction (Afflerbach, 2007)

Understanding the principles and relationships of assessment and instruction should enable teachers to select procedures that will assist in identifying and describing students' achievements and progress in reading.

### Issues in Reading Assessment of Learners who are Deaf or Hard of Hearing

Accurate assessment of reading skills is critical for making program decisions, instructional decisions and determining program effectiveness. When selecting, administering and interpreting findings of reading assessments, educators of students who are hard-of-hearing or deaf need to consider several issues including:

- Reading assessment items are generally complex and are not easily adapted to meet the needs of learners who are deaf and hard-of-hearing (McAnally, et. al., 2007).
- Language proficiency and differences of many deaf and hard of hearing learners and linguistic structure of assessment items may result in response errors that are not necessarily a reflection of reading skills (King & Quigley, 1985).
- Many deaf and hard of hearing learners may be unfamiliar with typical test-taking strategies (LaSasso, 1986; LaSasso & Davey, 1983).
- Few standardized tests include deaf and hard-of-hearing students in their sample populations.
- Yearly growth in reading for students who are deaf is reported at approximately .3 grade level per year. The standard error of measurement on some standardized tests may be about equal to the growth rate, thus resulting in the inability of standardized tests to measure progress or year-to-year growth (King & Quigley, 1985).

- Standardized test scores may be useful in determining placement in a program, but they do not assist teachers in matching a student with appropriate reading materials (Schirmer, 2000).
- Reading assessment results and their interpretation are influenced by several variables including cultural backgrounds, experiences, and communication environment(s) in home and school settings (McAnally, et. al., 2007).

A list of standardized tests that are commonly used in reading assessment of deaf and hard-of-hearing learners is presented in Table C.

Table C: Reading Assessments Commonly Used with Learners who are Deaf/HH

Test Name	Target Age Group	Comparison Group	Focus of Test	Examiner	Time Required	Publisher
Test of Early Reading Ability-3 (TERA-D/HH)	3:6-8:6	National sample of more than 1,000 D/HH students	Knowledge of alphabet and its functions, awareness of print conventions, ability to construct meaning	Teacher	Administered to individual students Testing time: 15-30 minutes	PRO-ED <a href="http://www.proedinc.com">www.proedinc.com</a>
Test of Early Reading Ability-3	3:6-8:6	875 students representing national demographics	Mastery of early development of reading skills (see above).	Teacher	Administered to individual students Testing time: 15-30 minutes	PRO-ED <a href="http://www.proedinc.com">www.proedinc.com</a>
Test of Reading Comprehension (TORC-3)	7:0-17:11	1,962 students from 19 states  Hearing students and students with disabilities	General and content area vocabulary, syntactic similarities, paragraph reading, sentence sequencing	Teacher	May be given to individuals or group Testing time: 30 minutes	PRO-ED <a href="http://www.proedinc.com">www.proedinc.com</a>
Gates-MacGinitie Reading Test-4 (GMRT-4)  Forms for 5 age levels: Pre-reading, beginning reading, early independent reading, grades 3-12, adult	5 years through adult	Hearing students tested on-level and out-of-level	Each level has a focus appropriate for ages within the level	Teacher	May be hand-scored or machine-scored by publisher	Riverside Publishing (in Chicago) <a href="http://www.gmrt.com">www.gmrt.com</a>

Carolina Picture Vocabulary Test (CPVT)	4:0-11:6	National sample of 767 deaf and hard of hearing students using manual communication	To assess receptive sign vocabulary	Teacher	Administered to individual students Testing time: 10-15 minutes	PRO-ED <a href="http://www.proedinc.com">www.proedinc.com</a>
Test Name	Target Age Group	Comparison Group	Focus of Test	Examiner	Time Required	Publisher
Peabody Picture Vocabulary Test-Revised	2-6 years to adult	4,200 hearing children at 2:6 – 18:0 years 828 adults	To assess receptive sign vocabulary	Teacher	Administered to individuals Testing time: 10-20 min.	American Guidance; Publishers' Building; Circle Pines, MN 55014 <a href="http://www.agsnet.com">www.agsnet.com</a>
Woodcock–Johnson III Tests of Achievement (WJ III ACH)	K+ Adult	5,948 children through adults representing a nationally diverse population.	Broad Categories include: Reading, writing, math, comprehension, auditory processing and memory.	Teacher	Testing time: 40-45 min., varied by sub test	Riverside Publishing Company <a href="http://www.woodcock-johnson.com">www.woodcock-johnson.com</a>
Diagnostic Assessments of Reading (DAR)	1 <sup>st</sup> -12 <sup>th</sup> grades		Word recognition, word analysis, oral reading, silent reading comprehension, spelling, and word meaning	Teacher	Individually administered Testing time: 20 min.	Riverside Publishing Company <a href="http://www.riversidepublishing.com">www.riversidepublishing.com</a>
Stanford Diagnostic	6 -18 years	53,000 students	Decoding, vocabulary,	Teacher		Harcourt Brace Educational Measurement; San Antonio,

Reading Test-4 (SDRT-4)			comprehension, scanning. Subtests include both formal and informal measures.			TX <a href="http://harcourtassessment.com">http://harcourtassessment.com</a>
-------------------------	--	--	--	--	--	---

Reading Assessments  
.....  
Informal Approaches

Informal assessments are the most frequent method of evaluating students' abilities and academic growth (McAnally, 2007, p. 240). King and Quigley (1985) discussed two categories of informal assessments, unobtrusive measures and dynamic assessment integrated with instruction. The categories include:

- Informal protocols
- Informal reading inventories (IRIs)
- Miscue reading inventories (MRIs)
- Checklists
- Retelling
- Anecdotal or running records

Assessments integrated with instruction inform teacher decisions regarding the effectiveness of specific strategies in literacy instruction.

#### Observations and Anecdotal Records

When using anecdotal records and observations for assessment, the teacher *must* have a systematic method and habitual practice of recording observations as well as a clear understanding of what is being observed and the goal of the observation. Observation records may include such information as:

- Types of reading material the student selects spontaneously
- Amount of time spent in independent reading
- Word recognition strategies used by the student
- Vocabulary relationships between English words and ASL vocabulary (McAnally et al., 2007)

Anecdotal records and observations of reading skill are maintained throughout the school year and assist in determining the direction of instruction. These observational assessment tools may include:

- Video and audio records
- Running records
- Cumulative product folders
- Daily notes
- Paper-and-pencil tests

A variety of observation checklists are available in professional journals and magazines, in literacy textbooks and at Websites (view <http://interventioncentral.org> website; Harp, 2006).

### Retell Procedures

Retellings are a way of assessing and evaluating students' memories, reactions, and understandings of their reading. Because reading is the construction of meaning resulting from interaction between the text and the reader's background knowledge, retellings are a powerful way to measure a student's comprehension (Harp, 2006). Retellings can be "aided" or "unaided." In an unaided retelling, the teacher asks the reader to retell everything he or she can remember about the text without any assistance.

In an aided retelling, the teacher asks prepared questions that focus on the key points of story structure or story grammar (e.g., setting, characters, plot, episodes and theme). The teacher would also ask questions that elicit the reader's responses to the text, such as:

- Have you ever read a similar story?
- Have you ever been in a similar situation?
- Why do you think that \_\_\_\_\_ did \_\_\_\_\_?
- How did you feel when \_\_\_\_\_ happened?
- What more can you tell me about how the story ended?
- How did you feel about the ending? (Harp, #2006, p. 96)

If the selection is expository, the teacher may ask questions about important facts or concept that the student should remember. The reader should include:

- Main ideas;
- Supporting details;
- Conclusions; and,
- Use of a logical sequence.

To evaluate the information learned about the reader through retelling, the teacher can use rubrics or checklists which can be found in educational texts and journals as well as in catalogs and bookstores that specialize in teaching materials (Jones & Lenske, 2000; Gillan & Carlile, 1997). Martha French (1999) provide alternative rubric strategies for story retell scoring with learners who are deaf or hard of hearing. View website <http://interventioncentral.org> for additional suggestions. Teachers may also develop their own rubrics and checklist.

