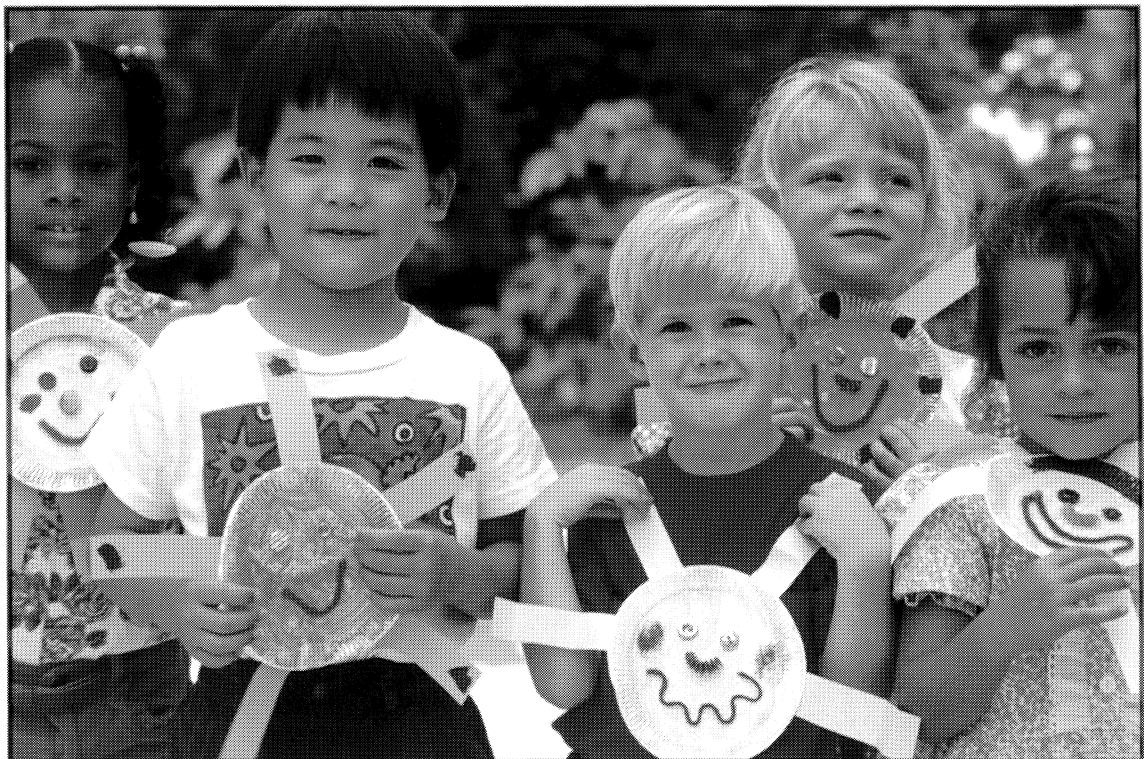


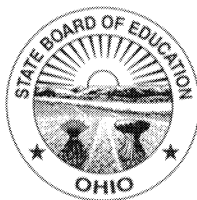
A Way of Knowing

A Teacher's Guide to Classroom-based Assessment of Young Children

Judith Schickedanz

*In collaboration with the Ohio Department of Education
Office of Early Learning and School Readiness*





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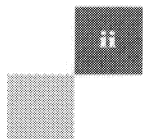
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A Way of Knowing

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Preface

A Way of Knowing: A Teacher's Guide to Classroom-based Assessment of Young Children provides methods for observing and recording children's behavior, analyzing the data obtained, and utilizing the results of these analyses to plan subsequent work with children. In ongoing observational assessment, data is collected while children engage in their typical daily activities, including those, such as story time, which are planned and directed by an adult, and also including child-initiated activities, such as play, which, though supervised and guided by adults, are largely directed by the children. This kind of assessment allows early childhood educators to make informed judgments about the progress children are making in their learning, and, in turn, to make good decisions about the experiences they will provide to children. While other published documents have been developed for a similar purpose, *A Way of Knowing* provides a unique and integrated approach to assessment that is linked to Ohio's early learning **content standards** for pre-kindergarten.

A Way of Knowing is intended for use by early childhood educators of preschool or pre-kindergarten age children (3-, 4- and 5-year-olds), with and without disabilities; thus, it is designed for use by administrators and early educators in community child care, family child care, Head Start and public preschool group settings. The content chapters of this guide (chapters 5 and 6) focus only on language and literacy—the content standards in English language arts for preschool children. The four chapters covering the observational assessment process (chapters 1 through 4), however, provide a framework that can be applied to any content area or developmental domain.

Ohio, like every other state, has engaged in the development of early learning content standards, describing outcomes or learning expectations for pre-kindergarten age children. For early childhood educators, families and children, Ohio's early learning content standards for English language arts describe essential early language literacy concepts, understanding and skills that young children should know and be able to do at the end of their preschool experience. These standards represent the potential of all children—children at risk, disabled and non-disabled—and serve as the framework for designing and implementing language and literacy curricula and learning experiences within all kinds of preschool programs. Given that the standards define the desired content and outcomes of young children's education, they can lead to greater opportunities for positive development and learning in these early years. When early childhood educators know and understand the standards, they ensure that the core knowledge and skills considered essential to success in learning to read and write in the elementary grades become part of every child's preschool experience.

The design and implementation of assessment practices that support all children's development in ethical and appropriate ways is essential for children's success within a standards-based system. Appropriate assessment begins with a comprehensive understanding of what is to be assessed. In Ohio, it is the content and desired outcomes expressed in the early learning content standards. Of course, assessment must be done in a variety of ways. This means that it must include **authentic assessment**, which consists of observations made by educators while they work with children in a variety of early education contexts. Moreover, given that early childhood programs include an increasing number of children with disabilities and developmental delays, these children must be given thoughtful consideration as teachers assess progress in relation to early learning standards. *A Way of Knowing* addresses the concerns that assessment include observations in daily contexts and that guidance for this task be inclusive of all children in early childhood settings.

Both pre-service and in-service educators should find this guide useful. The guide will also serve students of 2- and 4-year early childhood teacher preparation institutions as a guide for observing and recording the development of young children, while they complete their coursework and clinical work, including student teaching. The guide is also intended to provide in-service needs of teachers and assistants who are refining their skills in observing children and learning to plan for individual children based on developmental needs and targeted, standards-based goals.

Considerations

To ensure effective use of this document for Ohio's early childhood educators, some clarification of terms is essential. Important terms are in boldface throughout the guide, and these terms are defined and explained in a glossary located at the end of the guide.

About the Author

Judith Schickedanz authored this guide. Her work was informed by a draft document about observational assessment that had been prepared by Ohio's early childhood coordinators. Dr. Schickedanz is Professor of Education at Boston University's School of Education. Judith has worked with a variety of preschool settings, including public preschool, child care and Head Start, and thus brings an intimate knowledge of theory, research and practice to the text. In addition to *A Way of Knowing: A Teacher's Guide to Classroom-based Assessment of Young Children*, she has authored numerous nationally recognized articles and texts, including *Much More Than ABCs: The Stages of Reading and Writing*.

Acknowledgements

We wish to thank Judith Schickedanz, for her time, expertise and perspective that led to the development of this document to support Ohio's educators. Appreciation is also extended to the early childhood coordinators within Ohio's special education regional resource centers for their contributions. In addition, we appreciate the time and efforts of the Observation Guide Focus Group members. The perspectives, recommendations and work from this diverse group of early childhood professionals from around the state were instrumental in extending, completing and adapting the document specifically to Ohio's early childhood educators, for whom we hope it will serve as an invaluable resource and guide.

Part I

**Observation-based Assessment:
Some Process Basics**



Part I: Introduction

Every day, each of us uses what we hear, see and feel to take account of events in our environment. A streak of lightning against a dark sky, coupled with a loud clap of thunder and the sudden stirring of a strong breeze, prompts us to find shelter immediately. A flash of light and a loud “pop,” followed by darkness in just one lamp in our living room, tells us that it’s time to replace a light bulb, not check the fuses in the basement. These events are salient—they stand out and get our attention. In addition, these events are interpreted almost instantaneously, given that they are related so directly to specific causes.

All of life is not quite this simple. Yesterday, we blamed the short temper and frequent crying we observed in one of our children on too little sleep or post-Halloween fatigue. Not until today, when the thermometer confirmed the elevated temperature that a flushed face and red cheeks suggested, did we reconsider our earlier judgment: “Yes, crankiness often accompanies too much excitement and too little sleep, but sometimes it signals impending illness.” Even so, we wonder whether we should make an appointment with the pediatrician.

We review our observations: The child’s temperature is only 99.5 degrees, not over 100; his throat is red, but seems free of white spots. We have observed sneezing and a drippy nose. For now, our best interpretation of the data is that our child has a common viral cold. We decide not to make an appointment with the pediatrician, but do call the child-care center to inform them that our child will not attend today. “Shows Signs of a Fresh Cold” is listed in the child-care center’s *Parent Handbook* as a situation that warrants keeping a child home. We do that, and wait and watch.

Classroom life presents a teacher with behavior that varies tremendously in terms of both its salience or prominence and the ease with which it can be interpreted. Some behavior is almost like lightning and thunder—it comes to us and literally grabs our attention. Examples of highly salient classroom behavior include a child’s shouting, “I did it! I did it!” after succeeding in hanging up a painting using two clothespins; a child’s deliberate recitation of “1, 2, 3, 4, 5,” synchronized with the child’s pointing at small animals lined up on a tabletop; and a child’s loud and emphatic statement, “I will NOT be your friend today, if you don’t play with me in the blocks!”

A considerable amount of child behavior in a classroom, however, is quiet, not salient or prominent. Because it is quiet, we must be on the lookout for it. It does not find us. For example, suppose that a child writes the numerals 1 to 6 on the individual pages of the blank book in which she has drawn pictures for a story, and then puts the book in her take-home folder, without ever saying a word to anyone. It’s the same with a new child’s response to the social gestures of a classmate:

The child lifts up a jigsaw puzzle after she has assembled it, and then extends her arms in an offering movement, as she looks up at the new child sitting across the table. When the children’s eyes meet, the child with the puzzle smiles, and then she raises her eyebrows and also her shoulders, as if to say, “I’m finished. Do you want a turn with the puzzle?” The new child breaks gaze, tilts his head to look down at the tabletop and shakes his head no.

Nothing about the behavior in these two situations calls out to say, “Hey, look here! I’m about to do something that will tell you what I know or can do, or how I feel.” Early educators notice quiet behaviors, such as these, only because they know that they must watch for them, and also because they have learned where to look and what to look for.

Interpretation of child behavior also varies in difficulty from the fairly straightforward to the downright mysterious. When a child exclaims, with great excitement and a big smile, "I did it! I did it!" the adult can conclude, with a fair degree of certainty, that the behavior reveals the child's sense of pride in an accomplishment. But what is to be of a demand by one child that another child play with him or risk losing him as a friend? Would it be accurate to think that the child's verbal behavior is an instance of meanness or a wish to exert control over the behavior of another child? Should we think that the other child, who agreed after the outburst to join the child in the blocks, gives in too easily to the demands of others instead of sticking up for himself?

The actual interpretations of the data made by the teacher differed from these. The day before, the teacher had heard the children discussing what to play. One child suggested the play dough table; the other suggested the blocks. The teacher thought they had agreed to play with play dough (the other child's choice) yesterday, and made plans to play with blocks "tomorrow." But what one child had understood the day before to be a promise had perhaps been forgotten by the other child. Or, perhaps the child had not understood that a promise had been made or must be kept. The teacher had missed the exact words used by the children as they talked the day before. For now, he writes a few key notes about today's incident in his note log, dates it and makes two mental notes: Keep an eye on the two children throughout the day to collect more information about their interactions, and try to find time during the day to discuss these events with both children.

And what might we make of a new child's silence, and his rejection of another child's friendly bid? Does it matter that the new child does not speak English like everyone else in the classroom, and that he is new to this preschool? Of course it matters, and a wise early educator does not draw any conclusions about the new child's social behavior, based on this single observation. He or she knows that this observation will be the first of many entries needed to assess what has just been observed. Supporting a friendship between the new child and the child who initiated the interaction about the puzzle seems a good place to start. The teacher makes a mental note to pair the children later in the morning, at the end of story time, when children are dismissed in pairs to wash their hands and find seats at a snack table.

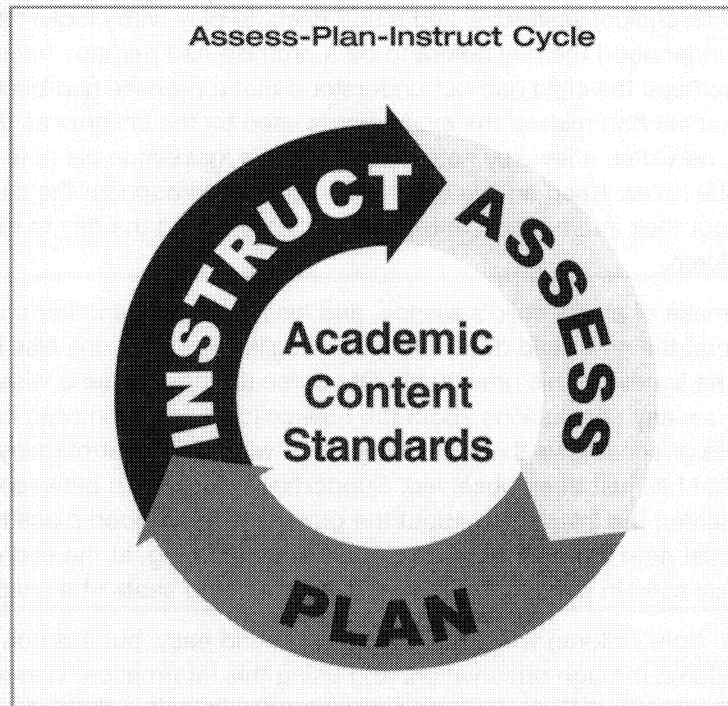
Obtaining information from children while we teach may sound easy, but it is not. Collecting information about children through observation, and using this information to assess children, requires considerable discipline. Early educators must be disciplined in their approach to gathering information. (*Data collection must be focused and systematic.*) They must be disciplined in not jumping to conclusions about the meaning of behavior at the time that it is observed. (*They must be objective, as free from bias as possible.*) They also must be disciplined in working out a system that allows observations to be recorded and organized, and to be kept in a safe and secure place. (*They must find a way to record the data they collect, must organize it for use, and must make sure that data are protected from loss or use by anyone who should not have access.*) Finally, early educators must be disciplined in thinking about the data they have collected. (*They must analyze and interpret data carefully so that conclusions based in the analysis are as sound as possible. Among other things, good analyses require considerable knowledge about children's development and subject matter.*) Each of these topics is discussed in Part I of this guide.

CHAPTER 1

Introduction

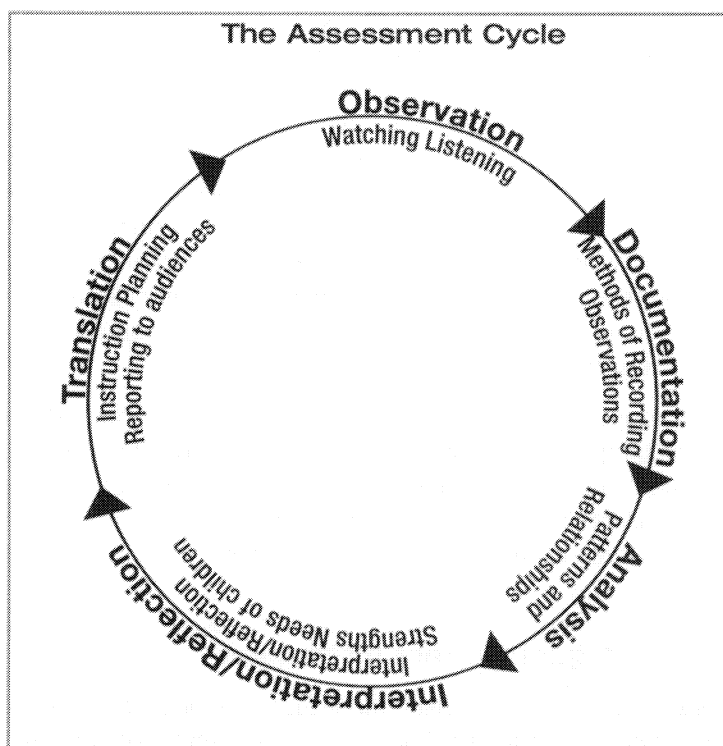
Assessment is an integral part of any early childhood educator's daily life. Early childhood educators observe while they work with children, and they constantly reflect on what they see children do and hear children say. Reflection leads to judgments about the current status of children's learning, and the educator then uses these judgments to plan further instruction. No matter the specific situation, teaching involves frequently recurring cycles of planning, instructing and assessing. Box 1-1 provides a visual for this recurring cycle.

Box 1-1



The **assessment** phase, represented in Box 1-2 (p. 5) in this cycle, includes observing, recording and organizing data, followed by an analysis of the data gathered. This analysis leads to judgments about children's instructional needs. After completing this final step in the assessment process, the early childhood educator is ready to return once again to the planning phase of the cycle.

Box 1-2



Before We Plan

The assess-plan-instruct cycle describes the process used by skilled early childhood educators as they work to achieve the goals they set for children. Before entering this cycle, however, educators actually start with content standards—with their expectations for children’s learning. What an early childhood educator plans to teach—the content for which instruction is devised—is determined through processes that are external to the assess-plan-instruct cycle. Several **content standards** for preschoolers in Ohio are shown in Box 1-3.

Box 1-3

Ohio’s Early Learning Content Standards

Acquisition of Vocabulary Standard – Pre-Kindergarten Indicators

1. Understand the meaning of new words from the context of conversations, the use of pictures that accompany text or the use of concrete objects.
2. Recognize and demonstrate an understanding of environmental print (e.g., STOP at a stop sign).
3. Name items in common categories (e.g., animals, food, clothing, transportation).
4. Demonstrate or orally communicate position and directional words (e.g., inside, outside, in front of, behind).
5. Determine the meaning of unknown words with assistance or clues from an adult (e.g., providing a frame of reference, context or comparison).

Based on content standards, the educator creates opportunities that engage children in activities designed to support acquisition of specific knowledge and skills. Early educators read stories and use detailed, descriptive language in conversation to help children achieve vocabulary content standards. Early educators set up paints at an easel to help children achieve motor and fine arts standards. Early educators place paper and markers in the block area, provide alphabet puzzles, and supply a writing pad and pencil beside the telephone in the playhouse area to help children achieve literacy content standards. Although children constantly surprise and delight adults with creative uses of opportunities provided, each opportunity is planned to set the stage for specific kinds of learning related to content standards. Together, the content standards, the **learning opportunities** provided to help children meet these standards, and the instructional support provided to children in the context of the learning opportunities constitute the **curriculum** provided for the children.

