Assessing Communication and Learning

in Young Children Who are Deafblind or Who Have Multiple Disabilities

Edited by
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Who Should Read This Guide?

This guide is intended for **all professionals who are responsible for assessing and developing interventions for young children who are deafblind**. The contents should also be helpful for families of these children who seek to become actively involved in educational planning. Some families may use the information to better understand their important role in the assessment process, while other families may want to share this guide with professionals who have been asked to evaluate their children. The strategies and materials described here are applicable to many **children who have multiple disabilities** as well as to children who are deafblind.

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NOTE: For ease of the reader we have alternated the use of "he" or "she" and "him" or "her" when referring to the child.

What is the purpose of an educational assessment?
There are four main purposes of educational assessment for children who are identified as having a disability:
- to determine eligibility for special education and other services
- to develop an educational program that fits the child's strengths, areas of needs, and learning style
- to design appropriate interventions to enhance the child's learning experiences
- to evaluate the effectiveness of the educational program in facilitating the child's progress
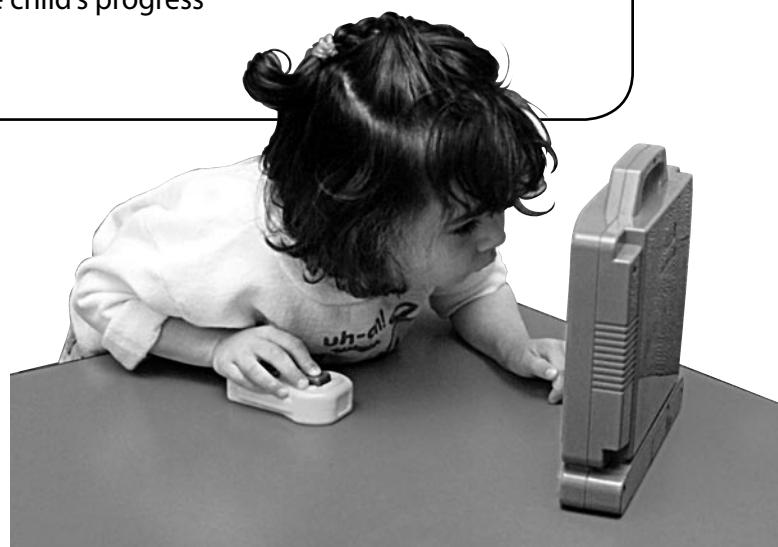
Introduction

We received a grant from the U.S. Department of Education to investigate best practices for assessing communication and learning skills in young children (2-8 years of age) who are deafblind and who have additional impairments. We collected data in the form of focused interviews, assessment results, surveys of assessment practices, and ratings of assessment tools from family members and professionals nationwide. This guide summarizes a practical approach to assessment informed by the data we collected and based on current recommended practices in early childhood special education. Complete data on our five-year project may be found at www.ohsu.edu/oidd/D2L/com_pro/db_assess_ab.cfm.

There is no single definition of assessment. In one sense, assessment is a tool, a means to an end, perhaps to qualify a child for special services or to document a child's acquisition of skills. However, assessment is also a process of gathering information about a child's skills and needs from many sources and across many contexts for the purpose of enhancing the child's education. Assessment is also the starting point of the child's education. For better or worse, assessment results can influence educational decisions about a child for years to come. Finally, assessments are used to evaluate a child's progress and the effectiveness of his educational program. Thus, accurate, comprehensive, and applicable results are essential for the child's educational and personal success. This guide is our effort to help professionals and family members to better understand the assessment of children who are deafblind or who have multiple disabilities.

Communication—a Foundation for Learning

We will focus our discussion on communication and the intersection of communication and cognition as it affects a child's learning. Communication—the ability to convey information to others and the ability to receive and interpret information from others—is fundamental to learning. The ability to convey information allows the child to influence other people and their actions. The ability to receive and interpret information allows the child to learn from other people, who offer meaning to the ever-changing events in the child's environment. We emphasize the assessment of communication because educational progress, acceptance by peers, and meaningful participation in the home and community all require the ability to communicate effectively. However, communication and cognition are tightly intertwined. Understanding the world and one's relationship to it, the essence of cognition, is not easily separated from the child's communicative abilities. Thus, the strategies we describe for the assessment of communication hold also for the assessment of cognition and learning.

Assessing communicative abilities in children who are deafblind or who have multiple disabilities is a challenge, even for experienced professionals. Vision and hearing losses limit methods of communication which rely on these modalities. For some children, motor impairments may reduce the range of communicative behaviors or restrict communication to subtle actions that are easily overlooked. Because there are so many issues in assessing these children, the task is best approached with the mindset that you are engaged in a process of discovery: discovering how to observe, elicit, and identify communication in a child whose abilities and limitations are truly unique; discovering how to acquire relevant information from teachers, parents, and others who know the child well; and discovering how to transform assessment information into an individualized educational plan. We believe that accurate assessment of communication will lead to realistic educational goals and appropriate learning experiences, not only for communication, but across developmental domains.

How This Guide Is Organized

In this guide we describe assessment as a three-phase effort that involves professionals and family members working together as a team. The three chapters that follow describe these phases:

- Getting Started
- Gathering Information
- Interpreting and Applying Results

In the final chapter we present a vignette describing the assessment of a young girl named Maria who is deafblind. The vignette includes specific examples of the strategies described in the previous chapters. Appendix A includes special notes for speech-language pathologists, special educators, psychologists and family members who are involved in assessing children who are deafblind. Appendix B provides descriptions of twelve instruments that are commonly used to assess children who are deafblind. Finally, we provide a list of resources related to the assessment of children who have multiple disabilities.

Phase I: Getting Started

A high quality assessment of a child who is deafblind will require extra planning, more coordination with other educational team members, and more time overall as compared to other assessments you may conduct. Planning for an assessment involves considering the family's role in the process, the role of all professionals involved in the child's education, and the methods you will use to evaluate the child's competencies. Careful planning will help all team members to share an understanding of the educational needs and challenges of the child.

The assessment process we discuss here may be very different from the one you use to assess typically developing children. No doubt, you will need to deviate from standard procedures in which the use of formal measures can be applied in as little time as an hour or two. Assessment time will vary depending upon several factors, including the complexity of the identified issues, the time "allotted" for the assessment, the child's schedule, the availability of team members, and the assessment measures and methods used.

Many professionals in special education have little or no experience working with children who are deafblind or who have multiple disabilities. They may lack the confidence to assess children with complex needs who are nonverbal or pre-symbolic communicators. However, through an interdisciplinary team approach and family-professional collaboration, a professional can organize a high quality assessment process by using the following tips.

Tips for the Professional Toolkit

- Draw on your knowledge, skills, and experiences in assessing other young children with disabilities.
- Identify what you need to know about the particular child and develop key questions to guide your information gathering.
- Seek and share information with relevant specializations (e.g., visual impairment, hearing loss, and severe disabilities), disciplines (e.g., occupational or physical therapy, speech-language pathology, and psychology) and resources (e.g., the State Deafblind Technical Assistance Project).
- Adopt an attitude of inquiry to gather information, analyze observations, and reflect on what you've learned about the child.
- Welcome the opportunity to challenge yourself professionally by increasing your expertise in conducting assessments and interpreting the child's unique behaviors.
- Recognize that through this process of discovery you will not only learn about the child but also about your own professional competencies.

Adopting an "Authentic" Approach to Assessment

Authentic assessment involves obtaining information about children in their everyday environments and routine activities that is useful for planning instruction. Traditional or formal testing of children who are deafblind or have multiple disabilities is not likely to give you much more information than confirmation that the child doesn't perform well on standardized tests. The standard "testing" approach (e.g., office setting, small table, no distractions, administration of formal tasks) will rarely provide meaningful or reliable information. In addition, the child may not warm up to you quickly and it may be difficult to directly elicit communication. It is best to learn about the competencies and interests of children in the context of normal routines and environments, such as in the classroom, during transitions, in therapies or small-group activities, with family members, etc. Adopting an authentic assessment approach means that we understand that children's interests and preferences, as well as contexts, can influence their behaviors; therefore, our assessment should examine their competencies across the range of "real world" settings in which the child participates. The major tasks that contribute to planning an authentic assessment are described below. At the end of this chapter we provide a checklist to help you keep track of these planning tasks.

Identify the Assessment Team

We recommend an interdisciplinary team approach involving family members, teachers, therapists, psychologists and other professionals, as appropriate for the individual child. Team members may have different concerns or questions depending on their background, perspectives, and experience with children who are deafblind or who have complex needs. Remember that intervenors or instructional assistants often spend the most time with the child and can provide especially detailed information and insight about a child's competencies. Additionally, every state (in the U.S.) has a Deafblind Technical Assistance Project that provides consultation regarding the education of children identified as deafblind. You may view a list of state projects at http://nationaldb.org/ppStateDBProjects.php.

Arrange for Family Involvement

Families have their own perspectives on the assessment process. When we asked parents of young children who are deafblind what was important to them about assessments, this is what they said:

What Families Want in an Assessment
- The assessment team should really try to "connect" with our child.
- The assessment team should get input from our family and from the classroom.
- The assessment should suggest how to set educational goals.
- The assessment should rely on tools that are appropriate for our children.
- Assessments should reveal our child's strengths and suggest how to build on them.

Each child is a member of a unique family system characterized by its composition, culture, language, experiences, and socioeconomic level. Some families may have clear concerns about the assessment process and may ask very specific questions about it. Other families may not feel it appropriate to have much input or may not believe that they have important information to share. You may have to explain that family members have unique perspectives and valuable information about their child. For instance, many children behave differently at home and at school. Furthermore, parents may interpret a child's behavior differently from how professionals interpret it. Sharing that information will lead not only to a more accurate assessment, but to interventions that address the child's skill development at home as well as at school. Below is a list of suggestions you may provide to family members to help them prepare for and contribute to their child's assessment.

How Families May Prepare for an Assessment
✓ Prepare your own questions and identify your goals and concerns in advance.

✓ Prepare a list of your child's special skills and interests.

✓ Discuss what instruments will be used to assess your child and who will administer them.

✓ Provide the evaluator with possible times to observe your child at home or in other familiar settings.

✓ Prior to the assessment, complete any parent questionnaires or assessments so that the evaluator can better understand your child's abilities.

Select Appropriate Assessment Instruments

Assessment instruments are helpful for organizing one's data-gathering efforts and summarizing a child's skills, interests, and challenges. They also provide a means to objectively measure change in skills over time. The problem is that few instruments are designed specifically to assess children who are deafblind or have multiple disabilities. This means that you will need to evaluate the instruments available to you for their applicability for the child you plan to assess. You will quickly find that there are no perfect instruments. That is one reason why the use of assessment instruments is only one element of an assessment. However, you may find that some instruments work well with certain children, or that using parts of several different instruments gives you the most useful information. We have reviewed instruments commonly used for children who are deafblind in Appendix B. Below are some questions to consider when selecting an instrument.

Sometimes, standardized assessment measures are required. These may serve a useful role in qualifying a child for special services. But they are inappropriate as educational measures, since children who are deafblind are not included in the population on which these measures are normed. If a child is below the 1st percentile on a measure, it only means that the child is below nearly all typically developing children on that skill. That should not be surprising, given the complexity and severity of the child's impairments and hardly provides new information to parents or professionals. Even age-equivalency scores must be considered suspect, since a child of 4 years who has multiple disabilities and who scores at a 3-month level certainly has more and different life experiences than an infant. Tests yielding IQ scores can be particularly troubling. An IQ score does not accurately describe the cognitive abilities or potential of a child who is deafblind. Such tests are highly dependent on verbal and perceptual skills and seem almost designed to assure poor performance from children who are deafblind. While state and local regulations may require that standardized measures be administered, they are unlikely to provide information useful in program planning or in predicting outcomes for children who are deafblind or who have multiple disabilities.