### Informal Reading Inventories

Informal reading inventories (IRIs) are popular reading assessments in classrooms with hearing pupils. IRIs are given to individual students and are generally administered by the teacher. They may be developed by teachers or commercially prepared with explicit scoring criteria (See McAnally, 2007, pp. 245-246 for guidelines for developing IRIs).

Most IRIs contain reading passages written in narrative and expository text prepared at sequentially more difficult levels of reading. Students read the passages either silently or orally, answer comprehension questions or retell what they have read in oral, CUED and/or signed language. Data obtained from the IRI can be used to determine:

- The reader's comprehension and interpretation of the text;
- The reader's ability to use text-based and reader-based strategies to construct meaning;
- The effects of the reader's word and syntactic knowledge on text comprehension; and,
- The reader's ability to relate different codes (e.g. ASL, English) and modes of communication (e.g., cued speech, signed English) to print (McAnally et al., 2007).

Using the information obtained from the IRI may not always be considered valid and reliable.

### Summary

A multimethod assessment approach should be used to provide the necessary information regarding all aspects of reading. A multimethod approach may include curriculum-based measures, diagnostic assessments and teacher reports that have been documented by systematic observation, informal reading inventories. Obtaining and using information provided through a multimethod approach may not yield information that is as accurate and comprehensive as desired, but it may well be the best information that can be obtained with current knowledge and technology.

Table D: Informal Reading Inventories

Name	Target Age Group	Focus of Test	Information Obtained	Who Can Administer	Time	Publisher
Qualitative Reading Inventory-4 (QRI-4)	K-12	Word identification, comprehension in silent and oral reading, functional reading levels for word identification and comprehension of narrative and expository text, strategic reading	Independent, instructional, and frustration reading levels, reader's strengths and weaknesses, word identification and comprehension ability, prior knowledge, think-alouds	Teacher	Test individual students, time consuming	Longman <a href="http://www.ablongman.com">www.ablongman.com</a>
Analytical Reading Inventory-7 <sup>th</sup> edition (ARI)	K-12	Word identification, comprehension of narrative and expository text, fluency, listening level	Word identification level, comprehension level in a narrative text and expository text (science and social studies), functional reading levels	Teacher	About one hour per child	Merrill Prentice Hall <a href="http://www.pearsoned.com">www.pearsoned.com</a>
Steiglitz Informal Reading Inventory-3 <sup>rd</sup> edition (SIRI)	Emergent readers – 8 <sup>th</sup> grade	Literature-based programs, instructional level of each learner, word identification, passage comprehension, phonemic awareness	Word identification levels in context and isolation, sight word level, dictated story assessment of emergent readers, recognition of rhyming words, blending of speech sounds, segmenting words, passage comprehension in narrative and expository	Teacher	Test individual students, time-consuming	Allyn & Bacon <a href="http://www.ablongman.com">www.ablongman.com</a>

			text, miscue analysis, story retelling			
--	--	--	--	--	--	--

## Early Childhood

.....

The following information is designed to assist service providers in fulfilling their responsibilities under Part C of Individuals with Disabilities Act (IDEA) serving children ages birth to 3. In Minnesota, the Infant and Toddler Intervention system is a partnership between the Departments of Education, Health, and Human Services and families with young children, ages birth to 2 years, 11 months.

Early Intervention services are provided under federal law, which requires that infants and toddlers with a developmental delay and/or certain diagnosed physical conditions and their families have access to services based upon their needs including the following:

Meets the criteria for the Deaf and Hard-of-Hearing disability category, View website <https://www.revisor.leg.state.mn.us/rules/?id=3525.1331>

OR

2. Meets one of the following criteria for Developmental Delay (a or b):

- a. The child is experiencing a developmental delay that is demonstrated by a score of 1.5 standard deviations or more below the mean, as measured by the appropriate diagnostic measures and procedures, in one or more of the following areas:
  - i. Cognitive development;
  - ii. Physical development, including vision and hearing;
  - iii. Communication development;
  - iv. Social or Emotional development;
  - v. Adaptive development.

OR

- b. The child has a diagnosed physical or mental condition or disorder with a high probability that it will result in a delay, regardless of whether the child has a currently demonstrated need or demonstrated delay. Hearing loss in young children is identified as one of these diagnosed physical conditions for which a child and family may be eligible for early intervention services. A description of the types and degrees of hearing loss included in Minnesota's Part C eligibility guidelines for young children can be viewed at:

<http://www.health.state.mn.us/divs/fh/mcshn/ecipelig/hearing.htm>

For more in-depth information regarding the guidelines and protocols for eligibility evaluation and on-going assessment across all developmental domains for children receiving services under Part C, please view the following websites:

- <http://www.health.state.mn.us>
- <http://education.state.mn.us/MDE/SchSup/EarlyLearnProg/PartCPreSSpecEd/index.html>

The tools identified in Table E are offered to help service providers complete ongoing assessments of the developmental growth of infants and toddlers who are deaf or hard-of-hearing. This is not an exhaustive list, rather a guide to meet the diverse needs of young deaf and hard of hearing learners. Teachers and service providers are encouraged to review the technical adequacy of any assessment material or protocol prior to using the outcome data for decision making purposes. It is expected that service providers will use the purpose of the assessment, clinical judgment, family cultural characteristics, the child's strengths and needs and consultation with the child's educational team to determine the appropriate selection of assessment protocols.

Table E: Assessment Tools Used with D/HH preschoolers

Test Name	Who Can Administer	Age Group	Time Required	Norm/ Comparison Group	Targeted Skills	Publisher
<b>AUDITORY PERCEPTION / LISTENING SKILLS</b>						
CASLLS: Cottage Acquisition Scales for Listening, Language and Speech	Teacher	Birth and up	N/A	Criterion-referenced	Set of scales that follow the development of language, listening, cognition and speech	Sunshine Cottage School for the Deaf 103 Tuleta Drive San Antonio, TX 78212 210-832-8696 <a href="http://www.sunshinercottage.org/">http://www.sunshinercottage.org/</a>
COW: Children's Outcome Worksheets (2003)	Child, Parents, and Teacher	4:0 to 12:0 years	5-10 minutes		Informal questionnaire that allows child, caregiver, and teacher to specify 5 situations where improved hearing is desired	<a href="http://www.oticonusa.com">http://www.oticonusa.com</a>
ELF: Early Listening Function	Parents	Birth to adolescence	N/A		Informal evaluation of listening activities in the child's typical environments	<a href="http://www.phonak.com">http://www.phonak.com</a>
ESP: Early Speech Perception Test (1990)	Teacher	3:0 +	N/A		Measures the effects of hearing aid(s) or cochlear implant(s) in terms of the impact on the child's speech perception ability	Central Institute for Deaf (CID) 825 South Taylor Avenue St. Louis, MO 63110 314-977-0133 <a href="http://cid.edu">http://cid.edu</a>
FAP: Functional Auditory Performance Indicators (2004)	Parents and Teacher	Birth to —	N/A	None	Assesses functional auditory skills	<a href="http://www.cde.state.co.us">http://www.cde.state.co.us</a>

Test Name	Who Can Administer	Age Group	Time Required	Norm/ Comparison Group	Targeted Skills	Publisher
FLE: Functional Listening Evaluation (2001)	Parents and Teacher	3:0 +	30 minutes		Observation of listening abilities affected by noise, distance and visual input.	<a href="http://www.cde.state.co.us/cdesp ed/download/pdf/s4-FunListEval.pdf">http://www.cde.state.co.us/cdesp ed/download/pdf/s4-FunListEval.pdf</a>
IT-MAIS: Infant-Toddler Meaningful Auditory Integration Scale (2003)	Teacher interviews the Parents	Birth to 5:0	N/A		Interview format to assess the child's spontaneous responses to sound in the environment	Advanced Bionics Corporation 1-800-678-2575 <a href="http://www.bionicear.com">http://www.bionicear.com</a>
L.I.F.E.: Listening Inventory or Education: An Efficacy Tool (1998).	Teacher and Student	Kindergarten and up	10-20 minutes		Questionnaire to identify benefit of amplification.	The Educational Audiology Association Available from: <a href="http://www.kandersonaudconsulting.com">http://www.kandersonaudconsulting.com</a>
LittleARS Auditory Questionnaire	Parent	Birth to 2	N/A	218 hearing children 0-24 months; currently being evaluated on children with cochlear implants	Parent Questionnaire: Identifies types of auditory behaviors and development	<a href="http://www.medel.com">http://www.medel.com</a>
Preschool S.I.F.T.E.R.: Screening Instrument for Targeting	Teacher	3:0 to Kindergarten	10-15 minutes		Compares D/HH child to hearing children in the classroom: academics, attention, communication, participation and school	<a href="http://www.kandersonaudconsulting.com">http://www.kandersonaudconsulting.com</a>