As each planned learning opportunity is implemented, the early childhood educator instructs by giving directions and providing explanations, by organizing and adjusting materials, by making comments and asking questions, and by joining children in play. Instruction consists of strategies that maximize children's engagement with experiences that are provided, and increase the benefit that children obtain from their experiences.

Using Observations to Adjust Current Instruction

Instructional adaptations enable the early childhood educator to individualize children's learning needs within a set of learning opportunities. For example, as Sebastian slips each of the wooden alphabet letters into its space in the alphabet puzzle frame, his teacher names all but S and T. She knows that Sebastian can name these letters, but not the others. After Sebastian names S, his teacher comments that S is at the beginning of Sebastian's name, and also at the beginning of Sarah's name (a classmate). After Sebastian names T, his teacher comments, "Your name also has a T in it, someplace in the middle." Sebastian nods his head in agreement.

By responding differently to Joaquin, in the midst of the very same alphabet puzzle context, the teacher maximizes his learning. Joaquin, who already knows the names of all uppercase letters, uses the letter pieces completely differently than Sebastian. Instead of using the puzzle simply as a puzzle, he uses the letters from the puzzle to explore how words are made. First, he dumps all the letters out of the puzzle frame. Then he puts three or four letters together in a row and asks, "What word is this?" His teacher sounds out the letters he places together. Most are not actual words, and Joaquin laughs when he hears a nonsense word. Joaquin's teacher sometimes rearranges his arrangement of letters to make an actual word, and explains his actions: "If we put the L first, the A next, the T after the A, and put the E last, it makes the word *LATE*." As Joaquin's teacher finishes, he slides his finger from left to right under the row of letters. "Late," Joaquin repeats, running his own finger from left to right under the letters, mimicking his teacher.

As children engage in learning activities, new information emerges about their understandings and skills. Early childhood educators often use this information immediately. For example, Joaquin had never before run his finger under letters rearranged by his teacher and repeated the word the teacher read to him. His teacher decided to start suggesting to Joaquin that he try to sound out the rearranged words himself.

Using Observation to Redesign Learning Opportunities

Early childhood educators also use information obtained from their observations to redesign in some way the opportunities for learning that they provide. Sometimes, they realize that the range and kinds of experiences offered in a curriculum they are using limits their instructional maneuvering, and that the experiences themselves need to be revised. Educators sometimes add experiences to the curriculum they are using and sometimes delete experiences. Joaquin's teacher added letter tiles to the collection of materials provided at the manipulatives shelf the day after Joaquin had shown an interest in trying to read *LATE*. The teacher thought the puzzle materials were too limiting for the exploration of words in which Joaquin had indicated an interest. The alphabet puzzle was still very appropriate for Sebastian and many other children, but Joaquin seemed ready for something more. Ongoing assessment is essential to the processes of adapting instruction and revising learning opportunities provided. Without **ongoing assessment**, educators lack the information they need to make learning experiences work well for each and every child.

Ongoing Assessment and Formal Assessment Must Work Together

In other kinds of assessment, such as testing, time is set aside, apart from the typical daily instructional context, for children to answer questions and complete tasks. Typically, tests are designed to measure what children have accomplished over a fairly long period of time, such as an entire year in school. The formal evaluations of children's learning obtained with standardized tests reveal overall strengths and weaknesses. Early childhood educators and administrators might determine from test data that a curriculum addresses some content standards thoroughly, but addresses others barely at all. To remedy the situation, the current curriculum is supplemented with additional opportunities to support children's learning, or a different curriculum altogether might be adopted.

Standardized tests, however, are not designed to help an educator guide a child's day-to-day learning. Assessment that is more continuous is needed for this purpose. In addition to meeting the early childhood educator's need for frequent feedback about each child's learning, ongoing assessment broadens and deepens the knowledge of a child's strengths and weaknesses that tests provide (Darling-Hammond, 1998; Gatthorn, 1998; Price, Schwabacher, & Chittenden, 1993). Information gathered through ongoing observation does not take the place of information obtained from district or state tests, or from other standardized tests. Rather, it provides immediate feedback that the educator can use to make daily instructional decisions. It also provides additional information that, together with test data, provides a fuller picture of a child's functioning than test data alone. Box 1-4 (p. 8) shows comparisons between different types of assessments.

How This Observation Guide Is Designed to Help You

Many early childhood educators already observe children's behavior, keep notes and utilize this information in their planning. For these educators, the basic approach to assessment provided in this document will not be completely new. Yet, even early educators who have used observation for years as a form of assessment might find that this guide helps them improve their observation skills, broadens their focus to include new areas, or brings new insights from research to the analysis of their data.

Box 1-4

Comparison of Features and Functions of Ongoing Classroom Assessment and Standardized Tests and Screening Tools		
	Ongoing Classroom Assessment	Standardized Tests and Screening Tools
<i>Frequency of data collection.</i>	Very frequent.	Infrequent (2-3 times per year).
<i>Context of data collection.</i>	Typical, daily, instructional context.	Specific tasks administered individually outside of instructional context.
<i>Reliability (degree to which others would obtain similar data and draw similar conclusions).</i>	Reliability varies with skill of observer, with observation tool used and with training observer has received. Is generally lower than with standardized tests.	Reliability is generally higher than with classroom assessment tools.
<i>Validity (degree to which the tool measures what it says it measures).</i>	Validity varies with the observation tool. Can be high or low.	Validity is generally higher than with ongoing classroom assessment tools.
<i>Helpful in informing daily instruction.</i>	Very helpful, given the frequent, ongoing nature of the data collection.	Somewhat helpful in timeframe that follows testing or screening. Less helpful as time goes on, given that children often change quickly, and assessment intervals are long (e.g., fall to spring).
<i>Helpful for informing program content and instruction.</i>	If areas in the assessment instrument match closely those covered in standardized assessments and tests, information can be helpful, assuming skilled observers and reliable and valid data and interpretations.	Very helpful for giving a broad picture of program strengths and weakness.
<i>Ease of use in making comparisons across early childhood programs.</i>	Generally hard to compare across programs, given that ongoing classroom assessment tools vary in terms of emphasis and level of detail.	Makes comparison across programs relatively easy.

This guide is designed to help early educators:

1. Observe language and literacy behavior of young children in instructional contexts;
2. Document and record these behaviors for each child;
3. Organize and make sense of the documentation obtained; and then
4. Use this information to plan subsequent instruction for each child.

The chapters in Part I provide basic information about the processes involved in using ongoing, observation-based assessment.

The chapters in Part II provide:

1. Background information about critical aspects of various domains of children's learning;
2. Information about contexts that early educators typically provide to give children opportunities to acquire each kind of learning of interest in each domain; and
3. Multiple examples of young children's behavior in these contexts.

Part III contains sample checklists designed for assisting early educators in summarizing judgments about a child's current level of understanding and skill in each domain of interest. It also contains a chapter with four sets of data. These data sets are provided to help readers become acquainted with the sample checklists, and to demonstrate the difference between data and interpretations and conclusions based on data.



CHAPTER 2

Objective, Focused and Systematic Observation

Early educators are constantly aware of children's behavior. When they see or hear a child do something that seems significant, they often record what they have observed as soon as they can. This spontaneous approach to observation might be characterized as "catch as catch can." The educator does not start out with a plan indicating a specific kind of behavior to observe, which children to observe and where to observe. Rather, the educator simply notices while things happen around them throughout a day and then, at the moment, selects a focus. Rather than depend entirely or even primarily on a spontaneous approach, early educators should plan some of their observations. Without planned observations, it is difficult to collect enough information of the kinds we need for every child in our group. It is also difficult to make sure that the observations made and recorded for any child are truly representative of that child's behavior. Unless we are careful, we sometimes have observations for a child that have been collected in just one or two contexts, and within only a restricted period of time. Information that is this limited rarely tells the whole story of a child's behavior, for, as we all know, children behave differently in different contexts, and their behavior sometimes changes dramatically across time. Planning for observation helps us focus our observations and makes sure they are systematic.

All observations, whether spontaneous or planned, also must be descriptive and objective rather than direct judgments of behavior on the spot. In this chapter, the meaning of objectivity in observing is illustrated and discussed. Focused and systematic observation is also discussed. We see in this chapter how each aspect of the observation influences the quantity and quality of the data we collect.

Objective Observation

A detailed description of an episode observed while two preschoolers played with blocks is provided in Box 2-1 (pp. 12-13). Take a minute to read it, and then write down a few thoughts about each child's social skill (i.e., make some judgments). Think, as well, about recommendations for the educators responsible for these children, based on your judgments.

When student teachers and other educators participate in this exercise, many characterize the target child as selfish or as "having a problem with sharing." Many comments about the second child characterize her as "patient," "intimidated" or as having "well-developed sharing skills." Other readers characterize the younger child as "more immature socially and cognitively" than the older child. Occasionally, someone characterizes the target child as "deeply absorbed" and "interested" in trying to build the model pictured on the box, and as "advanced" or "very smart." They also characterize the target child as "uninterested" at the time in playing with the other child.

Readers who focus almost solely on what the children did, and not on contextual conditions or disparities between the children's levels of maturity, are more likely to suggest that each girl be taught a specific social behavior. Some suggest that the younger child should learn to wait and to stop taking materials from another child. At minimum, they suggest that she should learn to ask if she might have some of the materials. According to these readers, the older child should learn to be more considerate of others and to share materials rather than to keep them all for herself.

Box 2-1

Context:	<u>Rug used for block play</u>
Materials:	<u>One package of small colored blocks (a variety of shapes and colors)</u>
Children:	<u>One girl, 4 3/4 years of age (target child). Second girl, almost 4 years of age, in the block area, attempting to play with target child.</u>

Description of Event

Target child sits down on block rug. Has box of colored blocks in both hands. (Carried it to middle of block rug from storage shelf.) Pulls lid up to open box. Puts one hand on each side of box, draws it up toward chest area and tilts it forward, making blocks spill on floor. Sits with legs out in front of her. Blocks in pile within space surrounded by legs and her body. Sets box just outside of left leg, beside knee. Takes blocks that are on top of others and fits each into a spot of own on rug. When finished, all blocks of a kind are near each other; no blocks on top of others. Child reaches for box with left hand and picks it up. Right hand joins the left in holding box, once it's at midline. Child looks at picture on one side of box (a building made with the blocks). Continues looking for about a minute. Turns box to look at other side. Looks. Turns back to first side. Looks. Sets box back outside of left leg by knee. Looks at blocks on floor. Picks up yellow arch. Looks down at floor right in front of her. Puts yellow arch down on floor, but doesn't let go. Picks up again, and reaches across body as twists at waist to put block down outside of left leg, near box. Leans over at waist, puts both hands in front of where blocks sit on floor, and pushes against them with palms of both hands (palms out; fingers up). (This moves blocks a few inches away from her body. Has created more space right in front to build.) Picks up yellow arch with left hand. Transfers to right hand. Places it on floor in front of her. Looks back at box. (Side panel of model building faces child.) Leans over some, as if to get a closer look. Looks back at blocks. Fingers them a little as looks around the pile. Picks up green rectangle.

Box 2-1 (continued)

Places it under poles of yellow arch. (This behavior continues for about 3 minutes—child has placed 5-6 blocks on her structure, and it resembles exactly model building shown on the side of the box.)

Child (girl, almost 4) enters area, sits opposite target child, near her outstretched feet. Reaches for the blocks on the floor in front of target child. "No!" says target child, as she puts both hands out to pull block pile in a little. (Not much room to move them, given block structure in front of her, in between pile of blocks and her body.) Other child stops reaching for blocks and sits and looks as target child looks again at block box picture. Picks box up this time and brings nearer her face to inspect. Puts it down again near left knee. Second child reaches for box. Target child: "No! I need it." Second child puts box down. Target child looks at blocks and picks up another block. Adds it to structure. Second child reaches for blocks again, saying, "I want to play." Target child: "No! I'm playing." Second child stops reaching. Target child repositions to left so that legs surround blocks and block building. Open area between feet now filled as much with block building as with loose blocks. (New position protects blocks more than previous position.) Target child continues building as before (i.e., looks at box, looks at blocks, picks up a block and adds it to structure; looks at box, and so on). Second child watches. After several minutes and probably six additions of blocks to structure, target child picks up two blocks from floor, hands them to second child, and says, "Here. You can play with these." Second child: "Is that all?" Target child: "I think I need the others." Second child holds the two blocks, one in each hand, and watches target child continue to build. Target child builds for a couple more minutes, using same process as before. Adds two more blocks. Picks up box, looks at picture. Looks at her structure. Looks back at box. Announces, "Okay, I'm done. You can have them now." Stands up and pushes structure over (gently). Uses both hands to gather blocks in a pile and then pushes these closer to second child. Target child leaves area. Second child stays on block rug and plays with blocks.

Interestingly, readers who consider the target child's intentions with the blocks, and the age and cognitive level of each child, rarely attribute problems in social skills to either child. In their recommendations for the children's teachers, these readers suggest the use of second set of blocks so that more than one child can play the same thing at the same time. Or, they suggest making patterns for simpler block structures, using construction paper shapes, so that one set of blocks provides enough blocks for building two or three unique structures (i.e., each building would use completely different blocks from the set).

In other words, even though these readers thought that the social interaction between the two children did not work very productively for either child, they did not attribute problems in social skills to either child. Rather, they viewed the children's behavior as a complex interaction between the materials provided, and the specific characteristics (both social and cognitive) of these two children.

What we mean by objective observing. These markedly different interpretations of exactly the same data illustrate the difference between our **observations** of children and our **interpretations** of what we hear and see. The example also illustrates the link between our interpretations of behavior and the **conclusions** we draw about children. As this example illustrates, conclusions or judgments do not come directly from our data. There is a middle step. We interpret the behavior we see and hear, and these interpretations then lead us to some judgments and conclusions and away from others.

Often, especially in everyday life, we draw conclusions almost instantaneously after having perceived an event. It's very much that way when we see lightning and hear thunder, and when a light bulb goes out in a lamp. But as we discussed in the Part I introduction, human behavior is not quite that simple. Virtually any behavior can be interpreted in a number of different ways, depending on what the observer considers when analyzing it.

When an observer collects **objective data**, the observer sets aside all interpretations and judgments while observing, and concentrates solely on what he or she sees and hears children do. During the observation time itself, the observer strives to get all the details—tries to see and hear exactly what children say and do. Conscious and deliberate reflection and analysis take place after the observation.

The importance of objectivity. Over time, an educator who has been objective when observing and recording behavior can see clearly the details of each episode. If an educator records judgments instead of actual data or, worse, judges even while he or she observes, the record consists only of judgments. Without details—without data—an educator cannot consider a previous episode in the light of details obtained from subsequent events. Nor can educators reconsider past events in light of new information they might obtain and bring to their reflections. Conclusions about a child can become terribly biased, as earlier judgments inform later judgments, in the absence of any record of behavior indicating their basis in fact.

Without objective data to back up conclusions, an educator also cannot provide evidence for a parent who asks, "Why do you say that about my child? What did my child *do* that made you draw that conclusion?" Perhaps the parent has an understanding of the child's behavior that differs markedly from the educator's. It is often impossible for the educator and parent to have a constructive discussion if the educator cannot go back to data as a way of explaining and discussing conclusions drawn.

Sometimes, a specialist who has seen a child on several occasions reaches conclusions that differ substantially from those of the educator who deals with the child daily. The differences

need to be resolved before recommendations can be made about services for the child. Unless both parties can go back to actual data that led to their respective conclusions, including information about the contexts in which they collected the data, they might have great difficulty agreeing on a representation of the child. Determining that two or more different portraits of a child are both accurate provides important information about a child and can serve as the basis for planning to meet the child's needs. (Some children behave quite differently in different situations, given that the situations themselves are unique contexts.) Not knowing whether any of two or three portraits is actually accurate leads to frustration.

Educators who are objective in their observing and recording will still be puzzled frequently by children's behavior, because behavior is often difficult to understand. They can remain confident in themselves, however, even while knowing that they cannot at this time make sense of some aspects of a child's behavior. Their confidence comes from knowing that they can proceed in ways that will maximize the chances that they will acquire more insight as time goes on.

Reflection for instruction, and reflection for evaluation. It would be a mistake for educators to conclude that they must not use information obtained through observation immediately to guide instruction. In fact, an educator responsible for children day-to-day must act practically non-stop. Often, something observed in the course of instruction causes an educator to alter a course of action in a matter of seconds from the one that had been imagined when the educator initiated engagement with a child.

The situation with Joaquin discussed earlier (p. 6) provides a good case in point. Immediately after Joaquin reread a word created by rearranging some of the puzzle letters, his teacher made a decision about subsequent instruction. Rather than continue to read the words formed by rearranging the letters, the teacher told Joaquin to try to figure them out. On the first occasion that Joaquin's teacher did this, Joaquin said, "But I don't know how to read words." His teacher quickly interpreted this comment and adjusted his instruction again. This time he invited Joaquin to "help me sound out this word." The teacher started slowly to sound out the first letter; Joaquin joined in. He did the same with the other letters and then said them altogether to pronounce the word. "He'll need my direct assistance for a while," thought Joaquin's teacher. "He's not quite ready to sound words out by himself."

After school that day, the teacher wrote down his observations, including Joaquin's response to having been asked to sound out a word. His teacher didn't try to come to a firm conclusion about what Joaquin actually knew about things related to skill in sounding out words, including the insight that alphabet letters represent sounds heard in spoken words (i.e., the **alphabetic principle**), specific sound-letter associations, and a high level (i.e., phoneme) of **phonological awareness**. He doubted that Joaquin had all of these understandings and skills.

In his teacher's experience, children who understand how letters function to represent sounds (i.e., who understand the alphabetic principle), and who also have the ability to think of spoken words as a series of individual sounds (i.e., who have developed phonemic level awareness), usually do not string letters together and ask, "What word is this?" Instead, they try to use their phoneme awareness skills and their knowledge of letter names to spell words, even though they cannot spell them correctly. And yet, Joaquin's teacher knows that children often behave in one way in one situation and differently in another. Perhaps Joaquin had more skill in this area than his behavior with the puzzle letters indicated.

Joaquin's teacher decided to spend some time with Joaquin in the writing center, where Joaquin might attempt to write a story, a label for a picture, or a note to a friend. In the writing context, the task is to represent a spoken word in print. A child, or an educator who is providing spelling assistance to a young child, must think about a word as a series of individual sounds. In contrast, in the puzzle context, letters placed together in a string must be sounded out to determine whether an actual word has been assembled. The two contexts might elicit different behavior from Joaquin, with each providing a somewhat different view of his level of skill and understanding.