Conduct Informal Observations in Multiple Settings

There is much to be learned from observing the child interacting with familiar people in familiar environments that naturally stimulate communicative behavior. The general goal of observation is to obtain samples of the child's actions and reactions, capabilities, participation, and challenges in typical learning and social situations. Observations are conducted to focus on specific areas of interest (e.g., social interaction with peers, participation in classroom learning activities, ability to express needs and

Considerations for Selecting an Assessment Instrument

- Do the items describe behaviors a child with vision and hearing losses and/or motor impairments could be expected to show?

- Are there sufficient items at the early developmental levels to clearly identify a child's current skills and measure progress in small steps?

- Are the items appropriate to the child's chronological age, or do they describe behaviors one would only expect to see in infants and toddlers?

- Are there sufficient examples to clarify the items and to determine how a particular skill might be observed in a child who is deafblind?

- Does the assessment require information derived from observations in natural settings?

- Do the results provide applicable information for program planning or are they primarily numerical scores?

- Does the instrument provide ideas about the "next step" for the child?

- Are the results in a format that can be easily communicated to and understood by families?

- Does the instrument require the user to possess specialized training or professional credentials?

- Is there a parent version that a family member could complete, or a way for parents to provide their input and perspectives?

interests, and exploration skills). It is preferable to conduct multiple observations in different settings over time, even if the observations are brief. In this way, you can gather information about how contexts (e.g., peers, tasks, and physical environments) influence a child's behavior. For instance, a child's greeting behaviors may be easily observed at home when big sister returns from school. At snack time, you might be able to observe how the child rejects something when she is offered a food choice that she really dislikes. When your own availability to observe is limited, solicit information from professionals and family members who spend the most time with the child.

Conduct Structured Observations

Much of the information that is required to complete an assessment tool can be derived from unstructured observations of the child's typical behaviors, or from interviews with familiar persons. But to complete some assessment instruments you may need to set up more structured situations to elicit specific behaviors. Or, you may suspect that under different conditions the child may demonstrate behaviors that are not well-supported in the typical settings. For instance, if the child has a one-to-one assistant in the classroom, it may not be clear whether he can gain the attention of someone from a distance, since he is always being attended to. In this case, you might want to set up a situation where the assistant withholds attention and is far enough away that the child needs to make a real effort to gain her attention. You may discover that a child has some skills that you have never observed before when the environment is engineered to make it necessary and worthwhile for her to use them. Structured observations that involve attempts to elicit specific types of behavior are very useful for filling in the gaps in information left by informal observations in unstructured settings.

Request Evaluations by Specialists

Any child who is deafblind has both vision and hearing losses, but generally some hearing and/or vision is available. Children with severe and multiple disabilities also are at high risk for sensory impairments. Obviously, the choice of receptive and expressive communication systems depends to a large degree on a child's vision and hearing capabilities. Motor skills also play a critical role in the ability to communicate and must be considered in choosing a communication system. Experts in vision and hearing,

occupational and physical therapists, and speech-language pathologists who specialize in augmentative and alternative communication will often have crucial information to contribute to the assessment process. You may decide that it is appropriate to request an evaluation from one or more of these specialists to develop in-depth information on sensory, motor, or other skills that affect communication.

Parents often ask: What is involved in the assessment process?

Educational assessments usually involve a combination of different ways to gather information about the child, including:
(a) interviews with the child's family and other people who know the child well,
(b) observations of the child in familiar activities and situations, and
(c) structured interactions to elicit selected skills or behaviors.
Professionals may use a variety of procedures and tools to obtain and record this information, such as a commonly used assessment tool.

Assessment Planning Checklist

Identify Assessment Team Members and Their Roles	
Name	Role

Arrange for Family Involvement	
Family's Primary Concerns	Tasks for the Family

Select Appropriate Assessment Instruments	
Instrument	Who will Administer

Conduct Informal Observations	
Contexts/Materials/Targeted Skills/Data	Observer/Date

Conduct Structured Observations	
Contexts/Materials/Targeted Skills/Data	Observer/Date

Request Evaluations by Specialists	
Specialist	Type of Evaluation

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Phase II: Gathering Information

The assessment process is basically a way to answer questions about the child's competencies in order to decide how to address his educational needs. Our focus is on communication goals, but communication goals are derived from a wide range of assessment information, not just communication assessments. Of course, we need to know about the child's current communication skills; but to develop our intervention strategies, we also need an estimate of his motor and sensory abilities, preferences, temperament, and cognitive and social development. We need to know the activities, places, people, even time-of-day where the child seems to function best, and the contexts which seem to present difficulties for the child.

Begin the process by generating a list of critical issues and unique concerns that need to be addressed. What do you need to know? What do the child's teachers, therapists, and family members want to know? Write down your questions so that you get the most useful information from team members. Questions should be specific, not general. For example, instead of asking the teacher to "Describe how the child interacts with other children," ask questions such as:

"How does he react when other children come up to him?"

"Does he return a greeting?"

"Does he seem to differentiate one child from another?"

Your questions will cover communication skills, communication-related sensory and motor skills, and child attributes that affect communication and learning. These areas are discussed below.

Communication and Social Interaction Skills

Whether you are a psychologist, speech-language pathologist, educational evaluator, vision teacher, or other professional, it is important to assess the child's communication and social interaction skills, since these are the foundation for all other learning. Don't assume that "communication" is the territory of someone else.

Communication includes not only *expressive* communication (ways the child communicates to other people) but also *receptive* communication (ways other people communicate that the child understands). The child who is deafblind or who has multiple disabilities may use different types of behavior for expressive versus receptive communication. That is, it may be necessary to provide information to a child in a mode that is different from the one that the child uses to express herself. For instance, a child might have enough sight to understand sign language for receptive communication, but not have the motor capacity to produce signs to express herself. This same child might use eye gaze to fixate on picture symbols for expressive communication. Another child without sight might have enough hearing to understand simple spoken phrases (receptive), but be unable to speak himself (expressive). He might use 3-dimensional symbols (selected through touch) for expressive communication. The table on the next page shows major expressive communication modes (categorized according to the motor output modes needed to produce them) and major receptive communication modes (categorized according to the sensory input modes needed to perceive them).

Receptive Communication. Receptive abilities include two components: the sensory modality through which the communication is received and the ability to comprehend the content of the message. Communications may be received through visual, auditory, and tactile modes or a combination of these modalities. Assessment of receptive communication abilities can be a challenge because we must rely on the child's responses to know whether the communication was received and understood. Before assuming a child understands signs or speech, be sure to check whether the child might be responding to contextual cues like the visual presence of a toy when you ask if he wants to play with it, or anticipating what comes next in a familiar routine when you request an action.

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Expressive Communication Modes	Receptive Communication Modes
Oral/Motor Output	**Visual Input**
Vocalizations (cry, coo, babble, gurgle, grunt, laugh, whine, scream) Vowel sounds, consonant-vowel pairs, word-like jargon Spoken words	Facial expressions Gestures Manual sign language Object symbols Picture symbols Printed words
Motor/Gestural Output	**Auditory Input**
Body movements (head, limb, postural change, change in body tone) Facial expressions Gestures Eye gaze Manual signs	Environmental sounds Intonation/register of speech Spoken words
Augmentative/Alternative Output (requires motor/gestural selection behavior as well as comprehension of symbolic system)	**Tactile Input**
Tactile symbols Picture symbols Object symbols Written words "High-tech" communication devices using one of above symbolic systems	Handling/touch/movement Specific touch cues Object symbols Tactile (hand-in-hand) signs Brailled words

Expressive Communication. Because many children who are deafblind do not use conventional forms of expressive communication such as speech, manual signs, or gestures, we need to look carefully for other indicators of the child's efforts to communicate. These may include affective responses (e.g., change in muscle tone, facial grimacing, or smiling in response to an event), direct behaviors (e.g., reaching out for a toy of interest, pushing away a toy, or reaching to be picked up), vocalizations (e.g., grunts, or open-vowel sounds), object symbols (e.g., picking up a bell to indicate 'music'), picture symbols, and electronic communication devices. When you assess a child who is deafblind, observe and document his expressive communication behaviors. Consider whether the behaviors are pre-symbolic (e.g., gestures, vocalizations) or symbolic (e.g., words, signs, picture or object symbols). Describe the communication "functions," or how these behaviors are used by the child or interpreted by others (e.g., to greet someone, to request something, to ask for "more", to indicate "yes"). Some children may primarily communicate expressions of distress, discomfort, anger, fear and other negative emotions through behaviors such as screaming, thrashing, or biting. These behaviors are sometimes interpreted as "acting out", when in fact they are deliberate attempts to communicate; in some cases these are attempts to express pain.

At first glance, a child with the most severe challenges may seem to have few, if any, communicative behaviors. Sometimes you will have to look very closely to realize that this is not the case. One way to organize your observations of a child who is very difficult to read is with a "head-to-toe inventory." Take an inventory of the child's movements and reactions from head to toe, considering which movements appear to be voluntary and, of these, which ones might have communicative intent. Think of the movements the child can perform with his head. Are any being used intentionally to communicate? If not, are they under volitional control and, therefore, might they have the potential to be communicative? How about the child's eyes, mouth, arms, hands, trunk, etc.? Sometimes by focusing on individual movements or parts of the body, one can discover subtle behaviors that are actual or potential forms of communication. Videos can be very helpful in confirming and interpreting subtle or inconsistent communication behaviors.

Social Interaction. Social interaction ranges from merely tolerating the proximity of another person to actively communicating back and forth. The willingness of children who are deafblind or who have multiple disabilities to engage with other people varies widely. Some children may withdraw almost completely from interaction with other people, while others may be extremely sociable. Some interact comfortably with adults who know them well, but not with strangers or peers.

Here are some sample questions you might ask about the child's expressive and receptive communication and social interaction skills:

Expressive Communication
How does this child make his/ her needs and wants known (body movements, gestures, facial expressions, vocalizations, words, sign language, picture symbols, object symbols, etc.)?
Does this child's expressive behavior appear to be intentional? Is it directed toward a goal? Does it appear that the child anticipates a response to the communication?
How frequently does this child communicate?
What specific messages or communicative functions does this child express (protests, requests, greetings, etc.)?
Under what circumstances is this child most communicative (with whom? when? where?)?
Does this child need prompting or support to communicate clearly or consistently? What type of support?
Receptive Communication
What types of communicative behavior does this child understand (spoken words, manual signs, gestures, facial expressions, vocal intonation, picture symbols, object symbols, etc.)?
What messages or communicative functions does this child appear to understand (directives, greetings, requests, etc.)? Is prompting and support needed for the child to respond to a communication?
Who communicates effectively with this child? Are there particular activities in which the child seems most likely to respond?
Social Interaction
Does this child enjoy interacting with adults? If yes, under what circumstances?
Does this child enjoy interacting with peers? If yes, under what circumstances?

Sensory and Motor Skills Related to Communication

Hearing. All children who are deafblind have some degree of hearing loss. With hearing aids and other assistive devices, some children may be able to comprehend speech, or at least derive some information from vocal intonation or environmental sounds. All children with multiple disabilities should receive audiological testing to evaluate their hearing. Every opportunity should be taken to help the child benefit from auditory information, whether it is spoken words, environmental sounds, or feedback from the child's own vocalizations.

Vision. All children who are deafblind have some degree of vision loss. With vision aids, some children will be able to take in more information about their environment and may even understand visual forms of communication such as manual signs, picture symbols, or even written language. All children with multiple disabilities should have their vision tested. A thorough evaluation, including a functional vision assessment, is needed if you are considering the use of visually based symbols for either receptive or expressive communication. First, you must be sure that the child can perceive and discriminate between visual stimuli. Second, you must know how to present visual stimuli and position

the child to get the most information from them.