Test Name	Who Can Administer	Age Group	Time Required	Norm/ Comparison Group	Targeted Skills	Publisher
Educational Risk (1996)					behavior *SPANISH VERSION	
TACL-3: Test of Auditory Comprehension of Language-3 <sup>rd</sup> Edition (1999)	Teacher	3:0 to 9:11	Administered individually ;10-20 minutes	1,102 hearing students 3:0-9:11 in 24 states	Measures receptive spoken vocabulary, grammar and syntax	AGS Publishing 4201 Woodland Road Circle Pines, MN 55014 800-328-2560 <a href="http://www.pearsonschool.com/">http://www.pearsonschool.com/</a>
<b>SPEECH / INTELLIGIBILITY</b>						
Arizona Articulation Proficiency Scale – 3 <sup>rd</sup> Edition (2001)	Teacher	1:5 to 18:0	Administered Individually  TIME: 2-10 minutes	5, 500 children and teens	Identify misarticulations and articulation proficiency	Pro Ed, Inc. <a href="http://www.proedinc.com">http://www.proedinc.com</a>
Goldman-Fristoe: Test of Articulation – 2 <sup>nd</sup> Edition (2000)	Teacher	2:0 to 21	Administered Individually  TIME: 5-15 minutes	2,350 subjects 2-21 years	Assesses a child’s articulation ability by sampling both spontaneous and imitative speech production	AGS Publishing <a href="http://ags.pearsonassessments.com">http://ags.pearsonassessments.com</a>
WASP: Word Associations by Syllable Perception	Teacher or Parent		N/A		Assess a child’s perception of English phonemes using simple pictures cards and a	Advanced Bionics Customer Care 1-800-829-0026

Test Name	Who Can Administer	Age Group	Time Required	Norm/ Comparison Group	Targeted Skills	Publisher
(1999)					diagnostic scoring system	<a href="http://www.bionicear.com">http://www.bionicear.com</a>
<b>LANGUAGE</b>						
CPVT: Carolina Picture Vocabulary Test (1985)	Teacher	4:0 to 11:5	TIME: 10-15 minutes	761 deaf children 2-16 years in total communication settings in U.S.	Receptive sign vocabulary test for children	PRO-ED, Inc. 1-800-897-3202 <a href="http://www.proedinc.com">http://www.proedinc.com</a>
CELF-P-2: Clinical Evaluation of Language Function – Preschool, 2 <sup>nd</sup> Edition (2004)	Teacher	3:0 to 6:11	Administered Individually  TIME: 30-45 minutes	1500 preschool aged children	Evaluates expressive and receptive language ability focusing on word meanings, word and sentence structure and recall of spoken language	Pearson 1-800-211-8378 <a href="http://harcourtassessment.com">http://harcourtassessment.com</a>
CASL: Comprehensive Assessment of Spoken Language (1999)	Teacher	3:0 to 21:0	Administered individually  TIME: 35-40 min.	1,700 subjects ages 3 – 21; 166 sites nationwide	Oral language assessment: comprehension, expression and retrieval includes lexical, semantic, supralinguistic and pragmatic	Pearson – AGS Publishing <a href="http://ags.pearsonassessments.com">http://ags.pearsonassessments.com</a>

Test Name	Who Can Administer	Age Group	Time Required	Norm/ Comparison Group	Targeted Skills	Publisher
EOWPVT: Expressive One Word Picture Vocabulary Test (2000)	Teacher	2:0 to 18:11	Administered individually  TIME: 10-15 minutes	1,118 hearing children 2 - 11 years in California	Assesses a child's oral/spoken English vocabulary. Tasks include: name objects, actions and concepts pictured in illustrations  *SPANISH VERSION	Super Duper Publications, <a href="http://www.superduperinc.com">http://www.superduperinc.com</a>
K-SEALS: Kaufman Survey of Early Academic and Language Skills (1993)	Teacher	3:0 to 6:11	Administered individually  TIME: 15-25 minutes	1,000 children	Assesses children's language skills (expressive and receptive), pre-academic skills and articulation	Super Duper Publications, <a href="http://www.superduperinc.com">http://www.superduperinc.com</a>
MacArthur-Bates Communicative Development Inventories (2004)	Parents and Teachers	8 months to 3:1	Questionnaire/Checklist	1,813 hearing children 8 - 30 months	Asks parents to identify various words that their child either says or signs, includes vocabulary relating to things in the home, people, action words, description words, pronouns, prepositions and questions words. *SPANISH VERSION	Brookes Publishing Co. <a href="http://www.brookespublishing.com">http://www.brookespublishing.com</a>
OWLS: Oral and	Teachers	3:0 to	Individually	1,985	Assessment of receptive	AGS Pearson

Test Name	Who Can Administer	Age Group	Time Required	Norm/ Comparison Group	Targeted Skills	Publisher
Written Language Scales (1995)		21:11	TIME: 5-25 mins	individuals 3 - 21 years	and expressive (oral and written) language	<a href="http://ags.pearsonassessments.com">http://ags.pearsonassessments.com</a>
PLS-4: Preschool Language Scales-4 <sup>th</sup> Edition (2002)	Teacher	Birth to 6:11	Administered individually  TIME: 20-45 minutes		Auditory comprehension (basic vocabulary, concepts, grammatical markers, comparisons and inferences) and expressive communication *SPANISH VERSION	Pearson <a href="http://pearsonassess.com">http://pearsonassess.com</a>
REEL-3: Receptive-Expressive Emergent Language Test-3 <sup>rd</sup> Ed (2003)	Teacher and Parent	Birth to 3:0	Parent Interview  TIME: 20 min.	1,112 infants and toddlers	Parent Interview: Identify infants and toddlers with language disabilities	Pearson – AGS Publishing
RITLS: Rhode Island Test of Language Structure (1983)	Teacher	3:0 to 20 (D/HH)3:0 to 6 (Hearing )	Administered individually 30 minutes	513 children with hearing loss and 283 hearing children	Measure of English language development, with focus on syntax	PRO-ED, Inc. <a href="http://www.proedinc.com">http://www.proedinc.com</a>
SKI-HI Language Development Scale (2004)	Teacher and Parent	Birth to 5	Parent Interview/ Questionnaire		A parent observation scale listing the receptive and expressive language skills of children birth to five	Hope Publishing, Inc 1856 North 1200 East North Logan, UT 84341

Test Name	Who Can Administer	Age Group	Time Required	Norm/ Comparison Group	Targeted Skills	Publisher
TELD-3: Test of Early Development-3 <sup>rd</sup> Edition (1995)	Teacher	2:0 to 7:11	Administered individually  TIME: 15-45 minutes	2,217 children from 35 states	Test of spoken language abilities	PRO-ED, Inc. <a href="http://www.proedinc.com">http://www.proedinc.com</a>
TOLD-P:4: Test of Language Development-Primary-4th Edition (1997)	Teacher	4:0 to 8:11	Administered individually  TIME: 60 minutes	1,000 children; 30 states	Nine subtests that measure different components of spoken language	PRO-ED, Inc. <a href="http://www.proedinc.com">http://www.proedinc.com</a>
TOSS-P: Test of Semantic Skills-Primary (2002)	Teacher	4:0 to 8:11	Administered individually TIME: 25-35 mins	1,510 students 4:0 - 8:11 years	A receptive and expressive test designed to assess a child's semantic skills	LinguiSystems (800) PRO-IDEA <a href="http://www.linguisystems.com">http://www.linguisystems.com</a>
TTFC-2: Token Test for Children-Revised (2007)	Teacher	3:0 to 12:5	Administered individually  TIME: 10 minutes	1,300+ children	Measures subtle receptive language dysfunction in children	Super Duper Publications 1-800-277-8737 <a href="http://www.superduperinc.com">http://www.superduperinc.com</a>
WRMT-R/NU: Woodcock Reading Mastery - (1998)	Teacher	5:0 to 75+	Administered individually	3,000 individuals	Comprehensive individual assessment of reading activity	American Guidance Service, Inc <a href="http://ags.pearsonassessments.com">http://ags.pearsonassessments.com</a>
<b>BASIC CONCEPTS</b>						
Battelle Developmental	Teacher and parents	Birth-7:11	Complete: 1-2 hours		observation of child, and interviews; interaction with	<a href="http://www.riverpub.com">http://www.riverpub.com</a>