After thinking about it, Joaquin's teacher thought that he probably had overshot the mark a bit when he told Joaquin to try to sound out a word by himself. He decided, however, to try to find out which word-making skills Joaquin actually had acquired. He was determined to join Joaquin at the writing center as soon as he could. He knew that his knowledge about Joaquin's understandings would be broadened if he observed him in the writing context, and he also knew that this context would open up some instructional opportunities that the letter puzzle context did not provide.

As this example illustrates, Joaquin's teacher uses information he gathers about children to adjust instruction both on the spot and within the very near term. An educator often must make instructional decisions quickly, even though he or she is somewhat uncertain about exactly what a child knows and can do. In fact, good teaching requires that we vary instruction itself, based on our current best guesses of what a child can do. Instructional variation leads to rich information about children, which, in turn, informs our instruction.

When Joaquin's parent conference is scheduled, or when an evaluation is needed for some purpose, his teacher will take all the information gathered to date, size it up as best he can, fill out a checklist and write comments that indicate Joaquin's current level of understanding and skill. It is here in the **formal reporting** of our evaluations that we must be especially careful to devote time to reflecting on all the objective information we have collected about a child up to that point. Our analyses and interpretations must be thoughtful, and our conclusions must be reasonable, given the data we have collected. (We will discuss analyzing and interpreting data in Chapter 4.) In contrast, a lot of our instruction is guided by fairly immediate interpretations of observational data, some of which we discover rather quickly are inadequate.

Focused Observation

In addition to striving for objectivity in our observations, we must strive to establish a focus for many of them. Focused observers select the kind of child behavior about which they want information, the child or children for whom they wish to collect it, and some good places to look for the behavior or behaviors of interest. To focus observations, educators must decide whether they want information about language and literacy knowledge and skills, as opposed to mathematical knowledge and skills, and whether they will look today for the behavior of interest only in Johanna and Rafael, or in every child in the group. Educators also need to identify a specific aspect or aspects within a domain of interest. For example, if language and literacy is the domain of interest, the teacher must decide whether expressive language, phonological awareness, book handling, knowledge of various functions of writing or something else is the specific behavior of interest. If mathematics is the domain of interest, the educator decides whether to focus on some aspect of numbers or on measurement or spatial understanding.

The importance of establishing a focus. Establishing a focus helps an educator know when and where to look, and how to plan time to accommodate observation. An educator consults the goals that have been established for the children's learning within various domains when establishing a focus for observation, and reviews the information that he or she has already collected for the goals for each child.

Early in the year an educator has very little information of his or her own about any goals for any of the children in the group. To start, the educator usually targets goals in domains that seem for some reason to be most important, and then observes all the children, as soon as possible, in relation to these goals. As time goes on, an educator targets for planned observation the goals for which he or she has little information for specific children.

Establishing a focus helps an educator use time effectively. Often, during any one day, an educator can set aside only 10 to 15 minutes for observing while not also directly working with children. Early childhood educators are simply too busy each day to set aside much time for observing only. An educator might need to organize even a small amount of time, such as 10 or 15 minutes, into two or three segments of just five minutes each. Unless early educators plan for the use of this time by deciding what to look for, at which children to look and where to look, they run the risk of squandering this precious time and ending up with too little data to meet their needs. Planning for observations during this time reduces these risks.

For observations done in the context of working with children (the majority of the observations conducted in most settings will be conducted in this way), focus also helps educators use their time wisely. If working in a group preschool setting, consulting the staff schedule for the week to find assignments for various times of each day can help an educator decide what observations are actually possible, and which children might be most accessible to observe.

Establishing a focus is also essential if we are to be systematic in our observations. An educator who is systematic is careful to collect data pertaining to all goals of a program, for all children, and to collect data that is representative of each child's overall behavior with respect to a domain or specific goal. (Systematic observation is discussed fully in the next section of this chapter.)

Selecting a focus for observations. An educator's focus is determined by several factors, including the goals established for children's learning, the role of the educator when making observations (i.e., observer only, or observer in the context of working with children), the level of data an educator already has for various children, and data an educator might need in order to solve a problem related to a specific child.

Let's consider first the role of the observer. Suppose that an educator, working in a classroom setting, is in charge of snack setup for the week (i.e., three children take a turn each day to set up snack tables with a teacher), and also is assigned to the writing table and to helping children check books in and out of the lending library during arrival and dismissal periods. Suppose that the teacher also learns that she will serve as supervisor/floater during the activity choice period on two days this week, and that she will supervise the art table, easel and water table areas on the other three days.

This teacher knows that the writing table provides a good opportunity for children to develop fine motor skills for use of writing and drawing tools such as markers, crayons or pencils (one goal). She also knows that children's writing often reveals something about their knowledge of alphabet letters, print conventions and the many purposes that writing serves (three more goals). It makes sense for this teacher to focus on some aspect of writing while assigned to the writing table, although a great deal of social interaction and conversation (two more goals) takes place there as well.

The teacher knows that she cannot determine before the day begins which children will visit the writing center. It is only one of several centers open during arrival and dismissal. During this time, some children visit the book area, the puzzle table, the manipulatives table or the nature table, but not the writing center. For this reason, the teacher cannot plan ahead to focus on just one child for her observations during this time, given that the child selected might not show up. The teacher selects three children for her observation, if they visit the writing center, and decides to focus on the kinds of marks they use to create writing.

All three children are young 4-year-olds, and all have been using mostly continuous looped and zigzag scribble for writing. On several occasions, however, the teacher has seen some discrete, tight scribbles in some of their writing, and even a rudimentary letter or two. Most samples she has collected are from the dramatic-play area, where children took messages on the pad of paper placed by the phone. A few samples are obtained from the block area, where children recently have been making tickets for the buses they built. The teacher wonders whether the children's marks might differ in the dramatic play and the writing center contexts, and she wonders whether children use different kinds of marks when writing different things. For example, would a label for a picture be as likely to be written in scribble as a very long story?

Children's signature's on book check-out cards can be used to obtain information about children's writing skills

Date	Name
	<i>[scribble]</i>
	VARA
	ANDREW
	KAGUI

Shoes From Grandpa	
Date	Name
	12 APRIL W
	<i>[scribble]</i>
	NWV M
	NATALIE

The teacher also has a vague recollection of having seen one of the children write his name on a painting, using letters that approximated actual letters. For this reason, she decides to focus her observation on the signatures of these three children, and on whether they seek help from a teacher. She can do this while she supervises the art table, easel and water table during activity choice time. She also plans to photocopy the cards from books that children check out each day from the classroom lending library.

Given this teacher's assignments for the week, this observation plan for the time that she spends working directly with the children makes sense. The teacher has a good chance of obtaining quite a lot of data on a specific aspect of writing for the three children of interest. The teacher knows, of course, that Plan A might not work. She might get bogged down with other children in the writing center or in the art and water table contexts, and any of the three children might choose to visit other centers, not ones where she is assigned. Like any good teacher, she makes a backup plan.

At the writing center, Plan B is to collect data on the variety of purposes for which children write. The teacher can easily keep track of this kind of information when none of her three focus children are present, and she also can switch to collecting this information if the writing table is so busy that she cannot focus on the three children of special interest. While supervising the art table, easel and water table, Plan B is to observe as many children as possible while they sign their paintings and collages, and to remember who uses the set of name cards as guides, who asks for help in forming specific letters, and what children say, if anything, about their names. She knows she can do some of Plan B, even if one or all of her three focus children choose the writing table.

For her observation only time for the week (10 minutes on each of two days, with 5 minutes scheduled during outdoor playtime and 5 minutes scheduled for the middle of snack time, after all children are seated and settled), she knows exactly what she will do. One child's social interactions are of concern to all teachers, and his expressive language skill (problematic) is thought to be a contributing factor. All teachers will observe him wherever he is during the four five-minute segments each teacher can devote to out-of-role observation this week. By week's end, they hope that together they will have a fuller picture of the child's social and language skills than they have at the present time.

An educator working as a specialist often has considerable opportunity to work alone with just one child. This situation is ideal for establishing a focus for observation. A home-based early educator also may have more control over establishing a focus for observation than does a teacher in a classroom-based team. Working alone, however, which is typical for most home-based educators, often makes it difficult to stick with a focus once it is established, given that only one adult is available for all the children in the home-based group. Whatever the specific circumstances, the educator tries to do the best that he or she can to establish a focus for observations.



Book check out cards displayed on door near classroom lending library

Systematic Observation

Let's suppose that the first three months of a school year are coming to an end, and the first round of parent conferences begins in about two weeks. The early educator makes a schedule of all the times she has available for parent appointments during the five-week conference period, and she posts it on the bulletin board as a sign-up sheet for parents. Two parents sign up for the two appointment times available during the first week of conferences. The educator pulls her observation records from the children's files. She knows that she will need to review the data she has collected for each goal that has been established for the children's learning and then mark each child's progress on a checklist of milestones that she uses.

When she reviews the data in the file for the first child, she notices some gaps: She has enough data to draw some conclusions about some aspects of the child's development, but for several goals she has no entries at all. She thinks for a while, trying to recall something she might have seen or heard that she can use for the progress report and conference. But instead of calling up rich images, she draws a blank with respect to several goals. She realizes that during the next two weeks, she will need to target some of her planned observations for this child. She also knows, however, that little time is left to gather data. She fears that she will find similar gaps in data for other children, perhaps for all. She hasn't really gone through each child's file for a while, to see what's there for each goal of interest. She vows to "get organized" soon, to avoid the same predicament come parent conference time in the spring.

All educators have found themselves in this same predicament. Perhaps we have a lot of information about each child in some domains, but very little or none in others. Or we have a lot of information for some children on virtually every domain of interest, but very little information for other children for any domain. Educators also sometimes find that they have quite a lot of information about a child's behavior in one domain, but that all of it was gathered during a restricted period of time. Perhaps a lot of observations on some aspect of a child's behavior were made during the first month of our work with a child, and virtually none were made during the last two months.

What it means to be systematic. Educators who observe systematically obtain a degree of evenness in their data collection. That is, they are more likely to have data for each child on every goal of interest, rather than data on just a few goals. Educators who are systematic observers are also likely to have adequate data for all children, not just some. And, finally, educators who are systematic obtain data at reasonable intervals over a period of time, in a variety of contexts throughout the day. In other words, the data they have for each child is likely to be fairly representative. This means that, together, the data probably gives a complete picture of the range of a child's behavior in each domain, not just one glimpse of the child's behavior. Chapter 9 provides numerous samples of a child's data collected over time and in different contexts. Each data set is representative of a child's behavior as it pertains to one aspect of learning.

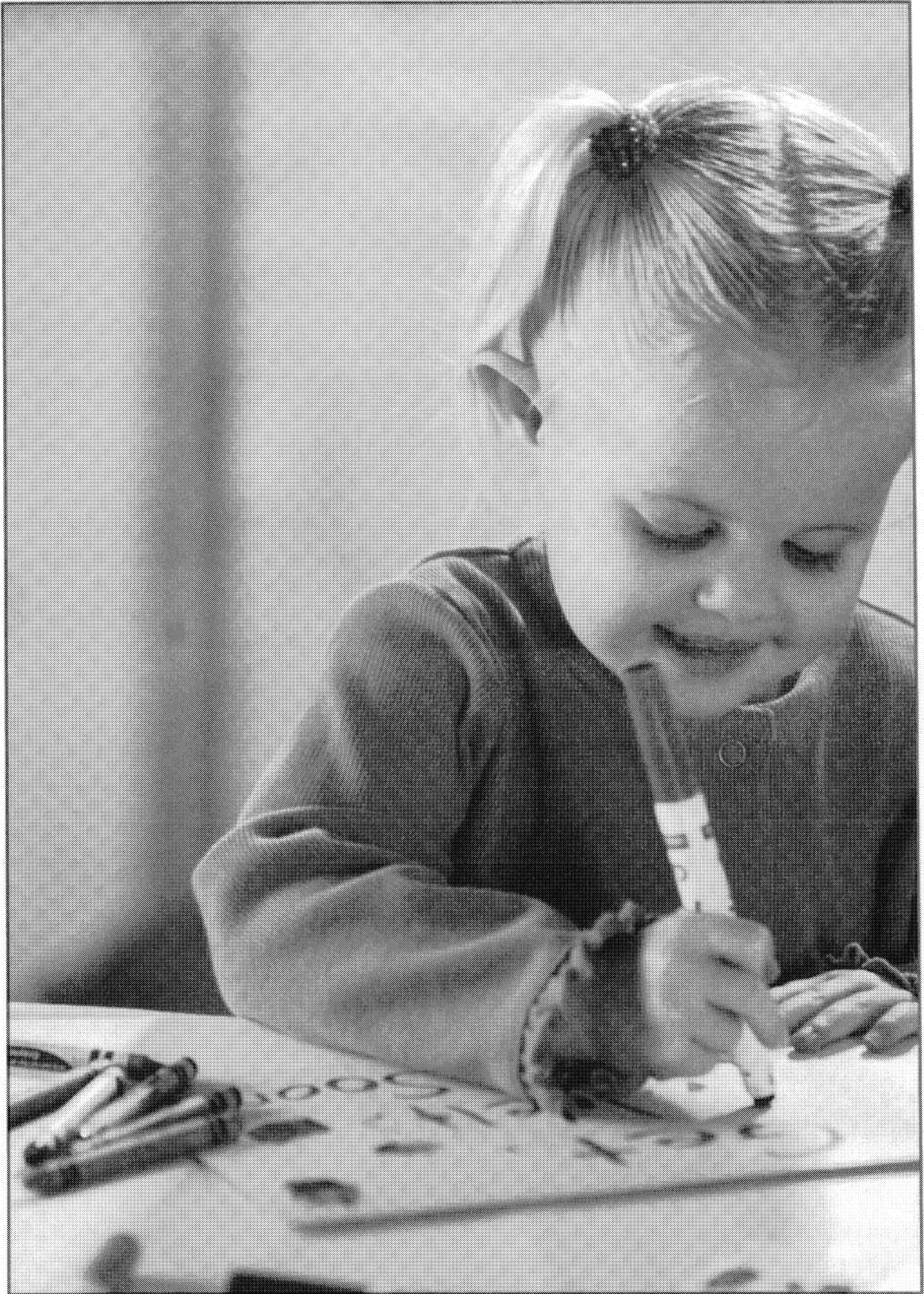
What systematic observation requires. This aspect of observation-based assessment is often the most daunting for early childhood educators. It seems easier to be focused and objective than systematic, especially given the constraints on our time. How can an early childhood educator collect sufficient data for each child on a number of goals? It isn't easy, to be sure, but with effort, all of us can improve on this aspect of the observation process.

Educators who wish to be systematic in their observations must periodically review all the goals of interest in the program and also review each child's file, to see what information has been

obtained in relation to each goal. Over time, the educator must make sure to observe all children in relation to all goals of interest in the program, rather than just some of them. Moreover, for each goal, behavior should be observed periodically, not just one time, and it should be sampled from all relevant contexts.

Because **systematic observation** requires that educators distribute their time in some equitable fashion among all the children in their group, a schedule for observations while working with children and for observation only is usually needed. This helps the educator to focus on each child in the group within a specific time frame, rather than observe some children most of the time and others hardly at all. Systematic observation also requires the collection of samples of behavior across situations and time. A young child's behavior is usually quite dynamic, which means that it is not likely to be exactly the same now as it was even last week, never mind three months ago. Behavior also differs by situation. For example, a child's behavior on the playground might differ quite a lot from the child's behavior during story time. Systematic observation helps a teacher collect observations that are representative of the entire range of behavior a child exhibits.

Being systematic in all these respects does not require an equal amount of data for each and every child, or just the same amount of data for one goal as for every other goal. Some children are more puzzling than others. As a consequence, an educator often collects more information about some children than others in order to figure out what is going on. Moreover, for each specific child, some aspects of a child's behavior seem completely straightforward and clear, while other areas present a mystery. Thus, different amounts of data are often collected on different aspects of a child's behavior. These variations in amount of data collected make sense, and are not in conflict with the goal to be systematic in one's data collection.



CHAPTER 3

Recording and Organizing Observational Data

It's the end of the day on a Friday for two preschool teachers. As they prepare materials for the next week, they discuss events of this day and jot down notes in their logs. One teacher relates to the other the details of a conflict he had observed between two children. As he makes a note about it, he comments that he couldn't remember ever having seen one of the two children (Brett) involved in a heated conflict with another child. "It surprised me. Usually, he doesn't hold his own. He just gives in."

"Actually," his co-teacher added, "I remember intervening earlier this week in a spat between Brett and ... Oh, I can't remember who the other child was. I know the children were in the blocks, and that the other child wanted to have a steering wheel for the fire truck Brett had built, and Brett said, "No! There's just one driver." Oh, wish I could remember who the other child was!"



As this vignette indicates, teachers' memories of events soon begin to fade. We often remember some parts of past events, but not all the essential details. Over time, we also find that events involving the same child in similar situations often begin to merge. As a consequence, we can't remember in which situation a recalled detail actually happened or precisely when.

Given that teachers have no crystal ball, a child's behavior will sometimes in retrospect turn out to be more important than it had seemed at the time. "If only I had written it down," we frequently find ourselves saying. Given how busy we are with children, we always see and hear far more than we can possibly record. As a consequence, we lose some information. We accept these losses, but we also strive to minimize them. Recording as many observations as possible is the best way to preserve the information obtained through observation.

In addition to helping us preserve—not forget—what we have observed, records of observations provide the documentation we need when we are ready to evaluate children, or when parents, administrators or specialists ask us how we arrived at various conclusions. If we have documented our observations and have organized them, we can review our data and can consider and reconsider our judgments and evaluations. Without written records, it is virtually impossible to recall essential details about individual children, place these details in chronological order or review them thoughtfully. Without written records, it is impossible for us to evaluate a child with any level of certainty that our conclusions are valid or reliable. In this chapter, we discuss several methods commonly used for recording observational data and provide examples of each one. We also discuss the importance of organizing data that we have recorded.

Methods for Recording Observational Data

Educators record their observational data in a variety of ways. The method selected depends on such things as the educator's role at the time the data is collected and the kind of behavior observed. Different methods of recording utilize different **recording tools**. This just means that the paper on which the observation is recorded is organized to match the kind of observational data collected.

The anecdotal record. The anecdotal record is a recording tool that educators use very frequently. An anecdotal record documents an interesting story about what someone says or does. An anecdotal record is written after an incident of interest occurs, not while the incident occurs. Typically, the observations for anecdotal records are obtained while the educator or parent works with a child. The adult is not observing more formally, outside of this role. Although an anecdotal record does not capture the total stream of a child's behavior in a situation, it does a good job of capturing some aspect of a child's behavior that is of interest.