Motor Skills. Many children who are deafblind or who have multiple disabilities experience fine motor or gross motor impairments, although some children have no motor challenges at all. Where fine motor limitations are present, it is important to determine whether they impact the use of expressive communication systems. Some movement is required to produce any communication. Gestures, facial expressions, and body movements require gross motor and fine motor skills. Switches and high-tech communication devices must be activated somehow, perhaps by a minimal response such as pushing a large switch. In the case of severe physical involvement, head turning or eye gaze may be the only movement available for expressive communication. In any case, where significant physical impairment is present, it is important to have occupational and physical therapy evaluations to assess the impact of motor challenges on communication and to help determine the systems and accommodations needed to enhance the child's ability to communicate.

Here are some sample questions you might ask about the child's sensory and motor skills related to communication:

Hearing
Is this child able to perceive speech, vocalizations or environmental sounds?
Would this child benefit from hearing aids, amplification or noise reduction devices (such as an FM system)?
Vision
Is this child able to perceive, discriminate between, and understand visually-based symbols for *expressive* communication? If not, is a tactile expressive system indicated (e.g., object symbols, Braille)?
Is this child able to perceive visually-based symbols for *receptive* communication (e.g., picture symbols, sign language, print)? If not, is tactile input required (e.g., tactile signs, object symbols)?
What accommodations are needed to help this child perceive visually-based communication (positioning of child and partner, illumination, position and spacing of stimuli or symbols, size and color of symbols, etc.)?
Motor/Fine Motor Skills
Does this child have the fine motor skills needed to use gestures or manual signs, to indicate choices or to activate expressive communication devices?
What accommodations need to be made to allow physical access to expressive and receptive communication systems?

Child Attributes

Preferences and Interests. Understanding a child's interests and preferences is key to the assessment of his competencies; furthermore, understanding what motivates a child can make or break an instructional program. Many

children who are born with vision and hearing losses or multiple disabilities adopt a passive attitude to learning, since it is so difficult for them to understand what is going on around them. Only highly preferred activities, materials, and people may motivate them to take the risk to explore new skills. Strong interests and preferences will bring out the "best" in the child, giving you a better idea of underlying competencies as well as promising instructional contexts and materials. For example, communication behaviors might be quite different if the child is observed during a favorite activity while seated next to a preferred classmate. A child might communicate more in a music activity than in other, less-preferred, group routines or have increased motivation to explore objects having interesting physical qualities, such as toys that light up or vibrate.

Temperament. A large part of understanding a child and how to engineer a successful learning environment depends on the child's general temperament. Is she happy or moody, friendly or shy? Is she easy or difficult to engage? Can she tolerate transitions and quickly adjust to new people and places? When does she "shut down"? Arousal and attention are critical for learning, so we need to know whether the child is easily excited or fatigued. Can she attend to a task for an extended period or does she quickly lose interest? If she is irritable, we might discover that certain positions make her uncomfortable or that loud noises or sudden changes frighten her. Does she mainly engage with other people or with objects? The answers to such questions may be obtained through the use of instruments assessing temperament and from your own observa-

tions, reports from family members, and the experiences of classroom staff.

Here are some sample questions you might ask about the child's attributes that may affect the development of communication goals and instructional strategies:

Preferences
What people, things, and activities does this child prefer?
What people, things, and activities does this child dislike?
Is this child mostly engaged by objects or by people?
Where and when is this child at his/her best?
To what extent does this child tolerate direct assistance, such as hand-over-hand or hand-under-hand support?
What is this child's primary mode of exploring new things (tactile, visual, oral)?
Temperament
Is this child easily excited or passive and quiet?
Does this child show sustained attention to tasks or quickly lose interest?
Is this child calm or irritable?
Is this child sociable or shy?
Does this child accept or reject changes in routines, materials, people, and situations?

Summary

In the traditional assessment based on formal tests, the performance of a child with significant disabilities is often described in terms of the degree of delay or deviation from the "norm." For example, a developmental age, an index score, or a percentage of delay might be reported, placing the emphasis on the child's shortcomings. Sometimes this kind of documentation is necessary to qualify a child for special education services. However, information which focuses on the child's weaknesses alone, or what he can't do,

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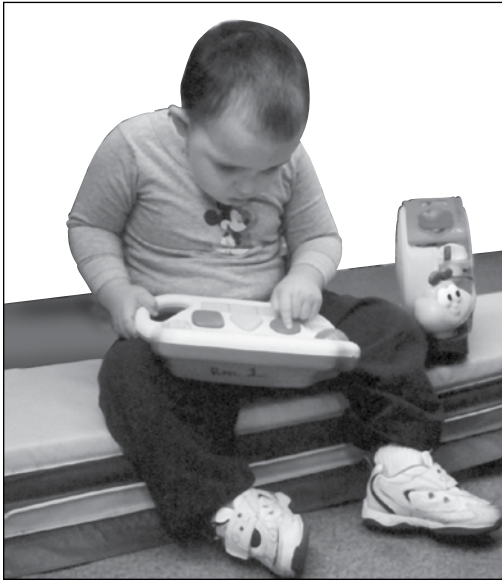
is neither useful for program planning nor for understanding the child's true abilities. We need to discover what the child can do and build on those skills through intervention. As you assess the child, the team members will highlight and qualitatively describe the child's strengths. Strengths are useful skills that the child consistently exhibits. Every child has strengths, such as: tolerance for new activities, ability to discriminate between people's voices, musical talent, interest in tactile exploration, social responses when others approach, or imaginative play. A child's strengths in the areas reviewed above serve as building blocks for further development and skill acquisition.

Parents often ask: Who will assess my child and are they qualified?

The Individuals with Disabilities Education Act requires that qualified personnel conduct assessments. Although many professionals involved in assessment may lack experience in assessing a child who is deafblind, they should have certification and expertise in their specific discipline. Further, an educational assessment of a child who has significant and multiple disabilities should include an interdisciplinary team approach that involves the family and professionals from relevant disciplines (e.g., visual impairment, hearing loss, speech and language, occupational and physical therapy, etc.) as needed.

Phase III: Interpreting and Applying Results

Effective instructional programs come from our best efforts at integrating what we know about the child's abilities, the external and internal factors which influence the child's performance, and the child's history of developmental and educational progress. We also need to acknowledge the constraints of time and personnel which inevitably make our best efforts an approximation of the ideal. At the very least, our assessment report should:

- Clearly address the interests and concerns of families and service providers.
- Provide a blueprint for service providers and families to implement educational programs and achieve educational goals.
- Describe the child's competencies in communication and social interaction.
- Suggest intervention approaches that are likely to enhance the child's learning experiences.
- Spell out the roles of families and service providers in the child's development.
- Provide objective data for evaluating progress and program effectiveness.
- Be culturally sensitive and free of professional jargon.

Current Skills and Educational Implications

Through the assessment activities outlined in the last two chapters, you will gather a great deal of information from a wide variety of sources. Now you need to put the pieces together in order to understand the child and how he learns. You will need to integrate the assessment information and consider its implications for instruction related to communication skills. Since team members operate from different vantage points, it is natural that they may draw differing conclusions from their observations and evaluations. Some observers will note skills that others have not seen; some will interpret behaviors differently from others; and there may be contradictions between staff/parent observations and results from the assessment instruments. But, differences between observers can focus helpful discussion to identify emerging skills, environmental influences, effective activities, and opportunities for generalization of skills. You may use the form on the next two pages to summarize current skills and their educational implications, based on your discussions with the assessment team. A sample completed form appears in the last chapter.

Skills and Implications

Current Skill Set	Conclusions/Implications
Social/Communication Skill Set	
Expressive Communication	
	(What existing expressive communication behaviors should be supported and what new ones should be targeted?)
Receptive Communication	
	(What communications does the child understand and how can we most effectively communicate with this child?)
Social Interaction	
	(What social interactions maximize the child's opportunities for communication with adults and peers?)

Skills and Implications

Current Skill Set	Conclusions/Implications
Sensory and Motor Skills Related to Communication	
Hearing	
	(What adaptations are needed to support the use of hearing for expressive and receptive communication?)
Vision	
	(What adaptations are needed to support the use of vision for expressive and receptive communication?)
Motor/Fine Motor Skills	
	(What adaptations are needed to support the motor behaviors needed for expressive and receptive communication?)
Child Attributes	
Preferences	
	(What activities, materials, and people encourage this child's communication?)
Temperament	
	(What pace, degree of novelty, and length of engagement best fit this child's temperament?)

Developing Educational Goals from Desired Outcomes

In the end, the assessment process should yield specific educational goals related to desired communication outcomes. Expectations may involve some of the following generic outcomes related to communication and social interaction:

Sample Communication Outcomes
Expressive Communication • Communicate more frequently using existing communication behaviors • Communicate more independently (with less assistance) • Use new (more conventional or sophisticated) forms of communication • Express new messages/communicative functions (e.g., request "more", ask questions) • Communicate about a broader range of topics • Communicate with more people and across different settings and activities • Initiate communication Receptive Communication • Respond to communication from others with less cueing/assistance • Understand new (more conventional or sophisticated) forms of communication • Understand new messages/communicative functions (e.g., requests for information, greetings) Social Interaction • Interact comfortably with adults • Interact comfortably with peers • Initiate social interactions

The generic outcomes above cover the basic elements of expressive and receptive communication and social interaction. The assessment team may decide to prioritize one or more of these generic outcomes or they may develop others. The next step is to develop educational goals that will support the selected outcomes and specify strategies for achieving those goals. Goals may target both the child's behavior and features of the physical and social environments that support the child's learning. Generally, individual school districts and programs have their own required forms for documenting educational goals in detail. Sample outcomes, educational goals and strategies are provided in the next chapter.

Instructional Considerations

Keep in mind that not all of the information collected during an assessment fits easily into forms and IEP/IFSP goals. Once the assessment team has decided on communication-related outcomes and goals, discussion may turn to more subjective impressions regarding appropriate contexts and strategies for instruction. The wealth of information collected during the assessment process can provide insight into a variety of factors that may have a profound effect on instruction related to communication skills. For instance, the positioning of the child and the position of materials in relationship to the child may enhance or suppress attention, vision and hearing. Environmental factors such as lighting level, ambient noise and distractions may be especially salient for children with sensory losses. Assessment results may also suggest some rules of thumb that affect instruction. For instance, it is important to keep in mind that communication goals can be integrated into any routine, even when other functional goals also are targeted. Additionally, it is important to resist the temptation to provide mostly one-to-one activities that include only the child and an educational assistant; such experiences do not provide opportunities for social participation and communication with peers.

Documenting the Child's Progress

Another important objective of your assessment is to document the progress that the child has made over time. It is difficult to track progress accurately when information comes only from narrative reports or informal, anecdotal information. Assessment instruments can help you to formalize your observations so that they can be systematically compared from one administration to another. However, many existing assessment tools are not sensitive enough to pick up the qualitative changes that a child who is deaf-blind or has multiple disabilities might exhibit. Indeed, the assessment instruments reviewed in Appendix B vary widely in terms of their sensitivity to the development of children who are deafblind or who have multiple disabilities. In the typical assessment, a child either "passes" or "fails" a particular item (i.e., either demonstrates or does not demonstrate a skill). Progress is evident when, after a period of time, the child demonstrates that he has acquired completely new skills (e.g., "passed" more of the assessment items). But progress need not be all or none. In fact, for the young child with multiple disabilities, progress can—and often must—be described in qualitative terms. Below are some qualitative indicators that may be helpful to describe progress in children who develop in subtle ways or in very small steps:


Qualitative Indicators of Progress

- Increased consistency of response
- Increased independence of response/ decreased assistance required
- Increased frequency of response
- Increased duration of response
- Increased clarity of response
- Faster response time
- Partial participation in one step of a routine
- Ability to participate in an activity for longer periods of time
- Sustained attention to a task
- Increased stamina
- Improved strength or accuracy of a motor response

Sometimes, it may appear as though the child has "regressed" in certain skills. It might be reported, for example, that a child's use of signs and vocalizations to communicate has decreased over the past few months, or that she is less interested in playing with other children. In fact, almost all children go through such periods of "regression" from time to time, and the reasons (e.g., illness, changes of routine, poorly designed instructional programs) are not always evident. The role of the evaluator is to gather information about what specific behavioral changes have been observed, by whom, and in what situations and contexts. Such information will be valuable to help monitor the child's progress over the short and long term, guide the team to develop interventions to reinforce previously learned skills, and/or help make decisions as to the need for additional consultations (e.g., medical or audiological).