Test Name	Who Can Administer	Age Group	Time Required	Norm/ Comparison Group	Targeted Skills	Publisher
Inventory-2 <sup>nd</sup> Edition (2005)			Screening: 10-30 minutes		the child using game-like materials, questionnaires and tasks; *SPANISH	
BAYLEY-III: Bayley Scales of Infant and Toddler Development-3 <sup>rd</sup> Edition (2005)	Teacher and Parent	1 to 3:7	30-90 minutes		Five key developmental domains of cognition, language, social-emotional, motor and adaptive behavior	Pearson <a href="http://pearsonassess.com">http://pearsonassess.com</a>
Boehm Test of Basic Concepts-3 Preschool (2001)	Teacher	3:0 to 5:11	20-30 minutes	660 children	Evaluates understanding of the basic relational concepts	Pearson <a href="http://pearsonassess.com">http://pearsonassess.com</a>
BIED-II: Brigance Inventory of Early Development	Teacher and Parents	Birth to 7	30-45 minutes		Infant and toddler developmental skills, caregivers' involvement and interactions, *SPANISH	Curriculum Associates, Inc. <a href="http://www.curriculumassociates.com">http://www.curriculumassociates.com</a>
CDI: Child Development Inventory	Parents	1:3 to 6:0	30-50 minutes	2,000+	Parent Questionnaire :child's present development	Pearson – AGS Publishing <a href="http://ags.pearsonassessments.com">http://ags.pearsonassessments.com</a>
HELP: Hawaii Early Learning Profile (2004)	Teacher and parents	Birth to 6	N/A	Not standardized.	Identify needs, tracking growth and development, and determining “next steps” *SPANISH VERSION	VORT Corporation 1-650-322-8282 <a href="http://www.vort.com/">http://www.vort.com/</a>

Test Name	Who Can Administer	Age Group	Time Required	Norm/ Comparison Group	Targeted Skills	Publisher
INSITE Developmental Skills for Multi-disabled Sensory Impaired Children	Teacher and Parents	Birth to 6:0	N/A		Checklist assesses areas of gross motor, fine motor, self-help, cognition, social, emotional, communication, vision, auditory and tactile development	Hope Publishing, Inc <a href="http://hopepubl.com/">http://hopepubl.com/</a>
Mullen Scales of Early Learning (1995)	Teacher	Birth to 5:8	Administered individually  TIME: 25-40 mins	1,849 individuals	Comprehensive measure of a child's motor, perceptual and language abilities	American Guidance Service, Inc 5601 Green Valley Drive Bloomington, MN 55437 1-800-627-7271 <a href="http://ags.pearsonassessments.com">http://ags.pearsonassessments.com</a>
<b>ACADEMICS</b>						
KRT: Kindergarten Readiness Test	Teacher	Preschool – Kindergarten	Individual TIME: 25-30 mins		Intended to assist in determining a student's readiness for beginning kindergarten *SPANISH VERSION	Scholastic testing Service, Inc. 1-800-642-6787 <a href="http://ststesting.com/krt.html">http://ststesting.com/krt.html</a>
<b>SOCIAL SKILLS</b>						
Meadow-Kendal Social Emotional Assessment Inventories for Deaf /HH Students-Preschool	Teacher and Parents	3:0 to 6:11	N/A	800 children with hearing loss	Four subscales (sociable, communicative,; impulsive, dominating : developmental lags: and anxious, compulsive) plus three special items related to HL	<a href="http://clerccenter.gallaudet.edu">http://clerccenter.gallaudet.edu</a>
VINELAND-II: Vineland Adaptive	Teacher and Parents	Birth to 90	20-60 minutes		Parent interview that measures personal and	American Guidance Services, Inc.

Test Name	Who Can Administer	Age Group	Time Required	Norm/ Comparison Group	Targeted Skills	Publisher
Behavior Scales- 2 <sup>nd</sup> Edition (2008)					social skills needed for everyday living	<a href="http://ags.pearsonassessments.com">http://ags.pearsonassessments.com</a>

## Transition Assessment

IDEA and Minnesota law require that transition assessment and planning begin as late as 14 years of age; however, every teacher is encouraged to include transition planning as needed before the age of 14 years. The purpose of Transition Assessment is to develop the foundation for the learner's progress toward his/her future beyond the secondary school experiences. Guidelines for selection and use of age-appropriate transition assessments are available through the Minnesota Secondary Transition Toolkit (2008), Minnesota Department of Education. Minnesota Statutes and rules related to IEP requirements for transition and behavioral intervention planning may be viewed at: <http://www.revisor.leg.state.mn.us/rules/?id=3525.2900>.

Additional information specific to the strengths, needs and accommodations with learners who are deaf or hard of hearing may be viewed at: <http://www.pepnet.org>.

## Web Resources Related to Assessment

-----

- Read general issues on assessing students who are deaf or hard of hearing and some recommendations. <http://www.ericdigests.org/1998-2/hearing.htm>
- Preschool progress forms. <http://www.nationalschoolforms.com/>
- Vocabulary assessment for deaf. <http://jdsde.oxfordjournals.org/cgi/reprint/8/4/383>
- Publications section for various info pieces. <http://www.nasdse.org/>
- A one stop-shop for info on IDEA 2004. <http://idea.ed.gov/>
- Assessment toolkit resources. <http://www.osepideasthatwork.org/toolkit/index.asp>
- Minnesota assessment and testing info. <http://education.state.mn.us/MDE/SchSup/TestAdmin/index.html>
- State of Minnesota support for special education in area of deaf and hard-of- hearing. <http://education.state.mn.us/MDE/EdExc/SpecEdClass/DisabCateg/HardHear/index.html>
- State of Minnesota support for Alternate Assessments. <http://education.state.mn.us/MDE/StuSuc/SpecEdProg/StateAssessStuDisab/index.html>
- Excellent resources on children with disabilities issues including assessment. <http://www.nichcy.org/>
- Accommodation info from nichcy. <http://www.nichcy.org/resources/largeassessments.asp>
- More on accommodations from the experts. <http://cehd.umn.edu/NCEO/TopicAreas/Accommodations/Accomtopic.htm>
- Info from the feds on including children with disabilities. <http://cdd.unm.edu/sde/memos/osep.htm>
- Information related to curriculum based measurement (CBM) and progress monitoring. <http://intervetioncentral.org>

- Research-based information for teachers related to progress monitoring and CBM. <http://progressmonitoring.org>
- Research based information for parents and teachers related to progress monitoring practices that are evidence-based and technically sound. <http://studentprogress.org>
- AIMSweb is a progress monitoring system based on direct, frequent and continuous student assessment. <http://www.aimsweb.com>
- Information on research based practices of reading, reading growth and reading assessment. [www.fcrr.org](http://www.fcrr.org)
- Progress monitoring information and tools for young children. [www.getgotgo.net](http://www.getgotgo.net)

APPENDIX A  
DEFINITIONS AND EXAMPLES OF SYSTEMATIC OBSERVATION  
TECHNIQUES

APPROACHES TO DATA RECORDING:

<b>FREQUENCY RECORDING:</b>
The number of times, or how often a behavior occurs

EXAMPLE #1:

Recorder: Susan Jacobs  
 Student: Tyler Hernandez (Hard of hearing student, auditory/oral)  
 Subject: Language arts class, grade 6, Lincoln Middle School  
 Date: 9/11/08  
 Time: 8:40 to 9:25  
 Behaviors: Turning to watch other classmates offering oral responses/comments

Behavior	Watching	Not Watching
Sally		//
John		/
Michael	/	
Jackson		///
Jacob		/
Melinda	/	
Tyler	//	////////

Interpretation of Data:

Tyler turned to watch his peers offering oral responses 2/9 times or 22% of the time.