An example of an anecdotal record is shown in Box 3-1 (p. 25). This incident caught the teacher's attention because it related to an important goal for learning—comprehension of texts read—and because it seemed to reveal something significant about a child's comprehension skill. The teacher made a short note in her note log ("story time, 'Is Peter going...snowball fight?', Eric") soon after story time ended, as a reminder to write a full account later in the day. Although the full anecdotal record is usually written later, jotting a few notes in a notebook log as soon as is possible after an observation can serve as a reminder. Notes can also provide a few key details, such as the exact wording a child used in a question or statement.

When the educator wrote the anecdotal record shown in Box 3-1, she used a recording tool that was designed just for this purpose. The sheet, labeled "Anecdotal Record," has space at the top for the name of the child observed, the date and something about the context (e.g., time of day, activity context, grouping). The record sheet also has three columns. The one on the far left is labeled "Running Record." Raw data details that describe what happened are recorded in this column. The middle column is for "Initial Thoughts," and the third column is for "Later Thoughts." These two columns are for analysis and interpretation of the data. The record sheet is designed to separate data (column one) from interpretations of data (columns two and three). As we discussed in Chapter 2, it is important to record only what actually happened in a situation, not conclusions or judgments about a child based on what happened. Behavior recorded might include not only what a child says and does, but also what a teacher says and does, when this is a critical aspect of the episode.

Box 3-1

Anecdotal Record

Child: Eric Date October 22, 2000
Context: Story time. Snowy Day Discussion

Running Record	Initial Thoughts (10/22)	Later Thoughts (10/26)
<p>After finishing <i>The Snowy Day</i>, I discussed various events, as I went back through pages of the book. At end, where illustration shows Peter leaving apartment with a friend, Eric asked, "Is Peter going to have a snowball fight this time?"</p> <p>I said I thought Peter and his friend probably wouldn't play snowball fighting, explaining that Peter still too little, and that Peter's friend looked about Peter's size.</p> <p>Asked if Eric was thinking that Peter was now big enough. He said, "He has a friend to play snowballs with." I turned back to the snowball fight pages and reread text, emphasizing big boys, and Peter's thought that he was not <i>old</i> enough yet, and said again that Peter and his friend probably would play other things...</p> <p>I asked, "What do you think?" Eric said, "Well, they might play snowballs."</p>	<p>Eric might have misunderstood why Peter did not join in the snowball fight. Maybe thought that Peter was not a friend of the other children, and that this was why he didn't join in. Maybe missed critical point of age and size discrepancy. Perhaps does not know that size/age would matter for throwing skill, or in skill required to duck on-coming snowballs.</p> <p>Might not know anything about snowball fights, and why being younger and smaller than other children is a disadvantage.</p>	<p>Maybe Eric thought that Peter and his friend could have snowball fight themselves—not with older boys. Given that both are same size, neither would be at disadvantage.</p> <p>I was thinking that Eric meant that Peter and friend would play snowball fighting with big kids, but he might not have had that in mind. Might have thought just Peter and his friend would play.</p> <p>Need to return to book and have better discussion to ask Eric who would play snowball fighting if they played that this time.</p>

On this anecdotal record sheet, there are two columns for interpretative comments, the first for initial thoughts, the second for additional thoughts that might occur later on. As can be seen in this anecdotal record, additional thoughts were added when the teacher realized that she had been thinking along very specific lines when she responded to Eric's question. It occurred to her later that Eric had perhaps comprehended the text better than she had at first thought. These "second thoughts" occur frequently to educators. This is why the recording tool provides a space for "additional thoughts," after an initial interpretation of a child's behavior has been entered.

The running record. The running record is similar to the anecdotal record in that it, too, provides a sequential, narrative account of children's behavior. The running record differs from the anecdotal record in terms of both *when* it is written and *what* it includes. A running record captures behavior *while* it unfolds, not after the fact. A running record also includes everything that happens within the time frame the educator sets aside to make the observation. It does not encompass just one episode or incident of interest, as does the anecdotal record. Recall that the anecdotal record of Eric involved only his question about Peter and the snowball fight. In contrast, a running record of the story time situation would have focused on Eric for a specific period of time during the book discussion, and would have provided a record of every comment or question that Eric uttered. It also would have included all other relevant information.

A running record of Eric's behavior during six minutes of a story discussion on a subsequent day is provided in Box 3-2 (pp. 27-29). As can be seen, the running record includes three or four specific incidents. A teacher's interpretive comments are usually made beside significant incidents or episodes within a running record.

Notice that the running record captures more specific behavior than does an anecdotal record. In the case of the two examples provided here, we can see that the running record captures much of what Eric, other children and the teacher said during story time discussion. By contrast, the anecdotal record includes more summary statements, especially pertaining to the teacher's own verbal behavior. Three direct quotes from Eric are included in the anecdotal record, but they are quite short. In the running record, we have mostly exact quotes rather than summary statements of what the teacher said. We also have two fairly extensive statements by Eric, each captured virtually word-for-word. It is usually impossible to remember this amount of detail for an anecdotal record, given that it is written after the observation itself rather than during it.

One advantage of running records over anecdotal records is that they include more detail. Their major disadvantage is that the adult cannot work with children and simultaneously collect a running record. Educators can do running records only in the limited time they have available for out-of-role observation. It is amazing, though, how much information can be gathered in a just a few minutes devoted entirely to observation. See Box 3-3 (p. 32) for an example of a running record made by a home-based early educator first thing in the morning, after two of the children in her group had arrived. The episode lasted only about three minutes.

When making a running record, educators strive to write all the relevant details that they can. Of course, it is extremely difficult to write down every important detail as it happens. Most of the time, observers need to spend a few minutes after they finish the observation itself to insert additional details into the ones they recorded at the time the action unfolded.

Running Record (Classroom)

Child: Eric Date October 27, 2000

Context: Story time, Gilberto and the Wind discussion.

Running Record	Initial Thoughts (10/27)	Later Thoughts
<p>After finishing book, teacher says, "Gilberto liked the wind sometimes because it helped him do some things. But sometimes he didn't like the wind, because it blew things away or made it hard for him to do things.</p> <p>Let's look back to find some of the things Gilberto liked about the wind. I want to know if the wind has ever helped any of you do these things."</p> <p>Eric has hands on sneakers at start of teacher's comment, moving loops of laces back and forth. Looked up, as teacher said, "I want to know..." Looks at book as teacher turns back to balloon page.</p> <p>Teacher: "Here, is the wind helping Gilberto?"</p> <p>"Yes," in unison, and Eric joins in.</p> <p>Teacher: "But, oh dear, what happens?" (points to balloon out of G's hand on next page and in tree top).</p> <p>"It took it," said Monica.</p> <p>"Blew so hard, and so quickly with a jerk, that the string slipped out of G's hand," said teacher. "Has that ever happened to any of you?"</p> <p>Others comment...</p> <p>Eric: "One time, well one time at this place, at a fair, games for kids, well, we got balloons, and they had a machine, and the, the, the balloon would stay in the air, and if you let go it would go high and you couldn't get it back."</p>	<p>Seems to understand that wind helps keep G's balloon afloat.</p> <p>Relates own experience to Gilberto's experience in book.</p>	

Running Record	Initial Thoughts (10/27)	Later Thoughts
<p>Teacher: "Oh, I think those are balloons with a gas called helium in them, which makes them float in the air. Mmm... do you need a windy day to lose a balloon with helium, if you let go of it?"</p> <p>Eric and others chime in: "Yes, wind makes it go high."</p> <p>Teacher: "Maybe it would go up high even on a calm day with no wind?"</p> <p>Eric: "My brother says that when it gets really high, really way up high, it 'splodes' because the air up there makes it happen. It's windy."</p> <p>Teacher: "Oh, it explodes, breaks apart. I think that is true. The helium makes the balloon keep getting bigger and bigger, and finally the balloon is just too thin and it breaks apart. I think that happens even when there's not much wind."</p> <p>Teacher: "Well, okay, the wind taking his balloon out of his hand was one thing G. didn't like about the wind. Now, on this page, was G. liking the wind or not liking the wind?" (umbrella page)</p> <p>Simone: "Not liking it. It took his hat."</p> <p>Teacher: "Yes, it blew off his hat, but what other problem did it create? What does Gilberto have in his hand?" (points)</p> <p>Eric and others, in unison: "Umbrella."</p>	<p>Does not seem to realize difference in situation. Would need experience with balloon without helium and balloon with to appreciate difference.</p> <p>Does not seem to understand what teacher has said. Picks up on "up high," which seems to make him think about brother's comment. Attributes bursting of balloon to wind. Probably influence of info from story misapplied here.</p> <p>Moves on...difficult to help Eric or others straighten out misconceptions without giving direct experience with different kinds of balloons...</p> <p>Attentive. Understands teacher's question and answers correctly.</p>	

Running Record	Initial Thoughts (10/27)	Later Thoughts
<p>Teacher: "Right. Let's look at the umbrella here, here, here, and here, and then here..." (points to pictures from left to right across both pages, showing umbrella turned inside out in last picture). "What happened here?"</p> <p>Eric: "He closed it. Shut it."</p> <p>Teacher: "Who closed the umbrella?"</p> <p>Eric: "Gilberto."</p> <p>Teacher: "Well, let's look at that last picture. Is the umbrella closed, or has something else happened?"</p> <p>Several children, including Eric: "It's closed."</p> <p>Teacher: "Let me get my umbrella out of the closet. (brings it to group) My umbrella is closed and now I'm going to open it (does).</p> <p>"Now I'm going to close it again.</p> <p>"See, when I close it, it folds down over the shaft and the handle.</p> <p>"Now, in the picture of Gilberto and his umbrella, the umbrella is out at the end. I wonder what happened?"</p> <p>No one answers.</p> <p>Teacher: "Well, with a strong wind, sometimes, the wind pulls the umbrella up this way (points), and ruins it... I think that's what has happened to Gilberto. See, he says that the wind 'broke it.' (rereads text and points to this part)</p> <p>"That's too bad, isn't it? I'm sorry that this happened to Gilberto."</p>	<p>Misunderstands situation. Brings own experience with umbrella to picture. Probably has only seen "deflated" umbrella in closed position. Thinks that is what is shown here.</p> <p>Misunderstands situation. Probably has seen umbrella folded up or closed, and has not had experience of wind pulling umbrella closed by pulling it up.</p> <p>Not sure that Eric or others really understood, even at this point, given silence. Might require seeing this kind of thing actually happen.</p>	

Tally sheets, behavior checklists and other non-narrative records. In addition to the two kinds of narrative records we have already discussed, non-narrative records of observation are also used to meet various documentation needs. Tally sheets or behavior checklists are non-narrative recording tools. Behavior usually is recorded while it is observed, or very soon afterward, although it could be recorded later in the day. The distinctive characteristic of data recorded on tally sheets or behavior checklists is that the items consist of very specific discrete behaviors that are well defined and thus easy to identify. These records do not provide detailed information about the content of what children say and do; rather, they indicate whether or not children say or do X, Y or Z; and sometimes how often.

Some kinds of behavior can be captured well using tally sheets or behavior checklists; other kinds of behavior cannot. Eric's behavior that was observed during story time discussion could not have been recorded on a tally sheet or checklist. Nor could Kamill's behavior with Craig and the books in the home-based child care setting. Had either educator been interested in merely knowing whether Eric participated in the discussion and whether Kamill asked anyone to play, a tally sheet could have been used to capture these behaviors. If, on the other hand, an educator wants to know what a child actually says when he or she participates in a story or attempts to get another child to join in play, then a tally sheet becomes inadequate for the educator's needs.

A tally sheet works well if an early educator wants to know whether any children used three or four new words in a book that was read on a particular day. Suppose that an early educator always identifies new words in books that he reads, and that he explains these briefly, in context, while he reads the books. Suppose further that he tries to use the words in the discussion that typically follows the reading of books at story time. Finally, suppose that he is interested in documenting whether children incorporate these new words into their own speech during the discussion of the book, as well as later when they work and play. This educator might very well devise a tally checklist to record whether or not children use words introduced in books.

A suitable recording tool for his purposes might look like the one shown in Box 3-4 (p. 33). The record sheet is simple, in part because the behavior of interest is known (i.e., the child uses new words from the book in discussion after the book is read), and also because the recording consists only of a tally mark, such as X. Names of children in a story group are listed in the left hand column of the record sheet. A book's title, the date of reading, and the new words targeted for explanation are written in, which allows the basic sheet to be adapted to any book that has been read. There is even a bit of space in each cell for a teacher to write a brief note. An early educator also can work out a coding system to indicate that the child used the word during book discussion (dbd), rather than outside the story time context. A very brief note is written about use of a word in a context other than story time. This kind of tally sheet is very useful, because it allows for quick and easy recording of behavior for a group of children.

Behavior checklists are similar to tally sheets. The difference is that they provide more options for recording specific kinds of behavior. Behaviors recorded on checklists must be clearly defined and open to little variation in interpretation. Over-regularization of verb endings and the formation of the plural forms of nouns can be recorded on a behavior checklist. These are clearly defined language behaviors, which do not need any interpretation. Book handling skills and demonstrations of knowledge of book parts are other behaviors that can be recorded quite easily using a behavior checklist. Book handling skills include holding a book right side up rather than upside down, and moving through a book, page by page, from front to back.

Knowledge of book parts, such as the title, is indicated if a child announces the title before opening the book or announces the title while pointing to it, before opening the book. An example of a checklist that might be used for these language and literacy behaviors is shown in Box 3-5 (p. 34). Rather than entering a tally in a cell, the teacher records the date on which she observed the behaviors of interest in each child indicated.

Another kind of recoding sheet allows a teacher to write down specific instances of a behavior of interest, the child who exhibited the behavior and the date. A record sheet of this kind is shown in Box 3-6 (p. 35). The record sheet shown was designed to help a teacher keep track of instances of over-regularization of verb endings and plural forms of nouns that were observed in children. Unlike the sheets used to record instances of new word use and instances of book handling behaviors, a tally sheet was not suitable for recording instances of over-regularization of verb endings and plural forms, given that the specific words that are over-regularized vary across children and, with each child, across time. A form that works well to meet this kind of need is one that is dedicated to the specific behaviors of interest (over-regularization of verb endings and noun plurals, in this case), but provides space for writing the child's name, the specific word(s) used and the date.

Tally sheets, behavior checklists and other non-narrative records can be designed in various ways to meet specific needs. Even though these recording tools do not provide the rich detail about child behavior that we read in the narrative accounts (Boxes 3-1, 3-2 and 3-3), they provide quick and easy ways to gather a lot of useful data about behaviors that are important.



Running Record (Home)		
Child: Kamill Date November 14, 2002		
Context: early morning; Craig only other child present.		
Running Record	Initial Thoughts (11/14/02)	Later Thoughts (11/21/02)
<p>Kamill says hi to me; kisses dad bye quickly. Takes sweater off. Puts on hook. Goes directly to book crate. Looks over at Craig who is playing with Duplo blocks on nearby rug. "Hey, Craig! Wanna do books?" Craig: "No, I don't want to." Kamill turns attention immediately to books in crate (no response to Craig), and takes book out of crate. Glances at cover, as holds it in right hand. "Blueberries, no." (<i>Blueberries for Sal</i> book.). Puts it down on floor. Picks up another. Glances at cover. "<i>Little Red Hen and the Pizza</i>. No." (<i>Little Red Hen Makes Pizza</i>). Puts it down on floor. Picks up another. Holds in right hand and glances at cover. "Corduroy. No." Puts it down.</p> <p>Picks up fourth book, glances at it, and says, "<i>Road Builders</i>. Craig! Here's a book you like."</p> <p>Craig looks up, and Kamill slants it so cover faces him. "Hey! How'd you find that?" Craig says.</p> <p>"It was just here," Kamill says. "We can look at it." Craig runs to Kamill and they sit down. Kamill gives book to Craig to hold. He rests it on his lap, and she looks over at pages, as he turns them.</p> <p>(Had to stop because Veronica arrived. Craig and Kamill looked at this book for about 10 minutes, and talked as they looked.)</p>	<p>Doesn't seem bothered by Craig's refusal of her invitation.</p> <p>Not sure whether she's really looking at print in title of each book, or whether she just knows title from picture and other clues on front of each.</p> <p><i>Little Red Hen Makes Pizza</i> is a favorite of Kamill's. Interesting that she passed it over this time...</p> <p><i>Road Builders</i> is a favorite of Craig's. Did Kamill just run across it, as she searched for something she liked, and then remembered that Craig liked this book? Or, did she search for it deliberately as tactic for getting him to read books with her? Could explain why she passed over <i>Little Red Hen Makes Pizza</i>, which has been her favorite book recently.</p> <p>Kamill often holds the book she shares, if she invites someone. Did she give book to Craig to hold as tactic to get him to stay in book situation with her?</p>	<p>Mother told me today when she picked up both children that they had gone trick-or-treating together for Halloween, and had been back and forth to play once in last week. Mothers car pool for pickup now on alternate days. Kamill probably was trying to do her best to get Craig to play with her last week with the books. Had not seen such skilled social behavior from her before...finding his favorite and letting him hold it. Nice addition to our group—more her age—unlike toddlers. Kamill not always happy to play with them, and is protective of materials when she does. Trusts older Craig a lot more to collaborate with her goals.</p>

New Word Use Tally Sheet

Book Read: Gilberto and the Wind

Date Read: November 24, 2002

Occasion: First Reading X Second Reading ___ Third or Subsequent Reading ___

	jerk/jerked	latched/unlatched	howl/howling
Eric			
Lamont	X (dbd) *		
Luciano	X (dbd)		
Monica			
Simone			
Sonya			X (snack time children silly and howling like wind... "stop howling... too noisy")
Terrence			

*During Book Discussion

Box 3-5

Behavior Checklist for Book Handling Skills and Knowledge of Book Parts					
Week of: October 22, 2002					
	Holds book right side up	Starts at front of book	Goes through book, page by page	Announces title before opening book	Underlines title with finger as "reads" it
Eric	10/22/02	10/22/02	10/22/02		
Geraldine					
Lamont					
Luciano					
Manny					
Monica	10/24/02	10/24/02	10/24/02		10/24/02
Rafeal					
Simone					
Sonya	10/22/02	10/22/02	10/22/02	10/22/02	
Terrence					

Form for Recording Over-regularization of Verb Endings and Plural Forms of Nouns		
Week of: October 21, 2002		
Child	Word Used	Date
Luciano	"tached" "My brother tached me to draw."	10/22/02
Sonya	"Mouses" referring to mice in book.	10/22/02
Monica	"eated" "Hungry caterpillar eated, and eated, and eated, and then got fat."	10/24/02

Organizing the Data

Educators who use observation-based assessment must organize the data to bring data together coherently for each child. Early educators often use sectioned notebook binders to store observation data. All the observations for each child are put together in chronological order within each child's section of the notebook.