Parents often ask: How will the assessment results be used and will they help my child?

The original purpose of the assessment should determine the use of the results and the benefit to the child. For example, was the purpose of the assessment: to determine eligibility for various services; to develop, modify, or evaluate the child's educational program; or to monitor the child's progress? Families should receive a written copy of the assessment report, have the opportunity to discuss the report with the team, and be informed about how the results will be used to benefit their child.
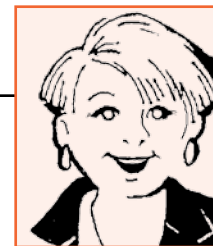
See How It's Done: an Illustration

The next chapter describes the assessment of a young girl named Maria, who is deafblind. This vignette shows how to apply the assessment strategies that we have described. Certainly, Maria represents only one example of a child who is deafblind. She illustrates a specific set of characteristics that are very different from those of many other young children who are deafblind: indeed, there is no "typical" child who is deafblind. The purpose of this vignette is to illustrate how this assessment process may be applied to any child.

Parents often ask: What can I do if I disagree with the assessment results?
As the child's advocate, a family member has the right to question an assessment report. It is important for family members to discuss concerns, ask for clarification, and address issues with the evaluation team. They have a right to find out how assessment information was gathered, which tools were used and to ask whether these tools were appropriate for their child's abilities and learning needs.

Maria

Maria is a quiet four-year-old who smiles a lot. She has multiple and complex needs, including a severe bilateral hearing loss, no vision in the left eye, a severely restricted visual field in the right eye, and significant developmental delays. Maria walks with minimal assistance, but she requires physical guidance to interact with people, objects and the environment. It is not clear whether Maria understands any manual signs, although she has produced a couple of sign approximations (MORE and DAD) inconsistently within appropriate contexts. Maria began attending preschool three weeks ago, and she is still getting used to her new school routine.

Phase I: Getting Started

Maria's Assessment Team

Maria's parents had asked for an assessment to focus on the development of Maria's communication and social interaction skills. Maria's parents were eager to be involved in this process, as they believed that Maria used some skills at home that she didn't use at school.

Maria's interdisciplinary team was composed of: her two teachers, Ellyn and Gina; a school psychologist; her speech-language pathologist; her one-to-one educational assistant; consultants in occupational therapy, visual impairment and deafness; and Maria's parents. The consultant from the State Deafblind Project also planned to provide support to the team. Most of the team members were still getting to know Maria. Although each planned to conduct his or her own assessment, they also planned to make some joint observations and meet to share findings, observations, and recommendations. Maria's teachers also decided to request the services of an audiologist to evaluate whether an amplification system would help Maria at school.

Concerns of the Assessment Team

"How will she learn to communicate?" Maria's parents expressed strong concerns about Maria's social development in their first meeting with Maria's teachers at the preschool. Mr. and Mrs. Montoya were very concerned about Maria's receptive and expressive communication and her interactions with other children.

"How is this going to work?" As an experienced early childhood special educator, Ellyn enjoyed co-teaching with Gina in a full inclusion class at the preschool. There were 6 children with disabilities in their class of 20 preschoolers, with two educational assistants. The children with IEPs demonstrated a wide range of strengths and learning needs. Ellyn relied on her expertise in early childhood special education and visual impairments to support the children's participation and learning in the preschool environment. In her previous teaching position, Ellyn had worked with another preschooler who was deafblind. However, this child was not at all like Maria. He was totally blind, had a moderate hearing loss and used some speech, but was very irritable and cried a lot.

Ellyn knew that there were school district policies and legal requirements regarding assessment. She also tried to implement the recommended practices on assessment developed by the Division for Early Childhood (http://www.dec-sped.org/index.aspx/About_DEC/Recommended_Practices). Ellyn wished there were some guidelines specifically for assessing children like Maria. She was very perplexed by some of Maria's behaviors, since she had never worked with a child like her. She remembered that developing and testing hypotheses would provide insights about the meaning of a child's behaviors. Still, Ellyn worried about the time and resources required for the assessment process.

Gina, Maria's general education teacher, was concerned about whether the staff would be able to address Maria's learning needs while supporting all the other children in the class. She wondered why they needed to spend all this time and effort on an assessment for a child who already had an IEP.

"What assessments will I use?" As a speech-language pathologist in the school district's early childhood special education services, Steve had assessed preschoolers who had autism, deafness and severe physical disabilities; but he had not assessed a child who was deafblind and nonverbal. Steve thought about his other experiences with children who had multiple disabilities. There was a child on his caseload who was deaf and had cerebral palsy. Steve worked with the teacher certified in deafness, the physical therapist, and the occupational therapist to select an appropri-

ate switch-activated device for this child. He considered consulting these colleagues about Maria. Steve also had assessed older children who were deafblind because of Usher syndrome, but these students were fluent in American Sign Language. He wondered how to assess Maria, given her developmental skills. Further, he only visited Maria's preschool two hours a week. Like other itinerant consultants, Steve had a large caseload and limited time to spend with each child. He wondered how he would find the time to assess Maria and what tools he should use. The tools that he had used with preschoolers who were deaf involved many visually-based items (e.g., pictures, manual signs) and probably would not be appropriate for Maria.

The school psychologist, Frank, had not assessed a child with dual sensory impairments before. He wondered how to conform to district requirements for providing test scores using standardized instruments. He also wondered how to develop information that would be educationally useful for the assessment team.

"How will I be involved?" The consultants in visual impairment and deafness and the occupational therapist wondered what their roles would be in the process. They each visited Maria's preschool one hour a week to consult with Maria's teachers and one-to-one assistant. They had worked together on educational teams for other children who were deafblind.

Maria's one-to-one educational assistant, Helen, was responsible for supporting Maria's participation in daily activities. Helen had very specific duties related to Maria's needs in the classroom and she didn't want to get "stuck" with other duties. She checked with her supervisor, who said that she would have valuable insight to contribute to Maria's assessment.

Involving Maria's Family

Ellyn asked the Montoyas what they expected from the assessment and what questions they had about Maria's communication development and learning style. She encouraged them to jot down their questions. Together they settled on a date for a home visit to observe Maria in her most familiar environment and to discuss the Montoyas' questions.

Major Questions Developed By the Team

The goal of Maria's educational assessment was to identify her communication and social skills, review areas of progress and concern, and determine necessary interventions to promote desired outcomes. Assessment results would be used to answer the team's questions, establish educational goals and plan learning opportunities for Maria. After discussing the upcoming evaluation with all of the team members, Ellyn decided that the following questions represented their primary concerns about Maria's communication skills:

Major Questions of Maria's Assessment Team

- How can we increase Maria's communication skills?
- How can Maria learn to interact with other children?
- To what extent can Maria use her vision and hearing to learn new skills?
- How can we encourage Maria to actively participate in routines and activities at home and at school?

Instruments Selected for Maria's Assessment

A few weeks before the assessment meeting was scheduled, Ellyn explained to Maria's parents that the team would be collecting information for several days at school. Michael, the state Deafblind Consultant, had recommended two tools to use in Maria's assessment: the *Communication Matrix* and *Home Talk* (reviewed in Appendix B). Steve was pleased to get a copy of the professional version of the *Communication Matrix*. Ellyn asked the Montoyas whether they would complete a copy of *Home Talk* and the parent version of the *Communication Matrix* if she sent them home. She explained to them why the information was important and how it would be used.

Frank, the psychologist, interviewed Maria's parents early in the process to get a sense of Maria's interests, special skills, and communication behaviors and to learn their perspective on educational priorities for Maria. In addition to reviewing the *Home Talk* assessment protocol that Maria's parents agreed to complete, Frank decided to use the current edition of the *Vineland Adaptive Behavior Scales* (reviewed in Appendix B) to gather information from Mr. and Mrs. Montoya. This assessment tool provides a checklist of skills in various areas of Communication, Daily Living Skills, Socialization and Motor Skills. Frank recognized that items on the *Vineland* were not especially sensitive to the development and learning modalities of children who are deafblind. Furthermore, the scores are not very meaningful because they are based ("normed") on the development of children without sensory impairments. However, the school district required psychological assessments to include a recognized measure of social and adaptive functioning that provided standardized scores. Frank thought that the *Vineland* could be useful to organize data about Maria's functional skills, and perhaps point to broad areas of relative strength or weakness, even though it would not describe the breadth and quality of skills that Maria had achieved.

Arranging Informal and Structured Observations

The team decided that in order to understand how to enhance Maria's communication skills, they needed to obtain an adequate sample of her behaviors in several contexts—such as at home with family members, in school with peers, and during other activities of high interest. Each member of Maria's team agreed to observe and note Maria's receptive and expressive communication behaviors during brief, specific times when Maria had opportunities for social interaction over the next week. For example, the classroom staff would make brief observations during various routines (e.g., snack time, transitions between activities, recess, and circle time). In this way they would make multiple observations across different people and situations and discover how Maria indicated her interests and needs in familiar settings and well-established routines. These observations would provide important information about her communication and social skills. The occupational therapist, and the vision consultant decided to observe Maria during "Discovery Center" time at the preschool, when Helen would encourage Maria's play and exploration of new and familiar toys, sounds, and objects. They decided to use these more structured activities to answer questions about Maria's preferences, general temperament and sensory and fine motor skills.

Phase II: Gathering Information

Maria's teachers, parents, related services staff and the audiologist all made observations and completed specific assessment instruments jointly and independently. When the team got together with the Montoyas for the assessment meeting, they had valuable information gleaned from all of these sources. Ellyn summarized the information for each of the major skill sets related to communication.

Expressive communication (how Maria lets other people know what she wants). During recess, Ellyn discovered that Maria smiled a lot when pushed on the swing, so she decided to pause and wait to see what Maria would do if she stopped pushing the swing. Maria kicked her legs and moved her head up and down until Ellyn gave her another push. Mr. and Mrs. Montoya reported that Maria had signed DAD a few times when she seemed as if she wanted attention; for example, when she wanted to be picked up. They also said that she would reach for a favorite toy that lights up or push her mother's hand toward the toy. When offered certain toys that she didn't like (such as blocks), Maria would reject them by dropping them or pushing them away. She showed that she wanted attention or was upset by making a grunting sound, kicking her feet, or grasping her hands together and shaking them. Maria's parents also noted that Maria made different vocalizations when she was in discomfort or distress.

Frank reported that Maria's standard score in the Communication Domain of the *Vineland Adaptive Behavior Scales* was below the 1st percentile. On Part 3 of *Home Talk*, "People Skills," Maria scored 22 out of a possible 40 in Basic Expression (55%). Steve reported that Maria was operating primarily on Level III (nonconventional presymbolic communication) of the *Communication Matrix*. He reported that Maria used the following behaviors to express herself: to indicate that she didn't want something Maria would move her body, turn her head away, use arm and leg movements, facial expressions and push an object or person away. To make a request, Maria would guide an adult's hand to something of interest. She used that behavior to request more of an action (e.g., being bounced on the rocking horse), to request a new action (e.g., to go outside), to request more of an object (e.g., a vibrating toy), and to make choices (e.g., between two toys). She had just begun to request a new object by reaching toward it and vocalizing

(e.g., for a flashlight that another child had). Maria did not exhibit any behaviors that could be used to ask questions, label objects or people or make comments.