EXAMPLE #2:

Recorder: Tom Smith  
 Student: Alison Fritz (moderate/severe hearing loss/auditory-oral/first integrated classroom experience)  
 Place: Happy Hollow Kindergarten Center  
 Behaviors: Standing up and walking away from teacher-directed instruction

Date	Time	Frequency
3/4/08	9:15 AM – 11 AM	/////
3/5/08	9:15 AM – 11 AM	///
3/6/08	9:15 AM – 11 AM	//////////
3/7/08	9:15 AM – 11 AM	///
3/9/08	9:15 AM – 11 AM	/////

APPENDIX A  
DEFINITIONS AND EXAMPLES OF SYSTEMATIC OBSERVATION  
TECHNIQUES (continued)

Interpretation of Data:

During the week of March 4 through March 9, from 9:15 to 11a.m., Alison stood up and walked away from the instructional activity 26 times. This was, on the average 24 more times than her kindergarten peers.

APPROACHES TO DATA RECORDING:

DURATION RECORDING:
The total amount of time a student spends engaging in a specified behavior

EXAMPLE:

Recorder: Melinda Polienzki  
 Student: Marianne McGrath, utilizes interpreter fulltime  
 Location: 8<sup>th</sup> grade Civics Class  
 Date: 10/12/08  
 Behavior: Attending to educational interpreter during a lecture

Civics Class:

Behavior	Start	End	Duration
2:00 to 2:45			
	2:05	2:08	3 minutes
	2:10	2:12	2 minutes
	2:16	2:21	5 minutes
	2:25	2:29	4 minutes
	2:34	2:35	1 minute
	2:40	2:45	5 minutes

Total Class Period: 45 minutes; Total duration: 20 minutes

Percentage:  $20/45 = 44\%$  attending

Interpretation of Data:

During Marianne's 45-minute civics class on October 12, she attended to the interpreter 44% of the time. The longest interval of attending was 5 minutes.

APPENDIX A  
 DEFINITIONS AND EXAMPLES OF SYSTEMATIC OBSERVATION  
 TECHNIQUES (continued)

Approaches to Data Recording:

LATENCY RECORDING:

The amount of time that elapses between a specified event and the expected behavioral response.

EXAMPLE

Recorder: Tracy Toronto

Student: William Lane

Location: Special Education Resource Room

Behavior: Teacher gives directions and student follows the instruction

<u>Date</u>	<u>Start</u>	<u>Response time</u>	<u>Elapsed time</u>
2/10/08	8:30	8:36	6 minutes
2/10/08	12:05	12:07	2 minutes
2/11/08	8:30	8:35	5 minutes
2/11/08	12:05	12:12	7 minutes
2/13/08	8:30	8:40	10 minutes
2/13/08	12:05	12:00	3 minutes
Average a.m. latency:			7 minutes
Average p.m. latency:			4 minutes

Interpretation of data:

In the morning it takes William 7 minutes to follow instruction after the teacher gives a direction.

In the afternoon it takes William 4 minutes to follow instruction after the teacher gives a direction.

APPENDIX A  
DEFINITIONS AND EXAMPLES OF SYSTEMATIC OBSERVATION  
TECHNIQUES (continued)

METHODS OF DATA COLLECTION

Each of the methods described requires that the observer use a stopwatch and/or an electronic or formatted paper and pencil recording/tally sheet. Observers most often design their own forms to fit the situation being observed.

CONTINUOUS RECORDING:

Recording the behavior each and every time it occurs for a given time period.

Used for frequency or the duration of a response (e.g., the number of times the student throws an object, or the number of minutes that the student is off-task during a class period).

INTERVAL RECORDING:

Recording the absence or presence of a pre-specified behavior within a series of time intervals.

Use when the behavior of concern occurs with such high frequency that continuous recording would be difficult to implement (e.g. the student speaking out of turn at any time within a 2-minute interval).

TIME SAMPLING:

The student is observed at the end of fixed intervals (e.g., 10 sec., 1 min.) The observer marks whether or not the behavior has occurred (e.g., whether the child is off task at the end of a 1-minute interval).

It does not require constant observation of a student, but it is a less accurate estimate than interval recording.

APPENDIX B

Observational Record of Behavior			
A. How does the learner who is D/HH participate in the general education setting when compared to his/her peers?			
	Yes	No	Notes
1. Does the learner participate in class activities at a rate similar to his/her peers?			
2. Does the learner use strategies to facilitate access and participation?			
3. Does the learner advocate for his/her needs?			
4. Does the learner respond to directions?			
5. Does the learner use strategies or accommodations to seek assistance?			

APPENDIX B (continued)

Observational Record of Behavior			
B. How does the learner who is D/HH access information?			
	Yes	No	Notes
1. Does the learner respond to directions given by the teacher?			
2. Does the learner use to accommodations to access auditory information?			
3. Does the learner contribute relevant comments during a discussion?			
4. Does the learner respond to information or comments offered by his/her peers?			

APPENDIX B (continued)

Observational Record of Behavior			
C. What student and teacher factors influence the learner's academic progress?			
	Yes	No	Notes
1. Is the language of the lesson accessible to the learner?			
2. Does the learner have strategies for requesting clarification?			
3. Does the learner communicate directly with the teacher?			
4. Does the teacher communicate directly with the student?			
5. Does the teacher repeat or rephrase information?			

APPENDIX B (continued)

Observational Record of Behavior			
C. (continued) What student and teacher factors influence the learner's academic progress?			
	Yes	No	Notes
6. Does the teacher check for the learner's understanding?			
7. Does the teacher ensure that the learner can see and hear optimally?			
8. Does the teacher use visual instructional aids?			
9. Does the teacher have adequate information regarding the role of the educational interpreter/transliterators/notetaker?			

APPENDIX B (continued)

Observational Record of Behavior			
D. What setting and acoustical conditions influence the learner's understanding?			
	Yes	No	Notes
1. Is the learner using the recommended amplification system?			
2. Does the learner advocate for his/her amplification needs?			
3. Is the amplification used appropriately during group activities, seatwork and during class discussions?			
4. Is the noise level of the classroom within functional listening levels for the learner?			
5. Are instructional visuals and accessible educational technology used during the lesson?			

APPENDIX B (continued)

Observational Record of Behavior			
E. How does the learner who is D/HH respond to his/her peers?			
	Yes	No	Notes
1. Does the learner have direct communication opportunities with his/her peers?			
2. Does the learner engage in appropriate social conversations?			
3. Does the learner use alternative strategies when peers don't understand him/her?			
4. Do the learner's peers use alternative strategies to communicate with the learner?			

## APPENDIX C

### GUIDELINES FOR DETERMINING THE NEED FOR AN EDUCATIONAL INTERPRETER/TRANSLITERATOR

#### Classroom Observation

Access to detailed and general information from the teacher. Is the learner able to correctly retell detailed/general information from the teacher?

- Access to detailed and general information from peers;
- Self-advocacy skills;
- Attention to visual information (e.g., teacher writing on the board).

#### Learning Environment Considerations

- Classroom configuration;
- Instructional pace;
- Instructional methods (e.g., small cooperative groups, lecture, etc.);
- Instructional styles (e.g., visual resources: overhead, use of boards, media);
- School-wide communication (e.g. use of visual, audio technology); and,
- Lighting, amount of glare from windows.

#### Academic and Language Considerations

- Language skills of the learner;
- Receptive and expressive language skills of the learner in the target communication mode/language to be used in the general education setting by the interpreter/transliterators; and,
- Academic progress.

## APPENDIX C

### GUIDELINES FOR DETERMINING THE NEED FOR AN EDUCATIONAL INTERPRETER/TRANSLITERATOR (continued)

#### Personal/Physical Indicators

- Headaches
- Visual difficulties (e.g. eyestrain, watering, acuity)
- Excessive fatigue

#### Social Emotional Considerations

- Interaction with peers
- Access to social communication
- Age-appropriate social skills (e.g., greetings, questioning behaviors)

#### Other Factors

- Parent/student input
- Co-occurring disabilities

## APPENDIX D

### IEP ACCOMODATIONS

The special education team should consider the following IEP Adaptations to increase a student's access to general and special education educational curriculum in a variety of educational environments:

#### Amplification:

- Personal hearing device (hearing aid, cochlear implant, bone conduction aid);
- FM amplification;
- Classroom amplification system;
- Inservice for teachers regarding hearing loss, amplification, and classroom implications of hearing loss; and,
- Hearing aid monitoring—including inservice for monitoring staff and monitoring equipment.