This approach provides a good start, but many educators go even further to organize the observations for each child, according to the specific aspect of learning that each one captures. The areas often are organized in the notebook in the order that they are found on a progress report or summary checklist used for parent conferences. With this kind of organization, it is possible to see all observation data pertaining to each aspect of a child's learning. An early childhood educator can quickly determine where gaps exist in data for a child, which helps to organize subsequent observations. This kind of organization is also helpful when it is time to do a summary assessment for a progress report, because all data pertaining to an aspect of learning is already grouped together.

Often, however, one observation provides information about more than one aspect of a child's learning. In the case of a child named Theresa, a question she asked and the affect she displayed at the end of story time one day provided information about Theresa's understanding of story text structure, vocabulary development and listening behavior during story time. (See Chapter 4, p. 37). The observation record can be copied and placed in all three places, or it can be placed in one section of a child's file, and a note can be entered in the other relevant places as a reminder to consult this observation record for other information.

Tally or behavior checklist record sheets that typically contain entries for a number of different children present a bit of a challenge. Data for individual children need somehow to get to each child's data section of a notebook or into each child's file. This data is fairly easy to pull off the tally or behavior checklist sheets to enter as notes in an appropriate part of each child's section in the notebook. Some educators simply make enough copies to put one of each in the files of children for whom data has been entered on a record sheet. Other educators store all the record sheets of a single kind (e.g., book handling, new words from books) in a separate section of a notebook, and then refer to this notebook to locate data when pulling together an assessment of each child.

CHAPTER 4

Analyzing and Interpreting Data

When we analyze and interpret data, we think about what a child's behavior means. As we saw in Chapter 3, different people often interpret the same data differently. Interpretations of data occur because people bring different knowledge, values and beliefs to their analyses. Our knowledge, values and beliefs provide us with frames of reference for thinking about children's behavior. These frames of reference include the meanings we have learned to give to various child behaviors, as well as our understanding of various domains of learning. In this chapter, we discuss analysis and interpretation of data, emphasizing the powerful influence of our knowledge. We also discuss the importance of learning to interpret child behavior in terms of reasonably standard frames of reference, so we can minimize problems with **reliability** and **validity**.

The Power of Our Frames of Reference

The example provided in Chapter 2 in Box 2-1 (pp. 12-13) illustrated quite clearly how different frames of reference lead to quite different interpretations of data from an observation. We will consider another example here. Read the anecdotal record of the observation provided in Box 4-1 (p. 39), and then read the brief interpretative and follow-up comments made by the teacher who wrote the record.

As indicated in the brief interpretative comments, Theresa's teacher knew that she loved story time, and thought that she was upset because story time was ending. This behavior was puzzling, given Theresa's usual behavior. Her teacher wondered if there was less reading at home, given the baby brother. The teacher began to think about ways to increase Theresa's time with books at school. Interestingly, Theresa never behaved in this way again at the end of story time, and her teacher learned from Theresa's mother that their time for story reading at home had not diminished, despite the new baby.

A few weeks later, when the teacher prepared Theresa's progress report, she put triple checkmarks on the items, "Shows Interest in Books" and "Is Attentive during Story Time." Beside "Shows Interest in Books" the teacher wrote, "Almost cried one day when story time ended. LOVES story time." When reviewing Theresa's progress report with colleagues, there was further discussion about this incident, because everyone agreed Theresa's behavior on this day was not typical.

Later, when discussing the book that had been read, it occurred to everyone that Theresa probably misunderstood a statement made by the narrator on a page near the end. The text reads, "Together they found their way home." On the next page, which is the last page of the story, the narrator tells the reader/listener that the two animals became good friends and spent time together both day and night. We see the bear and hare sleeping on top of a mound of snow, out in the open.

After considering the book, everyone thought about Theresa's behavior in a different light. The question that Theresa asked ("Is that all of the story?") brought several things to mind: (1) this particular story; (2) features of narrative or story text structure; and (3) preschool children's limited understanding of words. Taken together, these considerations provided a frame of reference for a different interpretation of Theresa's behavior than the one her teacher arrived at initially.

In a story, a problem occurs and is then resolved. In this book, a problem occurs when two little animals discovered a research station and the little bear fell into one of the buildings (the problem). The little hare thought of a means of escape, the two animals got away, and then they found their way back HOME. (The narrator relates this fact to the reader/listener.) In the mind of a four-year-old, however, home probably means house, a physical shelter of some kind (e.g., cave, nest, burrow), not a territory. The story had ended properly (i.e., the problem of getting home was resolved), only for those who understood that home has a broader meaning than house or shelter. Preschoolers are unlikely to know this broader meaning of the word.

The next day, the teacher showed Theresa the book, and asked her why she had been so sad one day at the end of story time. As it turned out, Theresa was worried that the people in the research station would come after the little bear and the little hare. The animals were still in danger, she thought, because they were out of doors, not home. The teacher explained that, in this case, home means territory, and that, when animals do not venture beyond their home territory, they are safe. We say that they are home, even though they are not inside a house or a cave or some other form of shelter.

Theresa smiled and talked freely about her relief in knowing that the animals were safe. "I don't want the bad people to get them," she said. "They should lock their door and not come out, if there are strangers." The teacher commented that the humans probably were as startled and afraid of the little bear and hare as the animals were of them, and that after all, the two little animals had been the intruders in this instance.

Needless to say, the teacher revised Theresa's progress report. She left the triple checkmarks on "Shows Interest in Books," and "Is Attentive during Story Time," but she erased the note about Theresa having almost cried one day because story time was ending. This interpretation of Theresa's behavior no longer stood in the teacher's mind as the most likely. The most significant change in Theresa's report, however, occurred in the section on a child's understanding of narrative and non-fiction text structures. Theresa's question indicated an excellent understanding of story structure (i.e., narrative), even though her behavior had not seemed at first to her teacher to provide any information about her knowledge of story text structure. Her behavior seemed informative only about Theresa's development in the social-emotional domain. Now, the item, "Understands that stories have a beginning, middle and end" was checked "yes." Beside the item was a note: "Is that all of the story?" (*Little Polar Bear and the BLH*, February). Thought it had not ended as a story should, due to limited understanding of the meaning of "home."

Date: February, 2000

Child: Theresa

Context: I read two short books to a group of children, and then read a third longer one. Because time was running short, I did not discuss the third book after reading it. Last book (of three) was *Little Polar Bear* and the *Brave Little Hare* (1992, Hans de Beer).

Anecdotal Record

I finished reading the last page of LPB and BLH, closed it, and said: "Okay, we must stop now. It's time for us to use the bathroom, wash our hands and then have snack."

Theresa broke in: "Is that all of the story?" Her brow was furrowed. Voice sounded a bit frantic or desperate. Eyes were a little bit teary. Together, facial expression and the tone of voice suggested she might cry.

"Yes, that's the end of the story." I told her. Opened book again to show the last page of text, and pointed to words above a picture of little bear and little hare. Then, turned page to show the end papers of the book. End papers have picture of Arctic landscape, with little bear and little hare sitting in the snow. "See, there are no words here," I told the children. "These are just the end papers of the book. The story ended on the last page of the book." I turned back to point to the print there. "We will read more stories tomorrow, Theresa," I said. She looked down at floor, then stood up to take Carlos' hand, when I called them to walk to bathroom. Still had a glum expression on face as walked to bathroom. At snack, talked, ate and smiled, as is typical of her.

Interpretation

Don't know why Theresa responded so sadly to the end of story time today. Loves story time, and routinely checks books out to take home. Usually deals with transitions very well. Certainly knows the daily routine, which includes story time. Usually loves snack time, too, and is ready to go. Loves to talk and eat at that time (and did on this day, as usual). Am puzzled as to why she wanted story time to keep going today.

Follow-Up

Ask mother if the baby is cutting into her time for reading to Theresa. Watch to see T's reaction to end of story time in upcoming days. Could suggest to her that she spend some time during activity choice period looking in book area. Could put little board books for babies in house area for her to read to dolls.

Sound Interpretation Is Important

The relationship between domain-specific knowledge and knowledge of child development in the interpretation of data is illustrated by the episode involving Theresa. Theresa's behavior was quite difficult to interpret correctly, in part because a competing interpretation (i.e., she was sad that story time itself ended) seemed so plausible. The later, more accurate, interpretation of Theresa's behavior required integration of knowledge drawn from several sources. Given the difficulties involved, early childhood educators can never expect that all of their interpretations will be on target. All early educators however, must do everything they can to make sound interpretations of their data.

Different educators have learned to apply somewhat different frames of reference to child behavior, and different educators also have achieved different levels of understanding of various content-area domains. Historically, there also has been a high level of tolerance for instructional practices, no matter their track record in leading to various outcomes. As a consequence of all of these variations, interpretation of observational data has often varied widely from educator to educator. Although a certain amount of variation is to be expected when different people interpret data, wide variations in data interpretation create problems. If educators share little in the way of common frames of reference, it is impossible for their judgments about children to be **reliable** or **valid**. When we say that judgments about data are reliable, we mean that one educator is likely to reach the same or similar conclusions about a child as those reached by most other educators who analyze the same data. When we say that conclusions are valid, we mean that other educators would agree that behavior X is an indicator of a child's understanding or skill in domain Y.

Let's consider an example of difficulties in reliability and validity stemming from lack of agreement about early indicators for a later behavior in a specific domain (**content standard**). For the domain of word recognition and fluency, letter name knowledge, phonological awareness, the alphabetic principle, knowledge of specific sound-letter associations, experience hearing stories and other kinds of texts read fluently and expressively, and frequent experience in retelling very familiar texts are all early indicators. Early educators differ, however, in their understanding of each of these indicators, and in their beliefs about how each one relates to the later behaviors of interest—word recognition and fluency. Some early educators give considerable weight to letter name knowledge in their judgments about a child's progress in this domain, and very little weight to the other indicators. Other early educators give considerable weight to phonological knowledge, or to the child's ability to retell stories fluently and expressively, and give relatively less weight in their judgments to letter name knowledge. Still other early educators consider all the indicators to be very important, such that progress is viewed as problematic if a child does not make progress on all.

It is easy to see how these variations in early educators' understandings and beliefs about indicators of later skill in word recognition and fluency would lead to problems with reliability and validity in both data collection and analysis. With respect to data collection, educators with different understandings and beliefs are likely to "see and hear" different things in the behavior they observe. Thus, data collection itself will lack reliability (i.e., consistency) across different observers. Then, in the analysis of data, there will again be differences (i.e., lack of reliability). Finally, except for the educators who consider all the known indicators of word recognition and fluency to be important, there will be problems in validity with conclusions educators will draw about children's progress. Too narrow a focus (i.e., lack of consideration for some important indicators) will lead to incorrect—invalid—conclusions about progress. Some children's

progress will be overestimated, other children's progress will be underestimated, while still other children's progress will be judged accurately (simply by chance).

Certainly, in terms of unusual behavior, or behavior that requires knowledge beyond what is ordinary for an early childhood educator, we can expect differences in interpretation of data, just as we expect differences in opinion among medical specialists when they try to figure out difficult and puzzling problems. But for "run-of-the-mill" behavior, educators must adhere to interpretative frames of reference that are commonly held and have underpinnings in research. If they do not, evaluations based on data collected will not be reliable or valid.

Minimizing Wide Variations in Data Interpretation

It is difficult to avoid all mistakes in interpreting our observations, given that most of us lack critical knowledge about some aspects of child development, or about the learning that is included in each domain covered by a state's content standards. All of us must do the best that we can to continue to learn more and more about children and about the subject matter we teach.

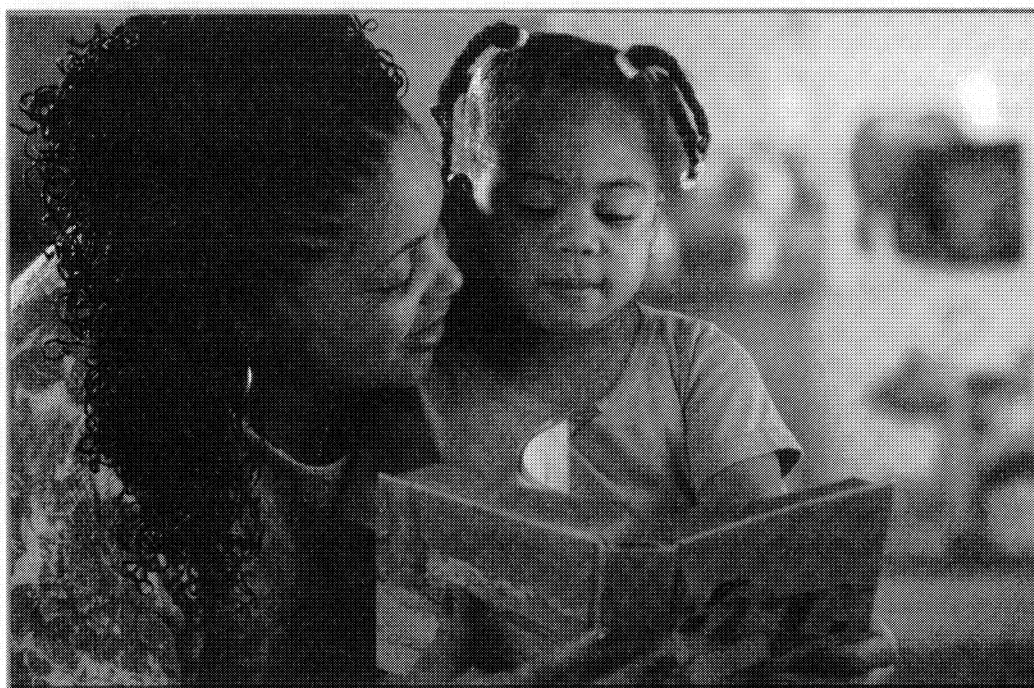
Helping educators develop frames of reference for interpreting child behavior can be provided in assessment materials themselves, if they include good descriptions of behaviors that are important and discuss portraits of children's progress, with respect to each behavior of interest, as they might look at various points along the acquisition continuum. In this guide, Part II is devoted to providing this information. There are also many print resources for early educators that provide information about relevant aspects of child development and subject matter domains. In training provided for early educators, there should be discussions of relevant aspects of both child development and subject matter.

Of course, not all problems in interpreting data are related to variations in frames of reference. Some problems stem from other sources. For example, interpretations of data are not always as sound as might be possible, when educators do not consider carefully enough the context in which they observe a child's behavior. Recall the observation of the two girls playing with blocks that we considered in Chapter 2 (pp. 12-13). Some readers considered the nature of the materials available (i.e., how many blocks there were), as well as the older child's intentions (i.e., copying a model building provided on the box). By including these considerations, these readers were able to arrive at a more complex interpretation of the children's behavior than did readers who failed to take these factors into consideration. In the example in this chapter about the child's response at the end of story time, we again have a situation in which the educators decided to take a look at the specific materials at hand. As it turned out, there was something unique about this book that, in combination with Theresa's developmental characteristics, helped to explain her behavior.

Box 4-2 (pp. 43-44) narrates two anecdotes: one about a child's writing in a dramatic play context, and one about a child's writing on a turns list for the block area. As can be seen, the same child produced very different writing in these two contexts, despite the fact that both samples were produced on the very same day. The two very different contexts probably influenced the child's writing. In play, when the phone message taken is delivered to someone, and is explained verbally, scribble serves well, even though it has only broad characteristics of writing (i.e., scribbles are lined up in several rows, and marks making up the scribbles are varied in form). One's name on a turns list is another matter. It is important here that other children or an adult be able to make out the signatures, if one expects to get the desired turn. (Children do

not know that adults can distinguish among children's scribbles, just as they often are able to identify the creator of non-representative drawings and paintings.) Educators' data can be interpreted more reliably when contextual information is included, and more valid (i.e., more accurate) evaluations of children are the result.

In an example of behavior provided in Chapter 3 (p. 27), a teacher's questions and comments limited what she learned about a child's (Eric's) comprehension of an event in a book. The teacher realized this later, and included in notes added as interpretations, that she would need to probe the child's understanding again in order to find out what the child actually understood. Consideration of our own influence on a child's behavior in a specific situation can help us arrive at interpretations of child behavior that contain fewer misinterpretations.