Receptive Communication (how Maria responds to other people who interact with her). Ellyn noticed that Maria seemed to anticipate the daily preschool routine after being in the class for three weeks; for example, she paused by the cubbies when entering the room in the morning and waited for Helen to touch her shoulder as a prompt to remove her backpack and put it in her cubby. Maria needed physical prompts to take a musical instrument that was offered to her and to make arm movements to the action songs. A couple of times, Maria responded to the sign FINISHED, used at table activities, by standing up without physical prompts. Maria's parents reported that she responded to simple requests within context when accompanied by physical prompts, such as "sit down" (patting her hip) or "give that to me" (tapping her hand). She would smile when sitting beside her parents or when they picked her up. They also noticed that Maria turned towards Mr. Montoya when he called her name before picking her up. The vision specialist observed that Maria's vision loss made the use of manual signs or picture symbols unrealistic for receptive communication. Maria was described as very dependent on routine; but it was difficult to inform her of what was going to happen next so that she could anticipate events. The possibility of using a calendar or tangible schedule system with object symbols representing the major activities of her day was discussed as a way to provide Maria information about forthcoming events (http://www. tsbvi.edu/publications/calendar.htm).

Frank reported that Maria's standard score in Receptive Communication on the *Vineland Adaptive Behavior Scales* was below the 1st percentile. On Part 3 of *Home Talk*, "People Skills," Maria scored 12 out of a possible 25 on Responding (48%).

Social Interaction. At circle time, Gina observed that Maria sat quietly for most activities and seemed interested in other children, orienting toward and reaching out to touch children who sat beside her. Ellyn asked a classmate to help Maria walk across the bridge on the play structure; she noticed that Maria looked at the little girl who took her by the hand and followed along. The Montoyas observed that Maria loved to interact with them at home and also with certain family friends who visited.

Frank reported that Maria's standard score in the Social-

ization Domain of the *Vineland Adaptive Behavior Scales* was below the 1st percentile. On Part 3 of *Home Talk*, "People Skills," Maria scored 8 out of a possible 20 on Social Interaction (40%). Steve reported that the *Communication Matrix* showed that Maria expressed interest in other people through facial expressions and requested attention by fussing and reaching out to touch a person on the hands or face.

Hearing. A few times, when she was wearing her hearing aids, it seemed as if Maria responded to music by swaying back and forth. When Gina read a story, Maria seemed restless because she kicked her feet and grasped her hands together and shook them, but did not get up. The consultant in deafness said that Maria's responses indicated that her hearing aids were helping, and the audiologist's report suggested that an FM system might be useful at school.

Vision. Ellyn noted that Maria moved her head close to toys (within 9 inches) so that she could use her right eye. The consultant in visual impairment indicated that these observations were similar to hers and that Maria seemed interested in looking at very large, bright pictures and toys with lights. She also indicated that if Maria sat upright, this posture might encourage better use of her functional vision. She expressed concern about Maria's capacity to see and discriminate between manual signs or picture symbols. Finally, the consultant indicated that she could work with teachers on experience stories and make appropriate tactile adaptations to materials (e.g., use of textured materials and familiar objects) that would be more likely to engage Maria's interest in short stories.

Motor Skills. The occupational therapist reported that Maria's motor challenges presented relatively minor obstacles to her communication skills. Her gross motor skills

had been improving and she could almost walk by herself. Her fine motor skills were somewhat awkward and weak, but she was able to grasp and manipulate objects of different sizes and shapes and she seemed to get much of her information through touch. The occupational therapist also noted that movement was important to Maria's communication development. She had noticed that when she placed her hands under Maria's and banged a drum, Maria would smile and push her hands to have the action repeated.

Preferences. In center activities, Ellyn noted that Maria did not put her hands in finger paints or other gooey materials. Maria refused to use or manipulate certain materials (e.g., paper, crayons, scissors and glue), but she used her fingers to explore toys that had moving parts, and she pressed knobs to make lights turn on. Helen reported that Maria liked keeping her hands under the water when washing her hands. Helen noticed that at lunchtime Maria preferred crackers and other salty, crunchy snacks to sandwiches. This preference was discussed with the occupational therapist. The Montoyas observed that Maria would laugh when Dad would swing her side to side by holding her under her arms. Sometimes she seemed to get overexcited and would arch backward and flap her hands rapidly during this swinging game. They made the following list of Maria's likes and dislikes:

Maria likes:
- splashing in water
- toys that light up or vibrate
- sharing snacks with her sister
- swinging and rough and tumble play
- eating crackers and chips
- dropping toys into her toy box

Maria doesn't like:
- waiting a long time for something she wants
- being moved abruptly (e.g., being picked up without warning)
- touching sticky substances, such as pudding
- being ignored

Temperament. Ellyn described Maria as cooperative and easygoing for the most part. However, Helen and the

occupational therapist noticed that when Maria was on her back, it was hard to gain her attention. She seemed more attentive when she was sitting up well-supported in a chair. Maria needed and tolerated frequent physical prompts (such as light taps on her arm) to turn on the faucet, use soap, rub her hands back and forth, turn off the faucet, find a paper towel, dry her hands, and put the paper towel in the trash. Similar prompts were needed for Maria to find her lunch bag in her cubby, carry it to the lunch table, sit down, remove the food, and clean up afterwards. The Montoyas noted that quick, unpredictable movements seemed to frighten Maria. Overall, Maria seemed to be rather passive and prompt-dependent and she rarely initiated actions.

Phase III: Interpreting and Applying Results

Based on their discussion of assessment results, Maria's parents and the members of her assessment and educational program team felt that they had obtained a representative sample of Maria's social, communication and learning skills. The team spent a long time discussing the implications of the information they had collected in terms of Maria's communication skills. A summary of Maria's current skills and their educational implications appears on the next two pages.

Skills and Implications

Current Skill Set	Conclusions/Implications
Social/Communication Skill Set	
Expressive Communication	
• *Communication is clearly intentional.* • *Communicative behaviors: smiles, body movements, head movements, grunts, gestures (reach, push away, push Mom's hand), may sign DAD.* • *Communicative intents: gains attention, protests, requests, social interaction.* • *Often needs prompting (physical assistance).* • *Initiates communication infrequently.* • *Communicates a lot with Dad and with Helen at snack and on playground.*	(What existing expressive communication behaviors should be supported and what new ones should be targeted?) • *Support/increase use of current gestures in different contexts.* • *Provide opportunities to make choices between alternatives.* • *Probe use of object symbols.*
Receptive Communication	
• *Currently responds to some touch cues, gestures, physical prompts.* • *May recognize her spoken name.* • *May respond to FINISH sign.* • *Understands greetings, directives, requests for her attention.* • *She is most responsive to Mom, Dad, and Helen.*	(What communications does the child understand and how can we most effectively communicate with this child?) • *Support/increase responsiveness to touch cues, gestures, signs, and spoken name.* • *Probe ability to discriminate/understand object symbols as potential receptive system to allow her to anticipate events.* • *Consider use of object calendar system.* • *Pair spoken words with touch cues and actions when possible.*
Social Interaction	
• *Enjoys familiar adults, especially if rough housing and in familiar routines.* • *Orients to, shows interest in peers during group activities at school, but little actual interaction.*	(What social interactions maximize the child's opportunities for communication with adults and peers?) • *Target structured group activities at school to encourage peer interaction and differentiation of peers.*

Skills and Implications

Current Skill Set	Conclusions/Implications
Sensory and Motor Skills Related to Communication	
Hearing	
• *Currently uses hearing aids.* • *Responds to vocal intonation and music.* • *Response to spoken name is uncertain.*	(What adaptations are needed to support the use of hearing for expressive and receptive communication?) • *Support use of hearing aids.* • *Try FM system at school.*
Vision	
• *Primarily relies on touch, rather than vision to explore items.*	(What adaptations are needed to support the use of vision for expressive and receptive communication?) • *Probe tactile means of communication.* • *Present visual stimuli/symbols within 9" of right eye, with good lighting.* • *Use high visual contrast and textured materials.*
Motor/Fine Motor Skills	
• *Motor skills are adequate for gestures.*	(What adaptations are needed to support the motor behaviors needed for expressive and receptive communication?) • *Supported sitting position (not lying down) for best use of vision and attention*
Child Attributes	
Preferences	
• *Dislikes: sudden unexpected movement, sticky things, toys without sensory displays.* • *Explores new things mostly through touch.* • *Likes both objects and people.*	(What activities, materials, and people encourage this child's communication?) • *Target vestibular activities, water play, snacks, toys with light/vibration, rough housing, and crunchy/salty foods.*
Temperament	
• *Calm, cooperative, sociable.* • *Performs best in familiar routines with consistent attention.* • *Cooperates with physical assistance.*	(What pace, degree of novelty, length of engagement best fit this child's temperament?) • *Stress short activities with consistent adult attention, slow pace, and clear routine.*

Educational Goals for Maria

Ultimately, Maria's assessment team agreed on five outcomes and goals related to communication and social interaction. Although they used district-required forms to compose official IEP goals and specific, measurable objectives, they summarized desired outcomes and goals as follows:

Expressive Communication

Outcome 1: Communicate more frequently and independently using current behaviors.

> Goal 1: Maria will increase independent use of gestures.

> Suggestions: Provide frequent opportunities to make choices in snack, circle, play; promote the use of gestures to make choices/requests; fade physical assistance; record frequency of independent responses.

Outcome 2: Use new symbolic forms of communication.

> Goal 2: Maria will use object symbols to make simple choices.

> Suggestions: Use familiar objects associated with preferred items and activities as symbols. Probe ability to choose correct one (out of two) associated with preferred snacks and toys.

Receptive Communication

Outcome 3: Increase responsiveness to current communication forms.

> Goal 3: The consistency of Maria's awareness of and reactions to auditory input will increase.

> Suggestions: Provide FM system; track responsiveness to spoken cues.

Outcome 4: Understand new forms of communication.

> Goal 4: Maria will demonstrate understanding of object symbols for major activities.

> Suggestions: Provide daily schedule system with one familiar object to represent each major activity in school schedule. Present before each new activity.

Social Interaction

Outcome 5: Increase ability to interact comfortably with peers.

> Goal 5: Maria will have increased opportunities to interact with peers during regular classroom routines.

> Suggestions: Include Maria in all group activities at school; provide consistent structure for simple interactions with peers; sit Maria next to favorite peers; where appropriate, involve peers instead of (or in addition to) one-to-one assistant.

Instructional Considerations for Maria

Having decided on communication-related goals for Maria, her assessment team turned to a discussion of their more subjective impressions regarding appropriate contexts for instruction. Their major concerns related to positioning and visual attention, optimizing classroom participation, integrating communication goals into functional activities and avoiding stressful circumstances.

Positioning. Her teachers, occupational therapist, and consultant in visual impairment had noticed that when Maria was on her back, it was hard to gain her attention, but when sitting well-supported in a chair she seemed particularly tuned in, especially if people and items were on her right side. That suggested that if they wanted to engage her when she was lying down while being dressed or changed, they should be especially dynamic in providing sensory input.

They also thought floor games were unlikely to work as well as table-top games, even if Maria appeared happy and content in a game of "row-your-boat." On the other hand, when she was sitting upright, she might be much better able to learn new signs, gestures, or symbols. Appropriate positioning was also a consideration for keeping her hearing aids in her ears.

Integrating communication goals with other functional goals. Mealtime had been proposed as a good context for learning because Maria liked to eat certain foods and was highly motivated to request them. Positioning issues could also be addressed at mealtimes. If Helen, who helped Maria at mealtimes, focused mainly on how much Maria ate or how well she held the spoon, she would miss a golden opportunity to help Maria's communication skills. In addition to learning how to pour, scoop and stir, Maria was likely to acquire new expressive and receptive communication skills during mealtimes.

Optimizing participation. Because the team wanted Maria to participate more fully with her classmates and in family activities, they wanted to create opportunities for her to experience a variety of people and places. To date, Maria had been engaged mostly in one-to-one activities with Helen in her new preschool. The team recognized that in the future she should participate in more play activities involving at least one other peer with whom she could be actively encouraged to interact.