#### Assistive Devices:

- Access to school media and technology.(describe the device to be used and the purpose)

#### Communication Accommodations:

- Preferential seating (describe appropriate seating);
- Evaluation of classroom acoustic environment;
- Encourage noise reduction, such as: closing the classroom door when there is noise in the hallway, reducing noise made by heating and cooling systems, keeping order in the classroom, and encouraging students to respond with voices loud enough to be heard clearly;
- Clearly enunciate speech. Allow extra time for processing information;
- Repeat or rephrase auditory information when necessary;
- Frequently check for understanding; and,
- Educational interpreter (ASL, signed English, cued speech, oral—describe role of the educational interpreter).

#### Instructional Accommodations:

- Use of visual supplements (overhead, chalkboard, charts, vocabulary lists, lecture outlines, homework in written form);
- Captioning or scripts for television, videos, movies);
- Buddy system for notes, extra explanations/direction;
- Down time/break from listening;
- Extra time to complete assignment;
- Step-by-step directions; and,
- Note taker.

## IEP ACCOMODATIONS (continued)

### Curricular Modifications:

- Modify assignments;
- Pre-teaching/review of vocabulary and concepts;
- Provide supplemental materials to reinforce concepts;
- Provide extra practice; and,
- Alternative curriculum.

### Evaluation Modifications:

- Reduce quantity of tests;
- Use alternative tests;
- Provide reading assistance with tests; and,
- Allow extra time on tests.

## APPENDIX E

### QUESTIONS FOR CONDUCTING A STUDENT INTERVIEW

1. What do you say to people who ask about your hearing loss?
2. How do you feel about asking classmates for repetition or clarification?
3. How do you ask your teachers for clarification? (Do you go up to their desk and ask privately or do you raise your hand and ask questions in class?)
4. Do you seek the correct seat placement? Does the teacher remind you to sit in the best place?
5. Do students tease you? If yes, is the teasing related to your hearing loss?
6. Do you ever feel left out? If so, is it because of your hearing loss?
7. What are the hardest places for you to hear your teachers/peers?
8. What do you like best about school?
9. What do you like least about school?
10. Does anything bother you about your hearing aid or assistive listening device used in school?

From the Assistive Listening Technology Protocol, January 2006; Rum River Special Education Cooperative & St. Croix River Education District

## APPENDIX F SAMPLE EVALUATION REPORT

The purpose of the Evaluation Report is to summarize the student's evaluation for special education eligibility and related services and his/her educational needs. This template provides a SAMPLE framework for best practice reports from D/HH teachers.

### REASON FOR INITIAL EVALUATION:

(STUDENT'S NAME) was evaluated to determine if (HE/SHE) is eligible for special education services from a teacher of the deaf/hard of hearing and/or related professionals (e.g. educational audiologist). The special education team determined a need for evaluation in the following areas: (Identify appropriate areas: Intellectual/Cognitive Functioning, Academic Performance, Communication, Motor Skills/Physical Development, Sensory-Hearing/Vision, Emotional Social and Behavioral Development, and Transition).

### REASON FOR REEVALUATION:

(STUDENT) was reevaluated to determine if (HE/SHE) continues to be eligible for special education services from a teacher of the deaf/hard of hearing and educational audiologist. Current Reevaluation data is necessary to ensure educational programming continues to align with special education needs. The special education team determined evaluation would be completed in the following areas: (XXX)

### INFORMATION PROVIDED BY PARENT/GUARDIAN:

Parent/Guardian Report of Student Strengths and Educational Concerns:

Due Process requires that parent input be included in the evaluation. Consider the following items when reporting parent information:

- Student strengths;
- Interventions that are working well at school;
- Academic concerns;
- Homework/organizational concerns;
- Social/Emotional concerns;
- Communication concerns; and,
- Use of hearing-related assistive technology (captions, video relay, text messaging devices, alarms, etc.).

## BACKGROUND INFORMATION/EDUCATIONAL HISTORY:

Background information is required, but these "fields" are optional. If someone else is completing the background information, D/HH teachers need to review their information and add any relevant information related to hearing loss and D/HH services.

- School Enrollment History
- ELL Status/History
- State and District Test Results
- Further File Review

## EDUCATIONALLY RELEVANT MEDICAL INFORMATION:

- Audiological Background/File Review
- Health Background/Vision Status

## LIST OF CURRENT TESTS EVALUATION PROCEDURES:

- Note of special adaptations in procedure based upon language, cultural, economic or environmental background;

- Note of special adaptations in procedures based upon physical or sensory status; and,

- Formal and informal evaluation procedures administered:

### Sensory Area (Examples)

- Pure Tone Testing/Tympanometry
- Speech Recognition Testing in Quiet and in Noise
- Test of Auditory Comprehension (TAC)
- Self Advocacy Skills Checklist/Student Interview

### Academic Area: (Examples)

- Test of Early Reading Ability-Second Edition (TERA-2)
- Curriculum Based Measurements (CBM)
- Teacher Interview(s)
- Classroom Observation with Comprehension Check

### Communication: (Examples)

- Test of Auditory Comprehension of Language-Revised (TACL-R)
- Communication and Pragmatic Skills Informal Checklist

### Social/Emotional:

- Meadow-Kendall

### Transition:

- Reading Free Vocational Interest Inventory

#### Current Evaluation Results:

The following test results are based on norms of students with normal hearing, unless specifically noted in this report. At the time of testing, STUDENT's chronological age was XXXX years, XXXX months.

Standard Scores and Percentile Ranks: (Review test manual for guidelines).

Current Level of Academic Performance: Completed by NAME, TITLE, on DATE, at LOCATION.

Research shows that students who have hearing loss may have difficulty in the areas of vocabulary development, reading, spelling, written language, listening, and language arts. The following tests were administered to determine potential educational implications of STUDENT'S hearing loss to academic performance.

Interpretations of the Test identified above:

Provide interpretation of score(s) and D/HH implications.

#### Classroom Observation

Information from objective classroom observations may be used as rationale for elements of the D/HH criterion and for the identification of educational needs;

- Seating;
- Participation in general education curriculum compared to peers;
- Self-advocacy skills; and,
- Benefit from an interpreter/transliterater.

#### Classroom Performance/Teacher Interviews

Consider the following areas when reporting in this section: academics, attention, communication, classroom participation, and social behavior. Some examples:

- Verbal comments;
- Written interviews;
- Teacher provided informal evaluation; and,
- Electronic progress reports.

#### Student Interview

Summarize student's self-evaluation of academic and social-emotional and advocacy strengths and concerns. This is particularly important in the transition IEP.

#### Conclusion of Academic Status

Included in this area are the student's "Present Level of Performance" and, therefore, should be included as the Academic PLEP when writing the IEP. Consider the following items in this Academic Conclusion:

- Overall summary of current academic results;
- How student is progressing in the general curriculum;
- Impact of scores on statewide/district tests;
- Progress on class assignments and homework;

- Impact of any academic deficits on attention and participation; and,
- Document how hearing loss may influence the student's academic progress in the general curriculum.

#### Conclusion of Sensory Status:

Conclusions in this area are the students "Present Level of Performance" and, therefore, should be included as the Sensory PLEP when writing the IEP. Consider the following items as examples in this Sensory Conclusion

- Speech recognition scores significantly different in quiet and in noise;
- Attentiveness in learning environments; and,
- Any OUTSIDE recommendations for medical follow-up should be carefully worded to eliminate local district responsibility, such as: "Based on current educational audiology test results, school health records, and medical background information, STUDENT'S parents are encouraged to independently pursue further medical evaluation (LIST SPECIFIC RECOMMENDATION, SUCH AS ENT EVALUATION IF STUDENT DOESN'T HAVE CURRENT (OR ANY) MEDICAL INFORMATION) outside of the school setting."