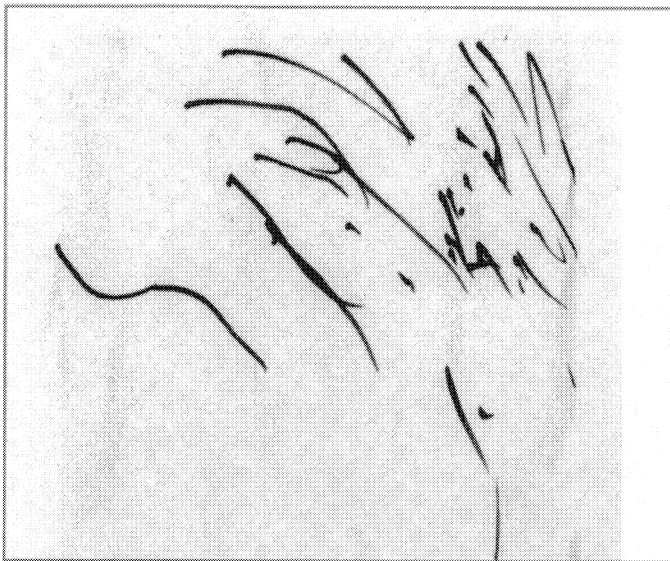
Anecdotal Record #1		
Child: Terrence Date November 5, 2003		
Context: House Dramatic Play Area		
Running Record	Initial Thoughts (11/5/03)	Later Thoughts (10/26)
<p>Monica is packing purse for going out. Announces to Terrence to call babysitter.</p> <p>Terrence says, "Ring, Ring" and answers phone. While receiver up at ear, says, "Okay, okay, okay, then!" Hangs up. Picks up pencil attached to pad of paper by phone and makes marks. Puts pencil down. Tears off top sheet. Goes to Monica and says, "The babysitter can't come. She's busy. Call another time." Drops phone message paper and lets it float to floor near Monica, as he turns and walks toward sink. Monica says, "Well, we'll take the baby." Terrence says, from sink, "No, I'm not going." T opens cupboard beneath sink. Gets several pots and pans, and in frantic, loud, banging way, "washes" them in sink. Monica turns around from her kneeling position in front of baby's clothes chest and says, "I'm not playing here anymore." Leaves doll, phone message and doll clothes on floor.</p>	<p>Funny that he makes phone ring in HIS house when it is he who is placing the call. (Was he saying "ring, ring" for the call in the babysitter's house, as if he could hear it ring there???? Or was he confused about placing versus receiving a call???) Used all scribble marks to create message. Wrote it quickly...</p> <p>We usually don't take a message when we place a call, unless we are calling to get somewhat detailed info, such as directions someplace. Somewhat odd that T wrote message down here, especially given fact that Monica was present in house area...</p> <p>T didn't want to go out with baby...maybe not at all? Maybe writing of babysitter's response was supposed to give it more "weight." Maybe thought Monica would then decide not to "go out." Seems perturbed that Monica still wanted to go out...</p> <p>Why wouldn't he think that was a fun script for play?</p>	<p>Terrence might have thought he'd lose having Monica to play with if they left house. They might encounter other children, and also Monica might change her mind about playing with him, once she sees what other children are doing. More trouble lately getting children to play with him. Loud and rowdy behavior may scare others away...Need to work on that with him. Watch for these times of rejection of his ideas, and of him to try to prevent outbursts, which only make children shy away more.</p>

Anecdotal Record #2

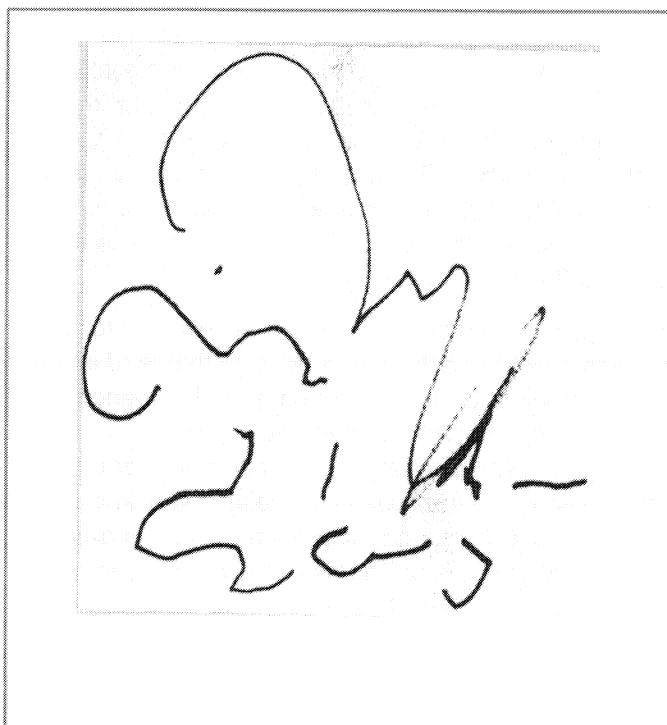
Child: Terrence Date November 5, 2003

Context: Block area turns list

Running Record	Initial Thoughts (11/5/03)	Later Thoughts (10/26)
<p>Terrence approached the block area and started to get blocks off shelf. Asked him to count players already there. He did, and determined there were four. Knew without reminding that he should put name on turns list.</p> <p>Got clipboard with marker and wrote name on paper. Propped clipboard on top of lower bookshelf as he wrote. Made name slowly, as if drawing each letter.</p> <p>Leaves turns list on block shelf, and walked back to house area sink. Picked up empty detergent bottle and turned it upside down over sink basin. Nothing in sink to wash. Moves hands in sink, as if water in there. Had no more than started this than J. in blocks announces he's leaving. He checks list, and I tell him T's name is the one there. He calls to T and T runs to blocks.</p>	<p>T still does not assess situations before entering them. Barges in....Knew what to do today, to get turn, and no pouting or stomping out of area, as he has done on previous occasions.</p> <p>Big contrast in time he spent in creating writing here compared to phone message in house area. Much less to write here and more familiar. Also more important that others be able to read it.</p>	



Terrence's phone message created in dramatic play area



Terrence's name written on turns list in block center

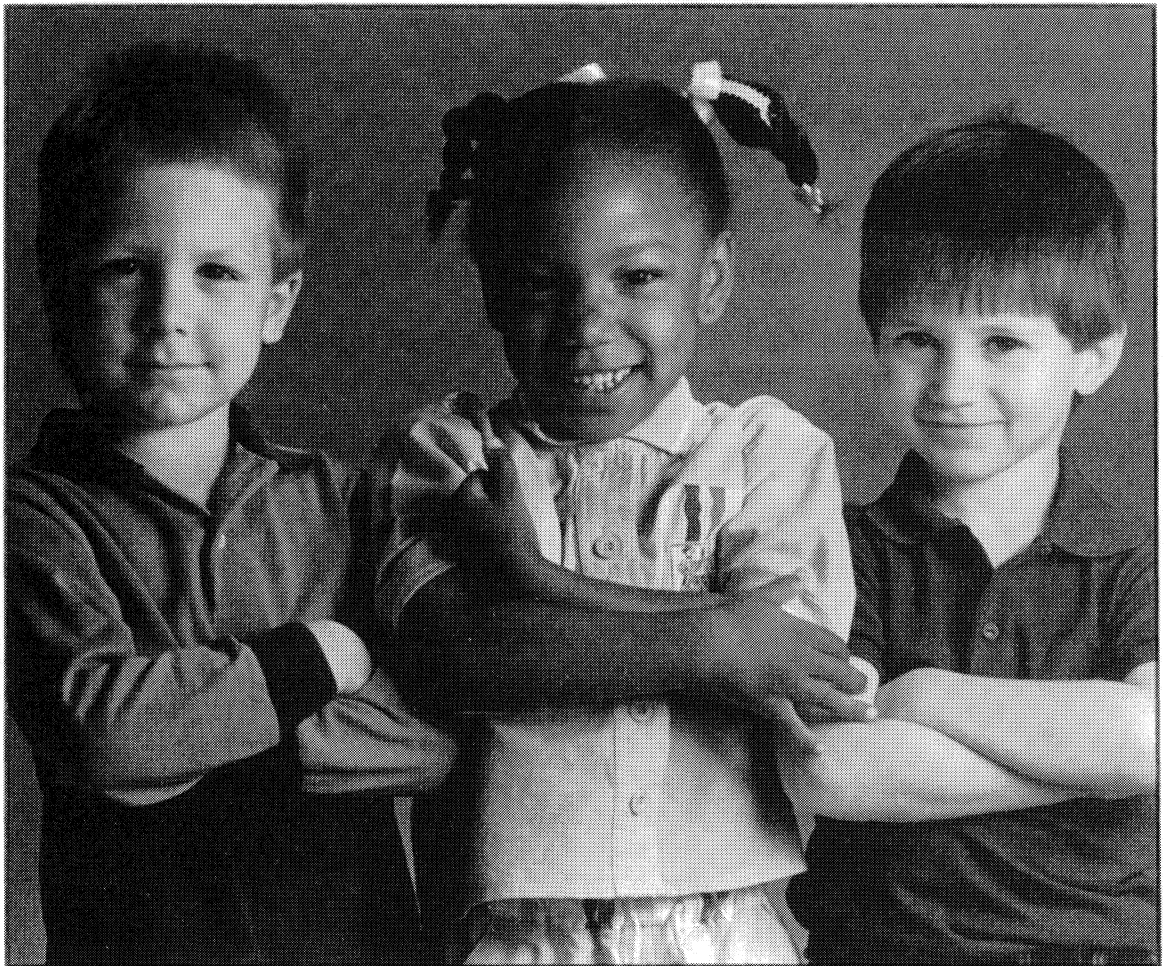


It is also good practice to discuss observations of children with colleagues. Given time and other constraints, it is difficult for many early educators to discuss observations and evaluations of children with other educators. Trying to find time for this kind of joint discussion can improve any educator's skill in interpreting children's behavior. These discussions promote the building of common frames of reference, and they also help us become less blind to contextual factors. When we collect data in the context of our work with children, we often fail to account for contextual factors. Discussing our observations with another educator can often help us see ourselves in these situations and consider this influence on the child's behavior.

Finally, the effect of errors in the interpretation of observational data can be minimized for any one child, if adequate data is collected for each child, in each area of learning that is of interest. The more data collected for each child on some aspect of behavior, the better the chances that the overall picture, on balance, will be more accurate than if there are only one or two observations for each behavior of interest. With several observations for each behavior of interest, one observation serves as a check on others. In the case of Theresa, it was known that her behavior in the story reading setting was not typical. This nagging contradiction in data helped to keep minds open about alternative interpretations of Theresa's behavior in the story reading setting.

Part II

Pre-Kindergarten Language and Literacy Content, Contexts and Behaviors



Part II: Introduction

Content standards or **guidelines** for a domain of learning indicate what children need to learn and be able to do. Each domain of interest (e.g., mathematics, social development, language, physical and motor development) consists of several different kinds of learning. In the domain of mathematics, for example, number and number relationships, measurement, and spatial understanding are some examples of learning that are of interest to teachers of young children. In the domain of early literacy, phonological awareness, print awareness, print conventions, book handling skills and letter name knowledge are of interest.

States have prepared standards or guidelines that specify the content to be taught in programs at every level of education, including the pre-kindergarten level. Professional organizations, such as the National Council of Teachers of Mathematics, have also developed content standards or guidelines. These content standards or guidelines are based both on views about the purposes of education (i.e., what educators feel children should know and be able to do), and on research that indicates what children need to know and be able to do if they are to achieve the desired level of competence. Research answers questions about the prerequisite knowledge and skills that are essential for the acquisition of some mature form of a behavior. With respect to literacy, for example, research has asked questions about the role of such things as phonological awareness, letter name knowledge, print conventions and vocabulary in learning to read and write. (See Appendix A for research sources on language and literacy development in young children.)

After content standards or guidelines have been written and adopted, educators must design curriculum and instruction that will provide children with opportunities to learn the content that has been specified in the standards or guidelines. Research that informs curriculum and instruction in literacy has asked questions about the nature of experiences that support a child's acquisition of specific literacy skills; for example, the kinds of opportunities and adult interactions that help children learn letter names, acquire phonological awareness, or learn and use new words (Snow, Burns & Griffin, 1998; Early Childhood-Head Start Task Force, 2002; Neuman, Copple, & Bredekamp, 2000).

Educators must also obtain or devise tools for assessing children's progress in acquiring the knowledge and skills that content guidelines outline. Research that informs assessment tool design and use provides descriptions of behavior that indicate how children make progress in learning some specific aspect of literacy. This kind of research provides milestones or indicators for young children's development. For example, research has provided many examples of the graphics (i.e., marks) (Clay, 1975; 1987; Schickedanz, 1990; Schickedanz & Casbergue, 2004) young children use to create writing, the strategies they use to create spellings (Adams et al., 1998; Read, 1975; Schickedanz, 1990), and the typical errors they make when learning to distinguish among and name alphabet letters. Research that has been designed to find out *why* children behave as they do with respect to language and literacy learning also helps to inform assessment, because it helps us interpret the data we collect. (See Appendix A for research sources on language and literacy development in young children.)

Part II of this guide describes and discusses the kinds of learning specified in preschool-level language and literacy content guidelines. Classroom contexts that provide children with opportunities to learn the content specified in guidelines are listed, and examples of child behaviors related to each kind of learning are provided.

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CHAPTER 5

Content Guidelines for Oral Language

The domain of oral language is concerned with the acquisition of behavior that involves listening to and comprehending oral language, producing speech, and using language to communicate a wide variety of diverse meanings. The demands of alphabetic writing systems require the development of special sensitivity to the sounds in language, which would not otherwise be important. This sensitivity is called phonological awareness. Phonological awareness is important, not because it contributes to a child's skill in using oral language to serve the primary purpose of communication, but because a conception of spoken words as a series of individual sounds is basic to understanding how alphabet letters represent speech. Similarly, skill in using language to communicate about the past, future or the imagined, rather than about the here and now (i.e., decontextualized language), becomes essential in a society that is dependent on texts to communicate a large amount of meaning.

In this chapter, four main aspects of oral language are fully described and explained, including basic listening, oral comprehension, expressive language and phonological awareness. Classroom contexts typically created by teachers to support each kind of learning are listed and briefly described in boxes throughout the chapter. Examples of behavior that a teacher might see children display in these contexts are also provided.

Basic Listening and Oral Comprehension

Listening involves the directing of attention to a speaker or speakers. Oral comprehension involves the ability to understand the messages that speakers try to convey. Listening is, of course, a prerequisite to comprehension. If a person does not listen to what someone says, there is little chance that the message will be comprehended. We consider listening first, then oral comprehension. Within the discussion of oral comprehension, we consider receptive vocabulary, decontextualized contexts of language use, and the understanding of explanations, directions, questions and comments.

Listening

To listen, one must direct attention to others who are talking, or to some other source of sound (e.g., singing, clapping). Attention has both physical and mental features. Physically, someone who is listening indicates in some way that he or she is oriented to the speaker or speakers. Typically, the listener looks at the speaker, often turning or repositioning to make this possible. Often, this orienting behavior is accompanied by cessation of other physical activity—a break in the listener's ongoing activity—as attention is directed to the speaker or speakers. Physical orientation behavior varies by culture. In some cultures, failing to establish eye contact, as part of the orienting behavior, is considered disrespectful (i.e., assumed to be evidence of “not paying attention”). In other cultures however, eye contact with an adult who is speaking is considered disrespectful, especially in situations involving a reprimand. It is incorrect in these circumstances to assume that lack of eye contact from a child indicates lack of attention to the speaker. Other physical cues indicate that attention is now oriented toward the speaker.

Specific features evident in displays of attention also vary by the child's personality. Some children, especially those who are very shy or those who come from families that socialize

strongly for feelings of shame about misbehavior, may avoid eye contact with an adult speaker in certain situations. Due to these cultural, social, and individual variations, it is important that eye contact alone not be used to judge a child's attention. Cessation of previous ongoing activity and general orientation of the child's body toward the speaker are better indicators of attention in these circumstances.

Orientating toward a speaker or speakers requires, first of all, awareness of calls or other signals to listen. Calling someone's name is commonly used to signal the individual that attention to the speaker is wanted. Some children become alert immediately, without repeated calling out of their names and without an extraordinary increase in a caller's voice volume. Other children seem not to hear their names called until an adult says the name a number of times, raises his or her voice, or approaches the child physically. Judgments about a child's listening skill typically include consideration of this orienting response. Hearing problems, of course, must be ruled out. If a child has frequent ear infections or a hearing impairment from other causes, this is not a listening problem; it is a hearing problem. Other conditions, such as attention deficit disorders and autism, also dramatically affect a child's orienting response. Impairment in listening, no matter the cause, can dramatically affect a child's language acquisition.

Judgments about children's listening skill also are based on considering the child's adaptation to various social contexts. There are times in a school day, and no doubt times during a day at home or in other out-of-school contexts (e.g., church, doctor's office, library visits), when children are expected to listen at specific times. In a classroom or family day care setting, these times include story time, a group meeting or song time, and small group instructional situations. Although children talk, at times, in all these situations, there are expectations about when they should talk and when they should listen to the adult or other children talk. When we describe a child as a "good listener," we often have in mind that the child listens when we expect that he or she should in adult-directed large or small group settings.

Examples of contexts in which children are asked to listen, and thus learn to listen, are provided in Box 5-1 (p. 52). Examples of behaviors that indicate development of skill in listening are provided in Box 5-2 (p. 53).

Oral Comprehension

Understanding what someone has said depends on more than listening. All adults have had the experience of dealing with a child who attends closely, but still does not understand the message conveyed. The child's overall language ability, vocabulary, background experiences and knowledge all affect comprehension. The context in which the speaker is attempting to be understood also affects the child's comprehension of what is said. For example, if there are clues in the environment that support interpretation of the language used, and if gestures accompany the language, comprehension is easier than when the immediate physical environment does not support the message conveyed. The kind and complexity of the discourse involved also affect the child's comprehension. Children find themselves in situations involving questions, explanations, directions and comments. Any of these can range from very simple to quite complex.

Listening: Contexts that Support Acquisition		
Physical Setting	Materials	Instruction
<p><i>Story time</i></p> <p>As children gather on the rug for story time, the teacher helps each child find a place to sit that provides a good view of the book. When all children have arrived, the teacher holds up the cover of the book.</p>	<p>Book: <i>A Letter to Amy</i></p>	<p>The teacher underlines the title and reads it: "<i>A Letter to Amy</i>. What is this over here?" (points to illustration) Children say "letter" or "mail" or "envelope." The teacher says, "Yes, it looks like a letter, and it seems to be blowing away. Looks like lightning back here (points) in the dark sky, and what is this boy wearing?" Children say "raincoat" or "slicker."</p> <p>Teacher says, "Yes, he's dressed for rain. Let's find out what he's doing out in the rain, and who Amy is. The title said 'A Letter to Amy.'"</p>
<p><i>Clean up after activity time</i></p> <p>The family child care provider has already given the warning for clean up, and now it is time to call clean up.</p>	<p>Puzzles, easel, writing center, book area, water table, blocks with trucks, dramatic play area</p>	<p>The family child care provider flicks the lights twice and says, "Okay, freeze wherever you are and look up here."</p>
<p><i>Outdoor play</i></p> <p>It's a windy day. The sand is dry. As a child digs a big hole in the sand, he tosses sand out to his side. The wind catches it and blows it around.</p>	<p>Sandbox, pails, shovels, plastic dishes</p>	<p>The adult approaches, places his hand on the child's shoulder, and says, "Jeremy." Jeremy turns toward the adult. "Do you see what is happening when you toss the sand out of your shovel?" Jeremy looks puzzled and shakes his head no. The adult picks up another shovel and says, "Watch, I'll show you." He tosses a little bit of sand out of his shovel, as Jeremy watches. "What happens to it? What does the wind do to the sand?" "It blows it," says Jeremy. "That's right, it does. It could blow into your eyes, or into someone else's, so it would be a good idea not to toss the sand out of your shovel today, but to dump it right onto the ground." "Okay," Jeremy says.</p>

Listening: Examples of Children's Behavior		
Physical and Social Context	Materials	Child Behavior
<p><i>Story time</i></p> <p>The teacher has finished reading the first page, where Peter explains to his mother that he's writing a letter to invite Amy to his birthday party. We learn that he's asked other children to his party; he didn't write to invite them. Peter explains that he wants to write to Amy because it makes it special.</p>	<p>Book: <i>A Letter to Amy</i></p>	<p>After reading the page, the teacher asks, "Oh, so we know that Peter is writing a letter to Amy. Who do you think she is?" Daniel says she's a friend, Kamil says that Peter knows her, and so on. "Yes, sounds like Amy might be a friend," says the teacher. "We usually invite friends to our birthday party, don't we?" The teacher continues: "I'm kind of wondering if the letter we saw on the book cover—the one blowing away from Peter (flips back to cover to point it out)—is the letter to Amy that Peter is writing right now." Several children say that it is. Others don't respond. "We'll read more, and I think we might find out," says that teacher.</p>
<p><i>Clean up time after activity time</i></p> <p>It is clean up time. The child care provider has flicked the lights and asked children to freeze and look at her.</p>	<p>Puzzles, easel, writing center, book area, water table, blocks with trucks, dramatic play area</p>	<p>All children but one stop and orient to the child-care provider. The child who continues playing is in the blocks. She's on hands and knees, bent over a block road, running her truck down it. The family child care provider raises her voice somewhat and says, "Sarah, park your truck and look up here." The child turns toward the child care provider, sits down on her bottom and holds the truck in her lap. "Okay, children," the child care provider continues. "It's time now to put your toys away. Sarah, you may leave the road there for playing this afternoon, but park your truck in the tub, and then you can help put the dishes away in the house area."</p>
<p><i>Outdoor play</i></p> <p>It's a windy day. The sand is dry. A child had been digging a big hole in the sand, and tossing sand from his shovel out to his side. The wind had been blowing it around. The adult had called the situation to the child's attention, and made a suggestion about dumping rather than tossing the sand from the shovel.</p>	<p>Sandbox, pails, shovels, plastic dishes</p>	<p>Jeremy picks up his shovel and begins to dig again. He doesn't toss the sand from his shovel this time, but lets it slide out while holding the shovel above the ground. The wind still catches some of it and blows it. "That's right," the adult says, "You're dumping it, not tossing it, but the wind is still catching it and blowing it a little as it falls from your shovel. Put the tip of your shovel on the ground, like this, and then the wind can't catch it at all." Jeremy watches as the adult demonstrates and then tries again, this time dumping the sand while resting the tip of his shovel against the ground. "That's it," says the adult. "It's very safe that way."</p>

Receptive oral vocabulary. When we say that a child has a good receptive vocabulary, we mean that a child understands a lot of words. Vocabulary is essential for the comprehension of both oral language and written text. In fact, a meager vocabulary is a major detriment to a child's later reading comprehension. For preschool children, a meager vocabulary is a barrier to understanding storybooks and other books that are read aloud, and to understanding explanations and directions. A good vocabulary is also a key ingredient in background knowledge that is, our storehouse of information about the social, physical and biological worlds. Knowing a lot about something typically includes the acquisition of a specialized vocabulary. For example, if a child has good background knowledge about caterpillars and butterflies, the child is likely to know words such as larva, insect, pupa, chrysalis, antenna, emerge, flutter and migrate.