Avoiding stressful situations. It had been noted that quick, unpredictable movements seemed to distress and startle Maria, which interfered with learning. The team pointed out that it was important to recognize how Maria signaled that she was over-stimulated or distressed. They would use this information to be more responsive to Maria's needs and to provide ample warning of upcoming activities and movements. An object calendar system would help in this regard.

Next Steps

The team had assessed Maria, identified desired communication outcomes, developed educational goals related to them, and provided some specifics about appropriate instruction. They also had pinpointed some factors that would have a strong influence on Maria's instruction. This was a good starting point, but a number of tasks remained. Responsibility for implementing the educational goals

was assigned to the various team members. Strategies for monitoring the success of instructional programs were developed. Decisions were made about what type of performance data to collect and how often to collect it. The team was now poised to move quickly to resolve problems if Maria's performance showed that she was not acquiring new skills; by the same token, they would be ready to "up the ante" to promote further progress when her performance showed that she was learning. Having begun with an authentic assessment involving an interdisciplinary team of family and professionals, Maria's prospects for a meaningful and appropriate education were good.

Appendix A

On the following pages are notes directed to special educators, psychologists, speech-language pathologists and family members. These notes explain the relevance of this guide for members of these target audiences.

A Note to Special Educators

As the child's primary teacher or an educational consultant collaborating with the primary service provider, we play a critical role in assessing a child with multiple disabilities or deafblindness. Whatever our professional responsibilities or certification specialization (e.g., visual impairment, hearing loss, severe disabilities, or early childhood special education) we possess a unique perspective of the child's abilities and areas of need. This guide will answer many of your questions about the assessment process. The purpose of this note is to identify the specific skills that highly qualified special educators contribute to the process of educational assessment.

- We take time to develop a relationship of trust with the child and family. This way, we facilitate a valuable partnership with families. We learn about the family's lifestyle, priorities, and concerns; the child's activities at home and in the community; his or her personality, strengths, interests, dislikes, and areas of need.

- We observe and interact with the child consistently during routine and instructional activities. We can identify how the child participates in activities and interacts with adults and other children; what types of supports and adaptations are successful; the child's likes, dislikes, responses, reactions, and temperament; and how he or she learns. We are focused on the "total child" (i.e., on all areas of the child's development).

- We interpret the child's nonverbal or presymbolic communicative behaviors, and use of functional vision, hearing and/or compensatory skills, within the context of familiar activities.

- We have opportunities within a familiar activity to structure a situation or manipulate events to elicit a child's targeted behaviors.

- We use authentic or ecologically valid, routines-based assessments, develop meaningful instructional objectives, and implement relevant instructional experiences and intervention supports in natural settings to accomplish these objectives.

- We are familiar with evidence-based and recommended assessment and intervention practices for young children with disabilities in selected areas of special education, and we use these practices.

As special educators, we are collaborating members of an interdisciplinary team that uses the shared discipline-specific knowledge and skills of other team members (e.g., physical or occupational therapists, and speech-language pathologists) to promote a coordinated and comprehensive program for the child. We are lifelong learners who delight in figuring out how to promote positive outcomes for children with significant needs. The guide *Assessing Communication and Learning in Young Children Who are Deafblind or Who Have Multiple Disabilities* was created for professionals like you as well as for other professionals and family members whose job it is to conduct quality assessments of young children who are deafblind or who have other complex disabilities.

A Note to Psychologists

Most of us have had limited opportunities to evaluate children who are deafblind. When presented with this challenge, we may feel unprepared and somewhat uncomfortable because of so many unknowns, lack of clear assessment models, and uncertainty of how to interpret the behavior of a child who may not communicate in standard ways. Even if you do not have experience working with these children, your role is critical. Many concepts and methods of assessment from your work with other populations (such as severe disabilities or autism spectrum disorders) apply to children who are deafblind, along with your experience in organizing and interpreting information from behavioral, cognitive and social perspectives.

This guide *Assessing Communication and Learning in Young Children Who are Deafblind or Who Have Multiple Disabilities* is intended to answer many of your questions and provide some suggestions about the process of psychological assessment. As you review the guide, keep in mind the following ideas:

- **The most important assessment goal is to gain an understanding of the child's real-life skills and concepts as applied in educational, home, and social settings**. It is less critical to obtain "scores" such as age equivalencies or IQs, which are unlikely to be either valid or helpful. For example, saying that an 8-year-old child is "functioning on a 12-month level" (a) minimizes or ignores the competencies and progress that, in fact, the child has achieved over eight years; and (b) promotes the erroneous assumption that the child experiences the social and physical world just like an infant does. On the other hand, your observations of key skills—documenting how a child shows understanding of cause-and-effect by pressing the buttons of a musical toy, symbolic representation by associating the feel of a spoon to snack time, or social awareness by quieting when someone provides a gentle touch cue—will go much further toward establishing a profile of abilities that can then be directly linked to intervention planning.

- **Use your expertise**. You don't have to be an expert in deafblindness to describe the child's learning style. Valuable information can be gained by observing the child's: attention (e.g., What does it take to gain or regain the child's attention? What materials, tasks, or persons help to increase interest level?); learning modality (e.g., What are the child's preferences? How does he explore new objects?); social and communicative competence (e.g., How does the child respond to interaction, engage in play, communicate basic needs or interests?); and many other important behavioral qualities (e.g., motivation, participation in daily routines, stamina, affective and emotional state, reactions to multi-sensory stimuli, acceptance of assistance, spatial awareness).

- **Try to make specific recommendations about the interventions, resources, and teaching strategies that could be helpful to the child, educational team, and family**. Don't stop short at just "qualifying" a child for services or concluding the obvious (e.g., "needs OT evaluation"). At the very least, take the next step by identifying the educational priorities for the child (e.g., increasing opportunities for peer interaction, promoting interest in tactile exploration, expanding the child's participation in mainstream classes, re-directing repetitive behaviors to more purposeful activity). Help the team generate hypotheses about situational interventions that might be effective (e.g., pairing the child with a peer instead of the aide during 'choice time' to enhance the sense of play).

The National Consortium on Deaf-Blindness (http://www.nationaldb.org/index.php) is an excellent resource for information about deafblindness and assessment.

A Note to Speech-Language Pathologists

If you are like most speech-language pathologists, your caseload may never have included a child who is deaf-blind, but now you have been called in to participate in an assessment. You are probably wondering: how do I prepare, what do I assess, and how do I report my results? You may even wonder how important your role is, given the extensive sensory, physical, and health issues the child may experience. Many of the answers to your questions are found in this guide, but here are some additional tips:

- Expect each member of the assessment team to have an opinion about the child's communication and that their opinions may differ from yours. Think of communication in its broadest sense, but be realistic, especially in interpreting social-affective behaviors. Keep everyone's focus on skills that, through intervention, have the potential to develop and become more conventional.

- Standardized assessment instruments have few preverbal items and those items generally describe infant behaviors which are not relevant for older children. Look through the assessment instruments described in Appendix B, both as a guide to preverbal communication and as a means of organizing your observations. You may need to scan the social and cognitive development sections of the instruments, since communication items and communication prerequisites are often found in these sections.

- Children who are deafblind usually do not have autism, but your experience in assessing children with autism can be helpful. For example, structured testing is not likely to give you much useful information as compared to observations conducted in familiar settings. Videos can be very helpful in confirming and interpreting subtle and inconsistent communications. Be sure you set aside sufficient time to observe and ask questions: think in terms of days, not hours.

- Your report needs to resonate with the intervention provided in the classroom and encouraged at home. Take the time to learn about the methods and goals of the child's current program and see where your input can have an impact. Couch your report in the terminology of the classroom. Avoid SLP jargon, which can be off-putting to teachers and parents. If you haven't been in the trenches with these children, don't be surprised if you have to prove yourself as an authority on communication; but don't be surprised either if you are expected to have all the answers.

The guide *Assessing Communication and Learning in Young Children Who are Deafblind or Who Have Multiple Disabilities* was created for professionals like you as well as for other professionals and family members whose job it is to conduct quality assessments of young children who are deafblind or who have other complex disabilities.

A Note to Family Members

No one knows our children like we do. As primary caretakers of a child with deafblindness, we are an invaluable part of any evaluation team. We can point out the nuances of our child's behavior and explain the context in which it occurs. Although some members of the educational team may speak in unfamiliar terminology, please do not let that deter you from becoming an active participant on the team. Your unique insights into the daily routines and habits of your child, along with your knowledge of their developmental history, are rich in useful information. While this is a guide to be used primarily by professionals who conduct assessments, it can be of great use to family members. There is much information to be gained and examples of questions that parents frequently ask appear throughout the guide. It is our hope that you will share this guide with your child's educational team and use it together to provide your child with a quality assessment. Remember:

- Family members spend more time with their child than anyone else and possess a wealth of information useful to professionals.

- We observe our children across varied environments.

- We have a unique perspective into development, medical history, social interactions, daily activities and level of independence.

- We possess insight into communication styles, preferences and effective cues.

- We possess first-hand knowledge about deafblindness. The professionals on your educational team may have never worked with a child with deafblindness and will benefit from your knowledge and resource information.

This guide will assist your child's educational team in the assessment process. Please read it and share it with them. For more information on deafblindness and support for your family, please contact the National Consortium on Deaf-Blindness at info@nationaldb.org or their website at (http://www.nationaldb.org/index.php) or call 1-800-438-9376. The Consortium is also home to DB-LINK, which has the largest collection of information related to deafblindness worldwide. For family-to-family support, national advocacy and information please contact the National Family Association for Deaf-Blind at nfadb@aol.com or visit their website at www.nfadb.org or call 1-800-255-0411.

Appendix B:

Instruments Used to Assess Children who are Deafblind

We collected information about which tools are commonly used to assess children who are deafblind, which tools are highly recommended, and which tools were designed specifically for this population. We narrowed our investigation to tools that:

- Cover some portion of the targeted age range (2-8 years)
- Can be used by a variety of professionals without extensive special training
- Address communication, social and/or cognitive skills
- Are readily accessible (in print, available for purchase in this country or downloadable)

The table on the next page allows a quick overview of the twelve instruments included in this appendix. The pages that follow provide a one-page summary of the background and purpose of each instrument, purchasing information, and advantages and limitations for assessing children who are deafblind.

Quick Guide to Assessment Instruments

Instrument	Developed for deafblind?	Domains assessed	Age range targeted	Focus on pre-symbolic skills
Callier-Azusa-G	Yes	All domains	0-10 yr.	High
Callier-Azusa-H	Yes	Communication	0-10 yr.	High
Carolina Curriculum	No	All domains	0-3 yr. (Infant & Toddler edition) 2-5 yr. (Preschooler edition)	Low
Communication Matrix	Yes	Communication	All ages: only earliest stages of communication	High
Dimensions of Communication	Yes	Communication	All ages	High
Hawaii Early Learning Profile (HELP)	No	All domains	0-3 yr. (0-3 edition)	Low
Home Talk	Yes	Communication, learning/concept development	School-age (3+)	High
Infused Skills	Vision impairment	Social competence, organization	Early childhood-secondary	Low
INSITE	Yes	All domains	0-2 yr. (short version) 0-6 yr. (long version)	High
Oregon Project	Vision impairment	All domains	0-6 yr.	Low
SIPSS/HIPSS	Yes	Object interaction related to cognitive and social domains	All ages	High
Vineland	No	Adaptive Behavior (Communication, Daily Living Skills, Motor Skills)	All ages	Low

Callier-Azusa Scale-G edition	University of Texas at Dallas
	Callier Center for Communication Disorders
Robert Stillman (Ed.)	1966 Inwood Rd.
www.callier.utdallas.edu	Dallas, TX 75235
	(214) 905-3060

Summary

The Callier-Azusa-G is a comprehensive developmental scale last updated in 1978. It was designed specifically for use with children who are deafblind or have other severe and multiple disabilities. The scale was intended for use by classroom personnel in planning intervention programs and measuring progress. Assessment is based on observation of the child in classroom activities and assumes that the scale will be completed by one or more persons who have considerable experience with the child in classroom contexts. The Callier-Azusa G contains numerous examples under each item that describe how a child who is deafblind might demonstrate the particular skill. These examples were drawn from teacher/therapist reports and reflect behaviors actually observed among children who are deafblind. However, many of the examples assume one-to-one interactions and classroom activities prevalent when the instrument was developed, that may not reflect current practice. The instrument includes subscales on Motor Development, Perceptual Abilities, Daily Living Skills, Cognition-Communication-Language and Social Development. The Communication sections include both expressive and receptive language scales. Many items were derived from the van Dijk methodology and emphasize gestures and other nonverbal communicative means. The scale notes where items may not be appropriate for children having severe vision, hearing, or physical-motor impairments.