#### Communication

Completed by Name, Title, on Date, at Location

#### Conclusions of Communication Status:

Conclusions in this area must provide rationale for D/HH criterion and educational needs: "Present Level of Performance" should be included as the Communication PLEP when writing the IEP.

#### Transition Skills:

Evaluation completed by PERSON, TITLE, on DATE, at LOCATION.

STUDENT completed the student transition interview with the following information:

- Employment;
- Post Secondary Education & Training;
- Community Participation; and,
- Home Living/Daily Living Skills.

#### Conclusions of Transition Area:

[Provide interpretation of tests/interviews and D/HH implications. Conclusions in this area must provide rationale for D/HH Criterion and educational needs. Conclusions in this area are the student's "Present Level of Performance" and, therefore, should be included as the Transition PLEP when writing the IEP.]

#### Special Education Needs:

Needs must be written with the following language: develop, increase, maintain, decrease.

#### Examples:

- STUDENT needs to develop/increase/maintain HIS/HER independent usage of hearing-related self-advocacy skills.
- STUDENT needs to increase/maintain HIS/HER on-task behavior and work completion, etc.

The special education team should consider the following IEP Adaptations to increase students' access to general and special education educational curriculum in a variety of educational environments (the following are examples of such):

Amplification:

- Personal hearing device (hearing aid, cochlear implant, bone conduction aid).
- Inservice for teachers regarding amplification, and classroom implications of hearing loss.

Assistive Devices:

- Access to school media and technology (e.g., video relay services).

Communication Accommodations:

- Preferential seating (describe appropriate seating).
- Educational interpreter (ASL, signed English, cued speech, oral—describe role).

Instructional Accommodations:

- Captioning or scripts for television, videos, movies
- Buddy system for notes and directions

Curricular Modifications:

- Provide supplemental materials to reinforce concepts
- Alternative curriculum

Evaluation Modifications:

- Provide reading assistance with tests; allow extra time on tests
- Use alternative tests

INTERPRETATION OF EVALUATION RESULTS:

- The student's current audiometric profile, HE/SHE sustains a (specifically describe hearing loss with type and qualifying pure tone averages/thresholds, dates for conductive loss, etc.), which meets criterion item(s) A 1, 2, 3, 4 (Choose appropriate number(s)).
- Based on clinical and/or educational audiologist audiograms and professional recommendation, STUDENT requires amplification to increase HIS/HER auditory access to spoken and environmental information, which meets criterion item B1.
- Based on current achievement test data (see above test results) STUDENT demonstrates an achievement deficit in the area(s) of: (list area(s) and scores), which meets criterion item B2.

- Based on systematic observation of typical classroom interaction and licensed teacher reports, STUDENT'S hearing loss negatively impacts HIS/HER independent and consistent classroom interaction in educational settings. This is demonstrated through (list examples). This meets criterion item C1.
- Current evaluation data confirms STUDENT uses (list visual communication system) to access spoken/environmental auditory information and general curriculum, which meets criteria item C2.
- Based on documented systematic observation/licensed teacher reports and results of a standardized scale of social skill development (see above results), STUDENT's age-appropriate social functioning is below average when compared to same-aged peers. This meets criteria items D1 and D2.

Statement of Eligibility:

Based on the current evaluation results, the team has determined STUDENT is eligible/is not eligible for special education services under the Deaf/Hard of Hearing category.

Based on the current evaluation results, the team has determined STUDENT continues to be eligible/does not continue to be eligible for special education services under the Deaf/Hard of Hearing category.

## Glossary

.....

The following are sample terms quoted from the QuestionMark Website. Please see the Website for additional terms: <http://w.w.w.questionmark.com/us/glossary.aspx>

**acculturation** - The process whereby individuals from one culture adopt the characteristics and values of another culture with which they have come in contact.

**adaptive testing** – A sequential form of individual testing in which successive items, or sets of items, in the test are chosen based primarily on their psychometric properties and content, in relation to the test-taker’s responses to previous items.

**intelligence test** - A psychological or educational test designed to measure intellectual processes in accord with some evidence-based theory of intelligence.

**confidence interval** - An interval between two values on a score scale within which, with specified probability, a score or parameter of interest lies.

**criterion-referenced test**- A test that allows its users to make score interpretations in relation to a functional performance level, as distinguished from those interpretations that are made in relation to the performance of others.

**norms** - Statistics or tabular data that summarize the distribution of test performance for one or more specified groups, such as participants of various ages or grades. Norms are usually designed to represent some larger population, such as participants throughout the country.

**percentile** - The score on a test below which a given percentage of scores fall.

**performance assessments**- Product- and behavior-based measurements based on settings designed to emulate real-life contexts or conditions in which specific knowledge or skills are actually applied.

**test modification** – Changes made in the content and/or administration procedure of a test in order to accommodate participants who are unable to take the original test under standard test conditions.

## References

.....

- AERA, APA, & NCME (1999). *Standards for educational and psychological testing*. Washington, D.C.
- Afflerbach, P. (2007). *Understanding and using reading assessment*. Newark, DE: International Reading Association.
- Anderson, D., & Reilly, J. (2002). The MacArthur Communicative Development Inventory: Normative data for American Sign Language. *Journal of Deaf Studies and Deaf Education*, 7(2), 83-106.
- Bebko, J.M., & McKinnon, E.E. (1993). *The Language Proficiency Profile*. Unpublished manuscript, York University, Toronto, Canada.
- Blank, M., Rose, S.A., & Berlin, L.J. (2003). *Preschool Language Assessment Instrument-2*. Austin, TX: PRO-ED, Inc.
- Boutla, M., Supalla, T., Newport, E.L. & Bavelier, D. (2004) Short-term memory span: insight from sign language. *Nature Neuroscience*, 7 (9), 1997-1002.
- Braden, J.P. (1994). *Deafness, deprivation, and IQ*. New York: Plenum Press.
- Braden, J.P., Kostrubala, C.E., & Reed, J. (1994). Why do deaf children score differentially on performance vs. motor-reduced nonverbal intelligence tests? *Journal of Psychoeducational Assessment*, 12(4), 357-363.
- Braden, J.P. & Athanasiou, M.S. (2005). A comparative review of nonverbal measures of intelligence. In D.P. Flanagan & P.L. Harrison (Eds.), *Contemporary intellectual assessment* (pp. 557-580). New York: Guilford Press.
- Boehm, A. (1986). *Boehm Test of Basic Concepts-Revised*. San Antonio, TX: Harcourt Brace Educational Measurement.
- Carrow-Wolfolk, E. (1999). *Test for Auditory Comprehension of Language-3*. Austin, TX: PRO-ED, Inc.
- Dunn, L, & Dunn, L. (1997). *Peabody Picture Vocabulary Test-Revised*. Circle Pines, MN: American Guidance Service.
- Engen, E., & Engen, T. (1983). *Rhode Island Test of Language Structures*. Austin, TX: PRO-ED, Inc.

- Fenson, L., Dale, P.S., Reznick, J.S., Bates, E., Thal, D., & Pethick, S. (1994). Variability in early communicative development. *Monographs of the Society for Research in Child Development*, 59, Serial #242.
- Fenson, L., Dale, P.S., Reznick, J.S., Thal, D., Bates, I., Hartung, J.P., Pethick, S., & Reilly, J.S. (1993). *MacArthur Communicative Development Inventories: User's guide and technical manual*. San Diego, CA: Singular Publishing Group.
- Francis, J., Garner, D., & Harvey, J. (1980). *KCPS: A pragmatic approach to language for teachers of deaf children*. Washington, DC: Pre-College National Mission Programs, Gallaudet University.
- French, M.M. (1999) Starting with assessment: A developmental approach to deaf children's literacy. Washington, DC .  
Gallaudet University Pre College National Missions Program, pp. 72-74.
- Gardner, M.F. (2000). *Expressive One-Word Picture Vocabulary Test*. Austin, TX: PRO-ED, Inc.
- Gardner, M.F. (2000). *Receptive One-Word Picture Vocabulary Test*. Austin, TX: PRO-ED, Inc.
- Gillam R.B. & Carlile, R.M. (1997). Oral reading and story retelling of students with specific language impairment.  
*Language, Speech, and Hearing Services in Schools*, 28, 30-42.
- Goffman, R. E. (2007). *Current practices in the social and emotional assessment of deaf youth*. Unpublished doctoral dissertation, Argosy University, Eagan, MN.
- Greenberg, M. & Kusche, C. (1989). Cognitive, personal, and social development of deaf children and adolescents. In M.C. Wang, M.C. Reynolds, & H.J. Walberg (Eds.), *Handbook of special education: Research and practice* (Vol.1, pp. 95-129). Oxford: Peragamon Press.
- Harp, B. (2006). *The handbook of literacy assessment and evaluation*, 3<sup>rd</sup> ed. Norwood, MA: Christopher-Gordon Publishers, Inc.
- Heath, S.B. (1986). Sociocultural contexts of language development. In *Beyond language: Social and cultural factors in schooling language minority children* (pp. 143-186). Los Angeles: Evaluation, Dissemination and Assessment Center, California State University.
- Hughes, A. (1990). *Testing for Language Teachers*. New York: Cambridge University Press.