Background knowledge assumes vocabulary to designate categories (e.g., fruits, vegetables, vehicles, furniture), and it also includes understandings about the relationships among things within a category. If we consider categories of various kinds of vehicles, boats are a subcategory, specifically a kind of vehicle that travels on water (i.e., oars, motors, sails), and has no wheels. Trucks, on the other hand, are a subcategory of wheeled vehicle, as are cars. The distinction between truck and car is made depending on the use of the vehicle, as well as on physical characteristics. Trains, too, typically have wheels, but unlike cars and trucks, they run on tracks not roads. The point here is that having a good vocabulary is not simply a matter of knowing a specific response (i.e., definition) for a list of words. True understanding of a word involves not only knowing that word, but also knowing other words that are related to it in various ways.

Vocabulary development and the development of background knowledge go hand in hand. Without deepening knowledge, there is no need for new words. Without new words, knowledge does not become a complex web of relationships and understandings. With good vocabulary development in a preschool child, we often see clusters of words that relate to specific topics to which the child has been exposed and in which the child has developed a special interest. One child might know a lot about dinosaurs; another might know a lot about snakes; still another might know a lot about plants or construction tools.

Examples of contexts in which oral vocabulary acquisition can be supported are provided in Box 5-3 (p. 55). Examples of behaviors that indicate vocabulary acquisition are provided in Box 5-4 (p. 56).

Decontextualized language. Much of the time when we talk with young children, we talk about people, objects, places and events in the "here and now" (e.g., the food we are eating at the time, the block structure the child is building, the colors in the picture the child is drawing). Some of our talk with children, however, is about the past, the future, or things we can only imagine. Language used to discuss something other than the "here and now" is called decontextualized language. Physical clues that can be relied upon to aid understanding in "here and now" situations are greatly limited in decontextualized situations. In decontextualized situations, children must pay close attention to language alone to derive meaning. For example, when a parent tells a child about an upcoming event, perhaps a trip to the supermarket or a visit to the doctor's office, those contexts are not available for immediate observation. The parent uses language to describe the upcoming event (e.g., "We're going to the supermarket. I need to get some eggs and cereal and some other things I need for a casserole."). The child brings past experience to decontextualized language contexts, but at the time of the conversation or explanation, the context is not available as a reference.

Oral Vocabulary: Contexts that Support Acquisition		
Physical Setting	Materials	Instruction
Story time	The book, <i>Swimmy</i>	<p>On page where tuna is said to come “darting” through the waves: “That means that he swam fast, first one way and then another way, back and forth,” the teacher explained (and moved hand to show it).</p> <p>On page where it says that Swimmy “swam from marvel to marvel,” the teacher said, “That means that he was seeing one very beautiful and amazing thing, and then another, and then another.”</p>
Meeting time (precedes major choice time in a.m., and is used by teacher to explain something about each activity provided in the classroom areas)	Tub with an item or two from each activity area	<p>“At the water table today, we have funnels (holds one up). The top part, this cone-shaped part right here, is wider than the bottom part, which is a tube – this part right here. You pour water into the cone-shaped part. It goes into the little hole at the base of the cone, and into the narrow tube. Then, water comes out the hole at the very bottom of the tube” (shows).</p>
Puzzle table	Child is playing with colored, plastic shapes, making designs	<p>“That’s an interesting shape, isn’t it,” said the teacher. “That’s what we call a diamond. It has four sides like a square or a rectangle, but its sides slant, don’t they? They are not straight up and down.”</p>
Block area	Blocks and small construction vehicles	<p>“I think construction workers use a bulldozer to move earth out of their way when they are building a road. Then, I’m not sure...do they bring loads of gravel in a dump truck, and then pour asphalt, that hot black stuff, on top of the gravel? I don’t know very much about road building. Maybe we need to find some books so you’ll know what each construction vehicle does.”</p>
Writing table	Paper in varying sizes, markers, pencils, envelopes, stickers to use as postage stamps	<p>Child finishes writing letter to Mommy and tries to fold it for the envelope. Having trouble. “Pull the top all the way down to the bottom edge of the paper,” the teacher advises (and helps with her hands). “Great. Now, let’s turn it this way, and make three folds this time, fold the paper in thirds. Bring the bottom up to here first (child does it, with help) and then bring the top edge down to the bottom edge (helps). Now, it should fit inside the envelope.” (child attempts) “Oh, orient it the other way so it doesn’t stick up in the way of the flap. That’s it.”</p>

Oral Vocabulary: Examples of Child Behavior		
Physical Setting	Materials	Child Behavior
Story time	The book, <i>Swimmy</i>	After teacher asks children what marvels they would like to see if they could swim in the ocean, several children introduce their choice by saying, "The marvel I'd like to see in the ocean is..."
Puzzle table	Children are using colored plastic shapes to make designs.	One child to the other: "Hey, two of these triangles make a diamond. Did you know that?"
Block area	Blocks and small construction vehicles	One child to another child: "No, that's a bulldozer, not a steam roller. See the big blade?"
Writing table	Paper in varying sizes, markers, pencils, envelopes, stickers to use as postage stamps	Child is having trouble getting a folded paper into an envelope. Approaches teacher: "I can't get this rented the right way." Teacher: "Oh, you mean oriented the right way? Okay, well let's just turn it this way, and I think it will go in."
Snack table conversation	Nothing pertaining to conversation, which is about where children live, apartments or houses	One child said she lived in an apartment. "Way, way high up?" asked a child at the table. Child said, "We live on the 4th layer." Teacher: "You mean you live on the 4th level, the 4th floor." Child: "Yes, 4th level."
Story time discussion	<i>Dear Juno</i> book	Teacher is talking about the envelope that Juno's grandmother's letter arrived in and asks if children ever get letters from family members who live far away. ELL child begins: "I got elev—elevlope" (pauses, as if aware that pronunciation is not correct). Teacher says, "Yes, you got an envelope, and who sent it?" Child continues: "I got envelope from Grandma."

Books also present decontextualized language situations. Although children often have experienced events and settings described in books, those events and settings are not available when the book is read. The illustrations help support the meaning conveyed by the text, but they do not provide the level of support that the real events and settings themselves provide. Nor is the author available to interpret the meaning of lines in the text. The meaning must be derived from the words that are there.

The amount of experience in listening to and using decontextualized language during the early years is related to later reading comprehension. That is, children with a greater amount of experience with decontextualized language in their early years have better reading comprehension than children who have less experience. This positive correlation makes sense, given that the language of books is always decontextualized—is never about something going on in the “here and now.” The more experience children have with decontextualized language, the better they become in getting meaning from language alone. This prepares them to comprehend the language in books.

We can see examples of decontextualized language use contexts in the box on oral comprehension (Box 5-5, p. 59). For example, the snack time discussion about who played with play dough during the previous activity time period is an example of decontextualized language use. Although children are still near the physical setting where play dough play occurred earlier in the day, the current context (snack time) is not the topic of conversation. Children must, at this point, recall their play dough experience. The story time discussion of the lion’s colorful tail in *The Lion and the Little Red Bird* is also a decontextualized language use context. The story’s events are not unfolding in “real life” with the children. Instead, they unfold in a book, which removes the child from the “here and now” of the events. Moreover, in this discussion, the children are asked to share what they might have been thinking (inferring) about the lion’s tail, before finding out from the story how it became a different color every day. We see a similar decontextualized context of language use in the listening box (Box 5-1, p. 52). The initial discussion about the book, *A Letter to Amy*, asks children to use information provided by the cover’s illustration and title to think about what might happen to the characters in this story. The children are not in a here-and-now context themselves, nor are they directly observing these events while they occur to someone else in the “real world.” Instead, they must derive meaning in a situation that is, decontextualized—that is, not happening in the here and now for the children—and, in this case, not yet even for the characters themselves.

Directions, explanations, questions and comments. When adults direct talk to children, they give directions, provide explanations, ask questions or make comments. The child’s comprehension of any of these is affected by the vocabulary the adults use, the level of complexity of what is said and the context in which the adult speaks. For example, the demands on oral comprehension are lower when the adult provides explanations in a supportive physical context, where children are engaged in relevant concrete activity, than when the adult gives explanations outside such a context.

The same kinds of factors affect the comprehension of directions, questions and comments. The more removed any of these is from the child’s experience, and the longer the list of directions or the greater the number of parts to a question, the harder they are to comprehend. Routine directions are easier for children to comprehend than new or unusual directions, and directions with just two or three steps are easier to comprehend than are directions with four or five.

Question difficulty also varies with the kind of question posed. Literal questions depend on recall or on direct observation of information. These are easier than questions that require some inference—the child’s use of information to draw a conclusion that has not been directly given. For example, if

cooking, and if ingredients have been reviewed and named before the children start using them, a child is very likely to comprehend and answer the question, "What is this in the bag that we need for our muffins?" However, if the teacher asks, before adding the liquid to the dry ingredients, "What do you think will happen to the flour and sugar when we add the milk?" children must infer what will happen based on previous experience with cooking, or on their knowledge of liquids and dry substances. A child who draws only on experience with sand and water might say, simply, "It gets wet." A child who has cooked before might say, "It gets sticky or mushy."

Additionally, the length and structure of the questions themselves must be comprehended. "What is...?" is a different structure than "What do you think will happen to the...when we...?" "What did you...?" differs from "Where did you...?" or "Why did you...?" When children fail to comprehend questions, they may misunderstand the question itself—what is being asked—or they may understand the question, but lack the knowledge or skill required to answer the question fully or correctly.

In judging children's oral comprehension, all these factors must be considered. A child might follow routine directions of two or three steps very well but experience difficulty if the directions exceed two or three steps or pertain to a new or unique situation. Similarly, a child might understand "what" questions, but not "where" or "why" questions. Explanations may be understood in concrete contexts, with reference to objects and actions, or in situations where children bring to the explanations considerable first-hand experience. Without such support, children may have too little to go on to comprehend what has been said.

Examples of contexts in which children are given explanations and directions, or asked questions, are provided in Box 5-5 (p. 59). Examples of behaviors that indicate development of skill in responding to these forms of language are provided in Box 5-6 (p. 60).

Expressive Language

Expressive language refers to the language the child uses. The child's expressive language skill can be described in terms of several dimensions. The clarity of the child's speech—the child's ability to articulate spoken words—is one dimension. A second dimension is the child's vocabulary—the range of words the child uses appropriately. We can also describe the level of the child's grammatical skill—the level of difficulty in the sentences the child generates and the extent to which grammatical conventions are evident. Finally, we can describe the child's skill in participating in conversations, which is both a social skill and a language skill.

Speech Skills

Speech skills refer to the child's ability to create speech. We are not referring here to the child's ability to form sentences or to speak grammatically. Rather, we are talking about the quality of the speech production itself. Articulation refers to the way a speaker forms sounds to create words. If a word is articulated well, we can hear clearly all the sounds that are actually in the word. If words are poorly articulated, substitutions may have been made in sounds that are actually in the word, some sounds in the word may be omitted entirely, or the sounds in the words may simply not be articulated clearly.

Many preschoolers make some articulation errors of the sound substitution and sound omission kinds. For example, they say "wabbit" for "rabbit," or they say "top sign" for "stop sign." For many children these errors are developmental (i.e., they disappear in the normal course of language development). Other children have more than the typical number of articulation errors, and these errors continue for an extended period of time. The speech of a child may be quite difficult for anyone to understand besides the adults who are very familiar with the child.

Oral Comprehension (Questions, Explanations, Directions, and Comments): Contexts that Support Acquisition		
Physical and Social Setting	Materials	Instruction
Early morning arrival	Fish tank and fish	A few children have arrived and the child care provider tells them that the two fish in the tank have died. "They're floating on top of the water," she tells the children. "We'll use the net later to take them out." "Why did they die?" asked one of the children. "I'm not sure," said the child care provider. "Maybe they got sick, or maybe the heater stayed on too long. The thermometer said the water was pretty hot." The children gathered around the fish tank to locate and observe the dead fish.
Snack time After asking Joaquin where he had played during the previous activity period, the teacher followed up by asking him who else had played with play dough with him.	Snack items	"Who else was there playing with play dough?" the child care provider asked next. "Play dough," Joaquin answered. "Yes, you played with play dough," the teacher responded "But who else was there? Who played with you?" "Play dough," Joaquin answered again. "Yes, you played with play dough, and made cookies. Did Melissa make cookies (points to child at the snack table)? Did Marcus?" Both of these children speak up and say they didn't, and named an area or two where they had played. "Oh, Melissa and Marcus said they didn't play with play dough (shakes head no)," said the teacher. "Who played at the play dough table with you?" Joaquin pointed to two children at a nearby snack table. "Oh, Jeffrey and Yasmin played with play dough. I see." Clean up time after activity time
It is clean up time. The child-care provider has everyone's attention, and has told Sarah what she is to do, to clean up. Next, the child care provider gives directions to Tony.	Puzzles, easel, writing center, book area, water table, blocks with trucks, dramatic play area	"Tony, hang up your painting, and then you can help Sarah in the house. Everyone else should clean up right where you are."
Outdoors It is afternoon. There had been a light rain shower in the morning, and children hadn't been able to go outside to play.	Sandbox, pails, shovels	Child care provider: "Everything is kind of wet, isn't it? I see a little puddle in the sand scoop." (Water had collected in a scoop that was on top of the sand.) "The sand is going to stick to your shoes today. We'll need to brush them off with the broom before we go back inside."
Story time The child care provider has just finished reading the book.	Book: <i>The Lion and the Little Red Bird</i>	"So the little red bird finally found out why the lion's tail was so colorful, and why the color changed from day to day. While I was reading, and before we knew that the lion was painting with his tail, I was wondering what ideas you had about the lion's tail. Did you have an idea about how the lion's tail got colored, and why it changed every day?"

Oral Comprehension (Questions, Explanations, Directions, and Comments): Child Behavior		
Physical and Social Setting	Materials	Child Behavior
<p>Early morning arrival</p> <p>A child who heard the child care provider's explanation about the dead fish answers the question of a child who arrives later.</p>	Fish tank and fish	<p>A child asked what made the fish die. A child who had heard the teacher's answer to this question said, "They got sick. Ms. Brown took their temperature, but it was too late for any medicine."</p>
<p>Snack time</p> <p>Snack time follows an activity period in the morning. The teacher sits with a small group of children at a snack table and talks with children about what they did during activity time.</p>	Snack items	<p>The teacher asks Joaquin, "Where did you play this morning, Joaquin? I know you were in the blocks (gestures toward that area). What else did you do?" Joaquin speaks little English, but is familiar enough with the snack routine to know that children are often asked during this time where they played during the previous activity time. The teacher's gesture toward the blocks also provided information about the content of the question. "Play dough," Joaquin answered. "Oh, you played with play dough," the teacher responded. "Did you use a rolling pin (gestures as if using one) and cookie cutters (gestures as if cutting a cookie out of dough)? Cookies? Did you make cookies?" Joaquin nods and says, "Cookies. Dog."</p> <p>"Oh, you used the dog cookie cutter?" asked the teacher. "The dog cookie cutter?" Joaquin nodded his head yes.</p>
<p>Clean up time after activity time</p> <p>Tony has hung up his painting, and is now talking with some friends who are putting puzzles away.</p>	Puzzles, easel, writing center, book area, water table, blocks with trucks, dramatic play area	<p>"Tony," the family child care provider calls. Tony looks up. "Do you remember where you were supposed to help clean up after hanging up your painting?"</p> <p>Tony answers, "No." One of his friends in the puzzle area says, "Over there. You're supposed to help Sarah put the dishes away."</p> <p>Tony says, "Oh, okay," and heads to that area.</p>
<p>Story time</p> <p>The child care provider has asked children whether they had any ideas about how the lion's tail got its color each day, before they found out from the story.</p> <p>Book: <i>The Lion and the Little</i></p>	<i>Red Bird</i>	<p>Child One: I thought the tooth fairy, well not the tooth fairy but some other fairy, came while he was asleep, and waved a wand and gave it a color.</p> <p>Child Two: I didn't know.</p> <p>Child Three: Well, he might have had different tails, and just put a different one on each day to play dress-up.</p>

Aspects other than articulation of words also can affect the clarity of a child's speech. A child might talk very fast, running words together, which makes them hard to understand. A child also might have atypical **intonation**, such as an absence of the typical range of changes in intonation that one hears in ordinary speech. This problem often occurs in children whose hearing has been impaired for some time, for example by ear infections. Some children also have hesitation or speech fluency problems. Children with **speech fluency** problems repeat parts of words, or the first few words in a sentence, before getting out the whole word or phrase. Many preschool children exhibit mild hesitation or fluency problems, as they struggle to find the words for all that they have to say. As children develop and their language skills increase, most children talk more fluently. Occasionally a fluency error continues or worsens. A trained therapist must help a child who has this problem.