Scoring is completed on a 1-page profile sheet that provides age-equivalency ranges. The presence of age-equivalencies makes the profile sheet inappropriate for sharing with families. The scale's instructions suggest that the age-equivalency column be removed. Age equivalencies have also encouraged some to calculate a developmental age. However, the age equivalencies should be used only to give users a general idea of scatter across skill areas; any developmental age calculation across domains would not provide valid or interpretable information.

Strengths
- Designed for children who are deafblind
- Comprehensive at earlier developmental levels
- Numerous examples are helpful for interpreting behaviors and identifying skills
- Small skill increments at earlier developmental levels makes it useful for slowly developing children

Weaknesses
- Many of the examples do not reflect current practice
- Users who are not familiar with the van Dijk approach may not observe some responses in the context of regular activities

Summary

The Callier-Azusa Scale H is designed specifically to assess the communicative abilities of children who are deafblind. The Callier-Azusa H was last revised in 1985. It provides a highly detailed evaluation of communicative skills in: Representational and Symbolic Development, Receptive Communication, Intentional Communication, and Reciprocity. In some cases, items overlap between subscales to demonstrate the interrelatedness of the four domains. Assessment is based on observation of the child in classroom activities, and the assumption is that the assessment will be completed by one or more persons who have considerable experience with the child in a variety of contexts.

The selection and sequence of items reflect the dominant developmental theories at the time the scale was created. Understanding of the items may be hampered in users unfamiliar with the theories of Piaget, Werner and Kaplan, and Bates, or the van Dijk intervention approach. The scale is rich in examples taken from observations of children who are deafblind. However, the contexts described in the examples, especially the emphasis on one-to-one interactions, may no longer be as prevalent as they were when the scale was developed. The Callier-Azusa H has a considerable number of items at preverbal developmental levels; this should facilitate using the scale to measure progress, even when progress occurs in very small steps. The emphasis on movement as the primary indicator of preverbal communication abilities may be less relevant for children having severe physical-motor impairments.

The communicative profile derived from the Callier-Azusa H was designed to assist educators and therapists who use intervention methodologies such as the van Dijk approach and other social/cognitive-based interventions. While the profiles derived from the Callier-Azusa H provide an accurate picture of the child's skills along important developmental dimensions, the profiles may be difficult to translate into activities, particularly in inclusion classroom settings. The presence of age-equivalencies on the profile sheet makes it inappropriate for sharing with families. However, the scale's instructions suggest that the age-equivalency column may be removed.

Strengths
- Highly detailed at lower developmental levels
- Includes numerous examples taken from observations of deafblind children
- Strong theoretical basis in selection of items
- Designed for use with children who are deafblind

Weaknesses
- Examples might not reflect current practices
- Emphasis on movement makes the scale less useful with children with severe physical-motor impairments
- Difficult to translate to intervention for programs not using van Dijk or other one-to-one social-communicative approaches

Summary

The Carolina Curriculum for Infants and Toddlers with Special Needs is a comprehensive curriculum that includes a developmental assessment. The package is designed for use with children functioning in the birth-to-3 years developmental range. A companion volume, the Carolina Curriculum for Preschoolers with Special Needs (2-5 years), directly overlaps with the Infants and Toddlers volume, allowing for continuity into the classroom. The materials are primarily designed and used by early interventionists and are not specifically designed for children who are deafblind. The instrument has undergone several significant revisions since it was initially published in 1986 and many users may be familiar with older versions. The current edition was published in 2007.

The assessment portion of the Carolina consists of skills observed in typically developing infants and toddlers, although many items are quantitative (e.g., "Appropriately uses 15 or more words") and relevant regardless of the child's chronological age. Five developmental domains are covered (Communication, Cognition, Social, Fine Motor, Gross Motor) under which 24 (0-3 yr.) and 22 (2-5 yr.) subscales are included. Although some communication subscales retain the familiar expressive-receptive distinction, there are separate subscales to assess conversational skills, grammatical skills, auditory attention and memory, and vocal imitation. This allows for addressing each in intervention, but also means that items more typically grouped together are scattered among a number of subscales. The lack of guidance regarding how to synthesize the information across subscales could lead to a fragmented communication intervention. Only the Conversation Skills subscale has more than a few items at the early developmental levels and is probably the most useful of the subscales for children who are only beginning to communicate. Many items require relatively intact visual and auditory skills, although each subscale is preceded by a section describing possible modifications for children whose vision, hearing, or motor skills are impaired. The other subscales jump rather quickly to the assessment of language skills.

The main strength of the Carolina is that it seems well designed for assessments conducted by persons who do not have much time to spend with the child (e.g., a home visit) and who must provide immediate intervention suggestions. Although it is designed for children whose abilities span the range from mild to severe developmental delays, it seems best suited for children at the milder end.

Strengths
- Each assessment item is associated with an intervention strategy or activity
- Most useful for children with milder impairments and who are acquiring verbal language skills
- The Infant-Toddler and Preschooler versions overlap, providing assessment and intervention continuity into the classroom

Weaknesses
- Communication subscales mainly focused on early language acquisition
- Clumsy to use for strictly assessment purposes
- Substantial requirement for hearing and vision needed to achieve many items, despite suggestions for modifications.

Communication Matrix
Charity Rowland
www.designtolearn.com
Online service: free at
www.communicationmatrix.org

Oregon Health & Science University
Design to Learn Projects
707 SW Gaines St.
Portland, OR 97239
888-909-4030

Summary

The Communication Matrix is an instrument designed to assess expressive communication skills in individuals functioning at the earliest stages of development. It accommodates any form of communication, including pre-symbolic and augmentative or alternative forms. It was most recently updated in 2004. The Communication Matrix is well-suited for children who are deafblind because the items are either not tied to a specific sensory modality or can be easily used regardless of the child's primary modality of expression. The instrument encompasses critical steps in communicative development that would occur during the first 2 years in the typically developing child. The instrument is designed for use by professionals who directly observe and elicit communicative behaviors from the child and/or gather information through interviews with parents and teachers. Its brevity, clarity of instructions, and ability to identify critical communication skills make it more user-friendly than most assessment instruments. The Matrix is available in a succinct format for experienced professionals and in a lengthier but easier-to-use format for parents (in English and Spanish). A free online version is also available at www.communicationmatrix.org, also in English and Spanish. This online service automatically generates the 1-page profile and a comprehensive communication skills list.

The assessment items form a matrix of communicative functions and communicative forms useful in understanding the range of a child's communicative skills and the means the child possesses to communicate. The assessment focuses on four basic reasons to communicate: to refuse, to obtain items, to socially interact, and to provide or seek information. It also asks the user to identify the behaviors and the level of intentionality and conventionality of the child's expressions. The communicative behaviors cover the full range one might expect to see, regardless of the type or severity of a child's sensory, motor, or cognitive impairments. The difficulty in its use may come from problems in correctly interpreting level of intentionality. Determining whether a child intends to act or intends to influence another person is not always easy to establish. Thus, there are always risks of under- or overestimating a child's abilities. In addition, the focus on expressive acts could lead users to ignore the receptive aspects of the child's communicative development in designing and evaluating the effectiveness of interventions. The scoring sheet is easy to use and the graphic format should be very useful in describing a child's present skills and opportunities for progress to parents and classroom staff. The instrument also offers brief but useful intervention suggestions.

Strengths
- Easily used with children who are deafblind
- Comprehensive at lower developmental levels
- Profile provides an excellent graphic for communicating a child's strengths and weaknesses to parents and classroom staff

Weaknesses
- Judgments of intentionality can be difficult
- Assesses only expressive skills

Dimensions of Communication

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Summary

Dimensions of Communication, published in 1999 (and to be updated in 2009), is a comprehensive communication assessment-to-intervention manual "designed to help teachers, educational specialists, speech-language therapists, psychologists, and other service providers evaluate the communication skills of children, adolescents, and young adults who have multiple disabilities, including severe or profound mental retardation and deafblindness." The instrument was intended to serve as an alternative to traditional speech-language assessments that may not effectively tap the communicative skills of children who are deafblind. The manual details a multi-step process of collecting assessment information, generating a profile of the child's communication skills, and linking the assessment results to intervention goals and activities. The assessment data are obtained through observation of the child, elicitation of the child's communicative behaviors, and interviews with service providers and caregivers.

The instrument is organized according to six communicative dimensions: symbol use, intent, complexity, social action, vocabulary use, and comprehension. Each of these dimensions is well defined and presented as a hierarchy of skills. Each skill level includes four or more examples extracted from classroom and community activities to help users determine a child's skill. The examples describe activities appropriate for children of different chronological ages, making the instrument useful for older as well as younger children with limited communication abilities. Instructions for using the instrument and creating a profile are clear, but the multi-step process may require more time than some users may be able to commit. The direct link to intervention is another distinct strength. However, some users may not be willing to study the detailed instructions and procedures that would enable them to properly use the instrument. Nonetheless, the manual offers an excellent tutorial for users having limited familiarity with children who are deafblind, guiding them through the steps of early communication development and aiding them in development of appropriate intervention strategies in the context of typical classroom and community activities.

Strengths
  • Comprehensive evaluation of the essential domains of communication
  • Direct link between assessment and intervention
  • Manual provides an excellent tutorial on communication acquisition and appropriate intervention activities

Weaknesses
  • May require more time and effort than some users may wish to spend due to length and multi-step nature of the assessment process

Summary

The Hawaii Early Learning Profile (HELP) provides comprehensive developmentally-based assessments in Birth-3 year and 3-6 year (Preschooler) versions. Two versions are available. The HELP Strands include over 600 items organized into developmentally sequenced strands of interrelated concepts. The HELP Checklists group the same items according to age level and are designed for easy recording and progress monitoring. The HELP Strands and Checklists provide the assessment component for a variety of curricula prepared by HELP. Each item links to intervention suggestions in the various separately published curricula.

Both versions of the HELP evaluate six developmental domains. There are ten subscales under the language area. The large number of subscales means that an unusually large number of items related to communication are included. But, there are relatively few items addressing early developmental levels, which make the HELP assessments less useful for children at the early stages of communicating. Most items also require relatively intact visual and auditory abilities and there are no specific instructions on modifying items to make them useful for children with sensory impairment. In the Language section, there is a distinction between subscales which evaluate communicative behavior (e.g., use of particular forms and functions) and those that evaluate the social aspects of communication (e.g., the Communicating with Others subscale.) One of the advantages of the HELP assessments is that they are more comprehensive at the early language levels for children who are in the process of acquiring language skills. The Cognitive area includes 16 subscales and covers some basic awareness and sensory/motor skills. Nonetheless, substantial accommodation would be required to make the instrument valuable for the assessment of many young children who are deafblind.

Strengths
- Large number of items in the domain of communication/language and in cognition
- Each assessment item is linked to curricula published by HELP

Weaknesses
- Few items relevant to children at the early stages of communicating
- Most items would be inappropriate or would require significant modification to use with children who are deafblind

Summary

Home Talk is primarily an instrument to assist families with organizing and documenting their knowledge and observations of their children. Home Talk was developed as a joint project by parents of children who are deafblind and clinicians and researchers who work with them. It may help families to effectively communicate and participate with professionals in the development of their children's educational program. It was designed specifically for use with children who are deafblind. In the first section, families describe the child's basic health and developmental status; in the second, they describe the child's individual interests, preferences, and personal characteristics; and in the third, the child's competencies in the social and cognitive domains. The fourth section is a "parent-professional worksheet", a mechanism for joint consideration of educational goals by family members and professionals.