Hunt, K.W. (1965). A synopsis of clause-to-sentence length factors. *English Language Teaching Journal*, 54, 300-309.

Individuals with Disabilities Education Act Amendments of 1997, 20 U.S.C. §1401(26).

Jamieson, J. (2003). Formal and informal approaches to the language assessment of deaf children. In M. Marschark & P. Spencer (Eds.), *Oxford handbook of deaf studies, language, and education* (pp. 275-288). New York: Oxford University Press.

Jones, J.L. & Lenske, S.D. (2000). *Improving Reading: Strategies & Resources* (3<sup>rd</sup> ed.) Kendall/Hunt Publishing, Iowa: Dubuque. P. 390-391.

Kelly, L., & Ewoldt, C. (1984). Interpreting nonverbatim cloze responses. *American Annals of the Deaf*, 129, 45-51.

King, C.M., & Quigley, S.P. (1985). *Reading and deafness*. Austin, TX: PRO-ED.

LaSasso, C. (1978). National survey of materials and procedures used to teach reading to hearing-impaired children. *American Annals of the Deaf*, 123, 22-30.

LaSasso, C. (1980). The validity and the reliability of the cloze procedure as a measure of readability for prelingually, profoundly deaf students. *American Annals of the Deaf*, 125, 559-563.

LaSasso, C. (1986). A comparison of visual matching test taking strategies of comparably aged normal-hearing and hearing-impaired subjects with comparable reading levels. *Volta Review*, 88, 231-241.

LaSasso, C., & Davey, B. (1983). An investigation of the criterion-related validity of the SAT-HI reading comprehension subtest for deaf students. *Directions*, 3, 66-69.

Layton, T., & Holmes, D. (1985). *Carolina Picture Vocabulary Test for Deaf and Hard of Hearing Children*. Austin, TX: PRO-ED, Inc.

Leslie, L., & Caldwell, J. (2001). *Qualitative reading inventory-3*. New York: Longman.

Maller, S.J. & Braden, J.P. (1993). The construct and criterion-related validity of the WISC-III with deaf adolescents. *Journal of Psychoeducational Assessment, WISC-III Monograph Series: WISC-III*, 105-113.

Marschark, M., Lang, H., & Albertini, J. (2002). *Educating deaf students: From research to practice*. New York: Oxford University Press.

Marschark, M. & Spencer, P.E. (Eds.). (2004). *Deaf studies, language, and education*. New York: Oxford University Press

- Marshall, W. (1970). Contextual constraint on deaf and hearing children. *American Annals of the Deaf*, 115, 682-689.
- Mayne, A.M., Yoshinaga-Itano, C., Sedey, A., & Carey, A. (2000(a)). Expressive vocabulary development of infants and toddlers who are deaf or hard of hearing. *Volta Review*, 100, 1-28.
- Mayne, A.M., Yoshinaga-Itano, C., Sedey, A., & Carey, A. (2000(b)). Receptive vocabulary development of infants and toddlers who are deaf or hard of hearing. *Volta Review*, 100, 29-52.
- McAnally, P., Rose, S., & Quigley S. (2007). *Reading practices with Deaf Learners*, 2<sup>nd</sup> ed. Austin, TX: PRO-ED, Inc.
- McLean, J., & Snyder-McLean, L. (1978). *A transactional approach to early language training*. Columbus, OH: Merrill.
- Mercer, C.D., & Mercer, A.R. (2001). *Teaching students with learning problems* (6<sup>th</sup> ed.). Columbus, OH: Merrill/Prentice Hall.
- Moog, J.S., & Geers, A.E. (1985). *Grammatical Analysis of Elicited Language Simple Sentence Level* (2<sup>nd</sup> ed.). St. Louis, MO: Central Institute for the Deaf.
- Moores, D. (1970). An investigation of the psycholinguistic functioning of deaf adolescents. *Exceptional Children*, 36, 645-652.
- Moores, D. (1987). *Factors predictive of literacy in deaf adolescents with deaf parents. Factors predictive of literacy in deaf adolescents in total communication programs* (Final report to NIH-NINCDS No. 83-19). Washington, DC: Center for Studies in Education and Human Development, Gallaudet University.
- Newcomer, P., & Hammill, D. (2007(a)). *Test of Language Development-Primary 4*. Austin, TX: PRO-ED, Inc.
- Newcomer, P., & Hammill, D. (2007(b)). *Test of Language Deveopment-Intermediate 4*. Austin, TX: PRO-ED, Inc.
- Parker, R., Hasbrouck, J., & Tindal, G. (1989). The maze as a classroom-based reading measure: Construction methods, reliability, and validity. *Journal of Special Education*, 26(2), 195-218.
- Paulson, E.L., Paulson, P.R., & Meyer, C.A. (1991). What makes a portfolio a portfolio? *Educational Leadership*, 48(5), 60-63.

- Pikulski, J.J., & Pikulski, E.C. (1977). Cloze, maze, and teacher judgment. *Reading Teacher, 30*, 766-770.
- Prezbindowski, A., & Lederberg, A. (2003). Vocabulary assessment of deaf and hard of hearing children. *Journal of Deaf Studies and Deaf Education, 8:4*, 383-400.
- Reynell, J.K., & Gruber, C.P. (1990). *Reynell Developmental Language Scales* (U.S. Edition). Los Angeles, CA: Western Psychological Services.
- Rose, S., McAnally, P., & Quigley, S. (2004). *Language learning practices with deaf children* (3<sup>rd</sup> ed.). Austin, TX: PRO-ED.
- Salvia & Ysseldyke (2004). *Assessment in special and inclusive education* (9<sup>th</sup> ed.). Boston: Houghton-Mifflin College Division
- Schirmer, B. (2000). *Language and literacy development in children who are deaf*, 2<sup>nd</sup> ed. New York: Merrill.
- Spragins, A.B. (1998). Reviews of assessment instruments used with deaf and hard of hearing students: 1998 update. Gallaudet Research Institute. Retrieved June 5, 2008 from <http://gri.gallaudet.edu/Assessment/intellect.php#tests>
- Stieglitz, E.L. (2002). *The Stieglitz informal reading inventory: Assessing reading behaviors from emergent to advanced levels*, 3<sup>rd</sup> ed. Boston, MA: Allyn & Bacon.
- Thurman, S.K., & Widerstrom, A.H. (1990). *Infants and young children with special needs: A developmental and ecological approach* (2<sup>nd</sup> ed.). Baltimore, MD: Brookes
- Tonelson, S., & Watkins, S. (1979). *The Ski-Hi Language Development Scale*. Logan, UT: Project SKI-HI, Utah State University.
- Tucker, J.A. (1985). Curriculum-based assessment: An introduction. *Exceptional Children, 52*, 199-204.
- Watkins, S. (2004). *Ski-HI Language Development Scale*. North Logan, UT: Hope Publishing, Inc.
- Wood, M.L., & Moe, A.J. (2003). *Analytical Reading Inventory*, 7<sup>th</sup> ed. New York: Merrill Prentice Hall.
- Zachman, L., Jorgenson, C., Huisingh, R., & Barrett, M. (1984). *Test of Problem Solving*. Moline, IL: LinguiSystems.
- Zimmerman, I., Steiner, V., & Pond, R. (1992). *Preschool Language Scale-3*. San Antonio, TX: The Psychological Corporation.