In the first two sections, users complete a checklist or write in descriptive information. In the third section, users describe the child's skills using a numeric rating system to describe the child's functioning in terms of People Skills (17 items), Solving Everyday Problems (20 items), Exploring the Environment (21 items) and Discovery & Learning (13 items). These ratings are intended to provide only a broad sample of development in these areas. The fourth section is designed for collaborative family/service provider planning of educational goals. The first three sections include jargon-free and culturally-neutral language and examples. Families who complete the first three sections of Home Talk could offer service providers extremely valuable information that would otherwise require a complete case history and probably an in-depth interview. It also gives the family the "authority" of a written document to compare and contrast with assessment information collected by service providers. The fourth part is designed for parents and professionals to complete jointly as an exercise for developing educational goals based on the information that parents have provided in the earlier sections. In this section, the terminology and objectives are similar in language to the educational objectives typically included on IFSPs and IEPs. Home Talk can be an important piece of a comprehensive assessment, but would not be sufficient to serve as an assessment without additional measures of the child's performance.

Strengths
- Provides family perspective on a child's abilities and characteristics
- Allows families to more effectively participate in educational planning
- Mostly jargon-free and culturally neutral

Weaknesses
- Offers only the family's perspective
- With few items, Home Talk doesn't offer sufficiently detailed evaluation of communicative skills for planning or measuring progress

Summary

The INSITE is a comprehensive developmental scale published in 1989 that covers gross motor, fine motor, self-help, cognition, social, emotional, communication, vision, auditory, and tactile development. It is available in 0-2 year and 0-6 year versions. It is designed for joint service provider-parent assessments in the home for the purpose of planning home-based interventions. However, it would also seem applicable for classroom use. Administration is based primarily on observation and generally requires extensive knowledge of the child, best provided by a parent or an educator with extended contact with the child. The Communication section addresses expressive and receptive communication and includes numerous items at the earlier developmental levels. Because the instrument was developed for children with motor and sensory impairments, the items do not need to be adapted and users will readily be able to match behaviors they observe with items on the instrument.

The INSITE is probably most useful for establishing an inventory of the child's skills from which objectives and activities may be planned. Each developmental level, indicated by an age-equivalency range, contains from 3-5 items drawn from the typical development literature. By identifying the skills the child does and does not demonstrate, service providers and parents can easily determine strengths and weakness that could be targeted in an intervention plan. In addition, the instrument may be used to measure progress by noting changes in the child's inventory of skills over time. The scoring system, however, might exaggerate the number of splinter skills. Items at each developmental level are numerous and diverse. Some require specific motor and sensory abilities, while others may not be present in the chronologically older child. Thus, achieving a basal level as described in the instructions could be problematic.

Although the INSITE is designed for use in intervention planning, the path from assessment to intervention is not clear. The manual suggests several sources to reference in intervention planning and, in fact, provides links to specific activities in these curricula. However, it would be difficult for an inexperienced service provider to analyze and prioritize the detailed data in order to choose appropriate targets. The density of developmental items, although a strength, could overwhelm inexperienced users. Finally, the small print size makes the instrument appear more daunting and unfriendly than it actually is.

Strengths
- Developed for children with multiple disabilities and sensory impairments
- Provides numerous items at earlier developmental levels
- Provides a comprehensive profile of skills and gaps

Weaknesses
- Large number of items at each level makes it difficult to determine which strengths and weakness need to be targeted in intervention
- Identifying a basal score is likely to be problematic
- Print is very small and difficult to read

Summary

The Infused Skills Assessment was published in 1997 as part of the larger Communication: A Guide for Teaching Students with Visual and Multiple Impairments (a revised version is in preparation). The assessment was designed for use with children who are deafblind and, more generally, with children having severe cognitive impairments. It covers five areas: Social Communicative Interactions, Emotional Development, Senses/Motor Skills, Basic Concepts, and Representation/Cognition. The accompanying manual provides a thorough description of the acquisition of communication and cognitive skills and of issues in assessment, especially as they relate to children with visual impairments and limited communication skills. It also provides a comprehensive review of intervention approaches. A significant strength of the manual is that it includes clear definitions of the terminology used in the assessment as well as reference lists for users seeking more information on specific topics. However, the length of the manual may discourage thorough reading.

The assessment is integrated with intervention ("diagnostic teaching") and includes multiple steps from basic data gathering to scripted scenarios designed to elicit particular behaviors. The sheer complexity of the process, however, is likely to discourage some users. Furthermore, there are relatively few items at earlier developmental levels. Scoring, too, is complex, yielding good documentation but requiring substantial effort. Previously scored examples are provided to assist users. The instrument is designed to provide measures of progress through color coding and there is space available for user comments, which can provide a supplementary view of skill acquisition.

Strengths
- Comprehensive manual describing early communication skills
- Items are based on the research literature
- Terminology used in the assessment is defined in the manual
- Contains scripted scenarios for eliciting particular communicative behaviors
- Integrated with intervention
- Addresses cognitive development

Weaknesses
- Complex procedure for documenting skills
- Lacks assessment items for pre-intentional levels of communication

The Oregon Project for Preschool Children Who Are Blind or Visually Impaired

Sharon Anderson, Sue Boigon, Kristine Davis and Cheri deWaard
http://www.soesd.k12.or.us/
(click on OR project)

Southern Oregon Education Service District
101 North Grape St.
Medford, OR 97501
541-245-5196

Summary

The Oregon Project Inventory is a comprehensive developmental scale initially published in 1978 and supplemented in 1991. The 2007 version (6th Ed.) incorporates an additional 200 items. The assessment covers the following domains: cognitive, language, compensatory, vision, self-help, social, fine motor and gross motor. The instrument was designed specifically for use with children who are visually impaired or blind. The Oregon Project Inventory is designed for collaborative service provider/parent assessments with parents identifying particular skills and behaviors they have observed. The Language Skills subscale contains relatively few items in the preverbal and early verbal stages. The items are developmentally ordered within each stage, but expressive and receptive skills are mixed. The Cognitive subscale contains a number of sensory/motor and awareness items at the birth-one year level. The items are described in jargon-free language, which should make its use by non-professionals easier. Because the instrument is designed for children who are visually impaired or blind, the items are weighted toward abilities in the vocal/auditory modalities. Use of the instrument in assessing children with more than moderate hearing loss would require adaptations and many of the items in the Birth-to-1 section would be inappropriate.

Scoring is based on the percentage of items attained within each 1-year age range. This system avoids the need to attain a basal level, thus minimizing the appearance of splinter skills and the subsequent confusion in selecting appropriate intervention objectives. It also provides a quantitative measure of change over time. However, the lack of clear sequences within and across each 1-year range makes it hard to use the results to plan intervention. Particularly at the Birth-to-1 stage, many of the items describe spontaneous vocal play, which would be difficult to target in an intervention. Nonetheless, the instrument does provide a thorough profile of skills, especially those related to the acquisition of speech and comprehension in the auditory modality.

Strengths
- Items take into account visual impairment
- Jargon-free language
- Provides a quantitative, criterion-referenced measure of progress

Weaknesses
- Results not easily translated into intervention goals
- Not appropriate for children with more than a moderate hearing loss

Summary

The School Inventory of Problem Solving Skills (SIPSS) is an observational instrument designed to assess cognitive skills related to object use in children who are deafblind or have severe and multiple disabilities. The SIPSS was most recently revised in 2002. It assesses the acquisition of sensory-motor skills related to objects and is not a measure of overall cognitive status. Rather than creating a scale of sensory-motor skills, the SIPSS reframes sensory-motor development in terms of problem-solving circumstances a child would encounter and might be expected to master in the classroom. This makes the SIPSS useful with chronologically older children for whom the typical infant-toddler sensory-motor assessment would not be appropriate.

The SIPSS is divided into three sections: Basic Skills with Objects, Ways to Gain Access to Objects, and Ways to Use Objects. Each of these three sections contains 9-13 items and a variety of appropriate examples. Items represent generic skills (e.g., Holds two objects, Opens simple containers, Matches to perceptual features). Each item is scored according to 4 score options. Of particular value is the category "Mastered with Limitations". This allows credit to be given to the child who, "Clearly understands what needs to be done, but physical limitations prevent the child from doing this independently." The SIPSS also cautions that the behaviors assessed need to be intentional to avoid crediting purely motor or perseverative actions.

The SIPSS is probably best used to determine the types of activities that would be appropriate for a child based on the child's object interaction skills and to inventory the environment to assure the child has opportunities to demonstrate those skills. Although it is indicated that the SIPSS may be used to target new skills, many of the skills described are difficult to teach because they depend on the child's ingenuity and motivation. A home version of the SIPSS (the HIPSS) is available and includes examples describing situations typically encountered in the home. It should be relatively easy for families to complete and to collaborate with service providers in interpreting the results. A Spanish language version of the HIPPS also is available.

Strengths
- Assesses sensory-motor skills in an age-appropriate way
- Clearly written with numerous classroom or home-based examples
- Allows credit for children whose motor/physical impairments interfere with their ability to demonstrate certain skills
- Available home version provides opportunity for parent input

Weaknesses
- Some examples within items seem to require different levels or types of cognitive skills

Vineland Adaptive Behavior Scales

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Summary

The Vineland Adaptive Behavior Scales is a standardized, comprehensive instrument designed to assess age-related, adaptive behaviors in individuals from 0-90 years. The latest edition is the Vineland II, published in 2006. The Vineland was designed to serve multiple purposes including differential diagnosis, program and treatment planning, and measuring progress. The manual contains extensive statistical data and states that accurate administration as well as interpretation requires a graduate degree in psychology or a related field. The Vineland Survey Form versions can be given to parents in questionnaire form or through parent interview by a professional (the preferred mode). The interview, if administered by a skilled interviewer, would likely gather rich information beyond the 4-category ratings available in the parent questionnaire. Items in the teacher rating version of the Vineland start at age three and are not appropriate for younger children or children at earlier developmental levels.

The Vineland addresses the domains of Communication, Daily Living Skills, Socialization and Motor Skills. Even the parent form of the Vineland has few preverbal items in the Communication Domain, and most require relatively intact auditory and/or visual abilities. It does, however, offer extensive and relatively fine-grained assessment of language and literacy skills for children who are acquiring language. Assessment of cognitive abilities are incorporated under Daily Living Skills, but are focused primarily on adaptive behaviors rather than educational performance.

One stated purpose of the Vineland is to provide information applicable to intervention and treatment planning, but the translation would not be straightforward because the items describe specific skills rather than general ability categories. In addition, the assessment focuses on performance, not skills. That means that that the user would need to determine whether they were targeting the child's motivation in a situation or the child's acquisition of knowledge or skill. Scoring is complex, but provides a profile of strengths and weakness that might be of value in communicating results to families and in measuring progress.

Strengths
- Standardized test with substantial data across populations of children having developmental disabilities underpinning the norms
- Focus on adaptive behaviors rather than on developmental skills may fit the goals of some programs

Weaknesses
- Few items at the earlier developmental levels
- Difficult to adapt for children with vision and hearing impairments
- Complicated to administer and score, requires specialized training and experience
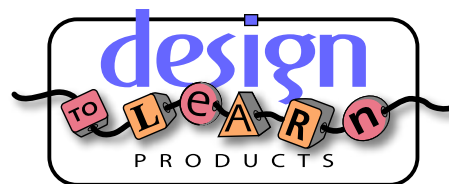- No clear translation into educational planning

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Assessing Communication and Learning

in Young Children Who are Deafblind
or Who Have Multiple Disabilities