The early childhood educator can support children with articulation, intonation and fluency difficulties by speaking clearly themselves, and by listening attentively to grasp the child's meaning. Focusing on meaning, and not articulation or fluency, encourages a child to talk—to communicate—and this is the most important part of language use at the preschool or any level. Children with these problems need the services of a speech and language therapist who can more directly assist the child in overcoming a specific speech problem, and these specialists can give suggestions regarding individual children to teachers, child care providers and parents. But day-to-day, the adult's primary responsibility to children with speech problems is to figure out, as best he or she can, what a child is trying to communicate, and by his or her example of patient listening and genuine interest encourage such a child to talk.

Vocabulary Skill

Expressive vocabulary refers to the words that a person uses. When we say that a child has a good expressive vocabulary, we mean that the child uses a lot of different words appropriately, and that the child uses precise words in many instances. For example, the child may refer to a baby's bed as a crib, not simply as a bed. A sand scoop is called a scoop, not a shovel. Gloves are called gloves and mittens, mittens. The bottom of a shoe is referred to as the sole. The inside of the hand is called the palm. A dinosaur is not just a dinosaur, but a *Tyrannosaurus rex* or a *stegosaurus*. A duck is not called a bird, but a duck. The traditional lists of words for preschoolers that include basic color words, shape words and prepositions fail miserably to indicate the richness of vocabulary that must be built across the preschool years.

Preschool children build vocabulary very rapidly, at the rate of six or more words a day, if given the opportunity. Of course, the meanings they have for words are at first fairly narrow (i.e., confined to just one of the meanings one might find in a dictionary). As words are heard and used across various contexts, the meanings are extended and deepened. Refer to the vocabulary boxes (Box 5-3, p. 55 and Box 5-4, p. 56) in the receptive vocabulary section for examples of contexts that support vocabulary acquisition and of children's expressive vocabulary behavior.

Grammatical Skill

The **grammatical** level of a child's language is indicated by the kinds of sentences the child uses and by the kinds or errors that are present (or absent). All children begin to talk using incomplete sentences. At first, children use just one word to convey meaning, using intonation to indicate their intentions. If a child says, "Milk?" the child wants to know if this is what a liquid in a cup is called or whether someone nearby would like some milk. If the child says, "Milk!" the child is typically indicating that he or she wants some milk. These one-word utterances are called **holophrases**.

The child's first **multi-word utterances** are devoid of anything other than critical content words. The child says, "Mommy purse?" rather than "Is that Mommy's purse?", "No milk" rather than "I don't want any milk," or "No go" for "I don't want to go." Grammatical morphemes, such as the possessive marker on "Mommy" in "Mommy's purse" are missing, and many small words that make a sentence grammatical are not included in the child's sentences. The child's language at this phase is called "telegraphic" because only the bare minimum words needed to convey meaning are used.

After the telegraphic phase of language, full sentences appear, but they contain some errors, most noticeably the **over-regularization** of rules for forming plurals of nouns and past tenses of verbs, and for changing nouns to verbs. In English, not all nouns and verbs follow the general rules. We say "teeth" not "tooths," and we say "mice" not "mouses." We say "ran" not "runned" and "taught" not "teached." We also say, "We hammered the nail" and "We painted the house," but we don't say, "We broomed the floor." During the preschool years, children typically use some of the incorrect forms of such nouns and verbs. The degree to which they retain these incorrect forms is related to the amount of language they hear from adults and older children. It is in such mature language models that the correct forms are used, and children must hear the words used to learn their forms.

Additional development of grammatical ability is seen in the increasing complexity of the child's sentences. Young preschoolers use simple sentences, and sometimes a lot of them in sequence, to tell about something: "I got a lot of new toys. I had a birthday. We had balloons on the mailbox. My grandma came. My cousin, Tony, came too. Some other kids from here came." An older preschooler with greater grammatical skill is more likely to convey the same message like this: "I had my birthday party on Saturday, and my Grandma and cousin Tony came, and some kids from school came too. We put balloons on the mailbox so they'd know where we live."

Conversational Skill

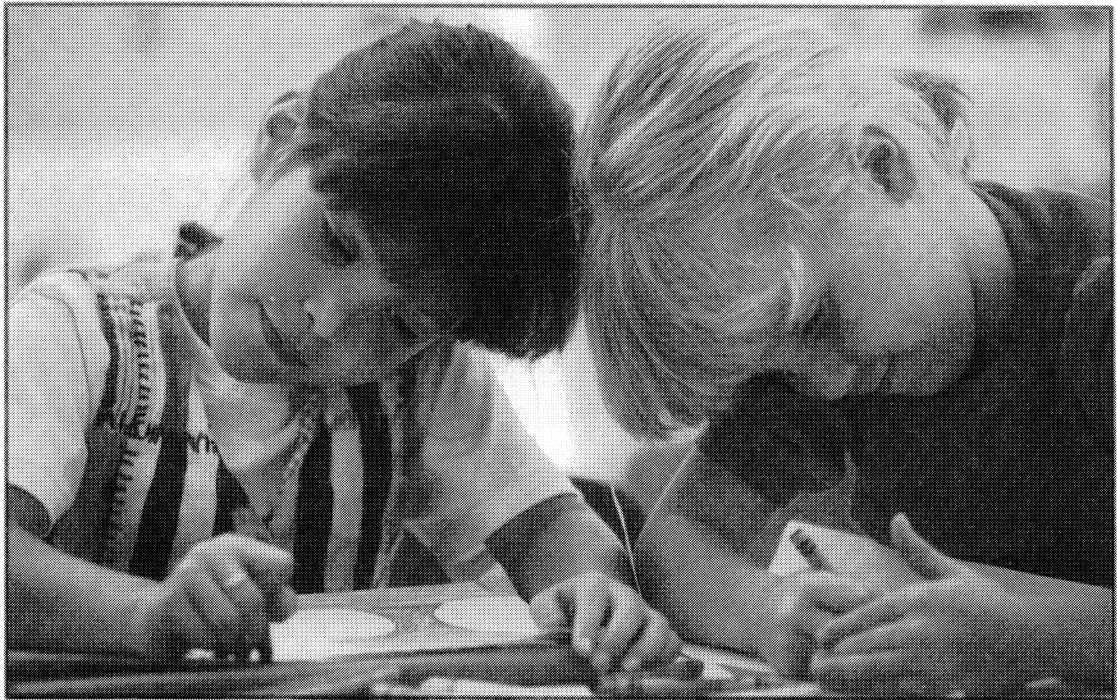
Conversational skill rests not only on vocabulary and grammatical skill, but also on an understanding of the social rules for interacting with conversational partners. In conversations, the participants take turns, stay on topic and move the topic along. Young preschoolers are not skilled at any of these things and must be included and coached while they participate in conversations, if they are to develop these skills. They are better at turn taking when they are one of two conversational partners than when they are one of a larger group of participants. They are also better at topic maintenance when the topic is highly familiar than when it is not. Thus, topic maintenance increases as children's knowledge increases.

The ability to move a topic along increases as knowledge increases, and also as children's understanding about the nature of conversation increases. At first, the child's own turn in conversations seems to be viewed simply as an opportunity to say whatever the child would like to say, regardless of whether the comment has any connection to what someone else has just said. Gradually, children begin to understand that what is said in the individual turns taken by participants in a conversation is related in some way. The conversation "goes somewhere."

Examples of conversations between adults and children are provided in Box 5-7 (pp. 64-65). In both cases, the adult is critical in helping the conversation move forward. Questions posed help the child to tell more and to clarify what has been said on a previous turn. In the conversation about the dream, a second child joins in, and the two children go back and forth two or three times, without the adult participating. But notice how the adult moves in just at a point where the conversation between the two children stopped, which might have stopped the entire

conversation as well. The adult asks a question that encourages the first child to continue. The second child continues to listen, and then joins in again with another comment at the end.

In judging the quality of conversations, it is important to look at how many back and forth exchanges there are, and at the extent to which the conversational partners, especially the adult in adult-child conversations, are responsive to the comments of others. Children become skillful in conversing, as we see here, by engaging in conversations with adults who are genuinely interested in what they have to say, and who provide scaffolding that helps a child participate.



Conversations: Child Behavior in Supportive Contexts		
Physical Setting	Materials	Instruction
Snack time	Typical snack items	<p>Child 1: "Guess what?"</p> <p>Adult: "What?"</p> <p>Child 1: "Well, well last night, well, I, last night, well, I had a dream."</p> <p>Adult: "Oh, you had a dream. Were you thinking you would tell us about the dream?"</p> <p>Child 1: "Yes."</p> <p>Adult: "Was it a pleasant dream or a scary dream?"</p> <p>Child 1: "It was scary when the dragon attacked me."</p> <p>Adult: "Oh, my, yes. What did you do in your dream when that happened?"</p> <p>Child 1: "I don't know."</p> <p>Child 2: "You probably used your sword."</p> <p>Child 1: "I don't have a sword."</p> <p>Child 2: "Well, then you'd die."</p> <p>Child 1: "I didn't die."</p> <p>Adult: "So what did you do to fight the dragon?"</p> <p>Child 1: "I don't know."</p> <p>Adult: "Sometimes we wake up at those very scary moments, and then we realize that we were dreaming, that this was not really happening, and then we realize we don't need to do anything."</p> <p>Child 1: "Well, I cried and went to my Mommy's bed."</p> <p>Adult: "Oh, well, yes, sometimes we need to do that, because we're not quite sure for a little while whether it was a dream or it really happened."</p> <p>Child 2: "Well, when I dream about scary stuff, I use my sword."</p> <p>Adult: "Do you have a sword in real life, that you play with and pretend to slay dragons, or is it something that you use only when you are dreaming?"</p> <p>(Continues with Child 2, and then other children at the table join in, as well, to tell about their dreams).</p>

Conversations: Child Behavior in Supportive Contexts		
Physical Setting	Materials	Instruction
Early morning arrival	Nothing specific was involved in this conversation. The child had just entered the classroom.	<p>Child: "I got stitches (turns head to show them)."</p> <p>Teacher: "What?"</p> <p>Child: "I can't jump on my bed anymore."</p> <p>Teacher: "Oh, you didn't jump on your bed, did you?"</p> <p>Child 1: "Yes, and I can't jump on the rocking chair."</p> <p>Teacher: "You jumped on the rocking chair?"</p> <p>Child: "Yes, I jumped, and it fell, and" ... (child describes the situation, using a lot of hand/arm gestures to indicate how the rocking chair fell over, and how she landed to cut her face).</p> <p>Teacher: "Oh, so you jumped off your bed into the chair, and it fell over, and the rocker part hit you and you got cut?"</p> <p>Child: "And I had to go to the hospital."</p> <p>Teacher: "That's where you got the stitches?"</p> <p>Child: "Yes, and I had to sit in my car seat. My brother went."</p> <p>Teacher: "Oh, he went with you to the hospital. I bet you were kind of scared."</p> <p>Child: "Yes, I was."</p> <p>Teacher: "Well, I'm sorry you hurt yourself. I hope your cut gets better soon."</p> <p>(Conversation continues for a while longer.)</p>

Phonological Awareness

Phonological awareness refers to the ability to think about the sounds in words apart from their meanings. **Phonological awareness** is a general term that encompasses a wide range of skills, including the ability to notice or detect rhyming words and words that start with the same sound, the ability to divide multi-syllabic words into their individual syllables, and the ability to break a single syllable apart into individual sounds or phonemes. When someone has the skill to detect and manipulate the individual sounds in words, we say that he or she has phoneme awareness.

Phoneme awareness is the level of phonological awareness that teachers want children ultimately to achieve, given that this is the level needed for learning to read and write a language that utilizes an alphabet. Alphabet letters represent spoken language at the phoneme level. A child who hasn't learned to think about spoken words as series of individual sounds usually struggles with learning to read and write.

Phonological awareness, which is acquired gradually over a quite protracted period of time, is not an easy acquisition for many children. First of all, phonological awareness is hard because it requires children to shift their focus from the meaning to the form of language. When children or adults use language normally to converse, describe or persuade, they do not think about how their words sound. Instead, they think about what they want to say to others, and on interpreting what others are trying to say to them. In order to develop phonological awareness, children must learn to set meaning aside, at times, and focus solely on how words sound.

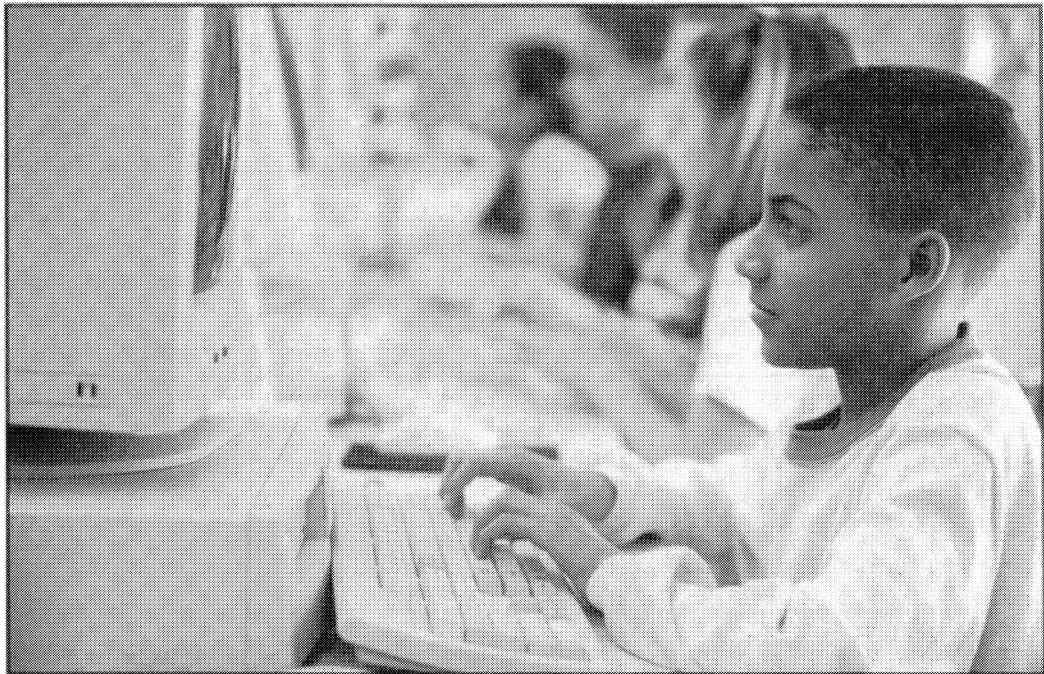
When we say to children, "Who can think of another word that rhymes with cake?" children need give no thought whatsoever to whether likely candidates, such as *rake*, *lake*, *make*, *snake*, *brake*, and *bake*, have any meaningful connection to cake. The only thing that matters is a sound connection—that words chosen share the rime portion of a syllable (i.e., the vowel and everything that follows it). This is a rather odd thing to do with language, given its usual function (i.e., to convey meaning), and children must be puzzled at first about what we are asking them to do. After a while, however, they do catch on, and most children eventually take considerable delight in playing various word games that involve rhyming words or words that start with the same sound.

Phonological awareness is also hard for a second reason. Difficulty arises with respect to phoneme level awareness, which is the level of phonological awareness we want children to develop eventually. The problem is that phonemes run smack dab into one another in words. Unlike **syllables**, which break apart from one another in our speech, and the **onset-rime segments** (p-it, ch-air) of syllables, **phonemes** do not stand out as separate units. This makes them hard to detect or find. Only when given opportunities to engage in activities that support phoneme level awareness do children eventually learn to think about words in terms of individual sounds.

Teachers can provide opportunities in the classroom that will support children in developing phonological awareness. A list of typical opportunities can be found in Box 5-8 (p. 68). Absent from the list are experiences in listening to and identifying environmental sounds. It might be desirable for young children to learn to identify a faucet running, a doorbell dinging or a horn beeping, but learning to identify these kinds of sounds will not contribute at all to skill in the area of phonological awareness. Becoming aware of the sounds within words—learning to think of words as consisting of a series of sounds—is quite a different matter entirely than learning to

attend to environmental sounds and to associate a meaning for each one. The development of phonological awareness requires experiences that involve language itself.

Examples of contexts that adults can provide to support phonological awareness development are listed in Box 5-8 (p. 68). Child behaviors that involve phonological awareness are listed in Box 5-9 (p. 69). The child behaviors listed higher in the box are common to those children earlier in the course of development than behaviors listed lower in the box.



Phonological Awareness: Contexts that Support Acquisition		
Physical Setting	Materials	Instruction
Story time	Book: <i>Round Is a Pancake</i>	After reading the book and discussing fishing reels, the teacher turns to pages with cake and bake rhyming pair. Says each and tells children, "These words rhyme." Asks, "Let's see if we can think of other words that rhyme with <i>cake</i> and <i>bake</i> ."
Group time	<i>Eensy-Weensy Spider</i> song	Teacher comments at end of song: "That song had some words that sound a lot alike—that rhyme. Eensy and weensy, and spout and out."
Group time	<i>Down by the Bay</i> song	Teacher has just finished leading children in singing <i>Down by the Bay</i> . Teacher says, "Maybe we can think of some new verses for our song. I've started some, but I need your help to finish them. This first one (refers to chart paper on which first idea has been written) says, <i>Did you ever see a goat, wearing a ____</i> . What could we say the goat is wearing? It must be something that rhymes with goat. What do you think?"
Snack table	Typical snack items, including napkin, cracker basket and small milk	cartons Children are playing guessing game by giving hints about an item in the room. They use color clues, place in room clues, and sometimes clues for the object's use (e.g., easel, paint brush, sink in house). After a while, the teacher suggests that children could use sound clues too, and gives an example (paintbrush): "You could say its name starts with /p/, if you are giving clues for paintbrush. That would be a good clue."
Writing table	Paper in varying sizes, markers, pencils, envelopes, stickers to use as postage stamps	Child finishes writing letter to Mommy, and puts it in envelope. Wants to write Mommy, and asks for help: "How do you make that word?" she asks. Teacher says <i>Mommy</i> , and then says /m/. Asks child if she knows the letter that we use to write /m/. Child says <i>M</i> ? Teacher says, "Yes, we use <i>M</i> to write /m/." Teacher continues helping child spell by isolating phonemes in the word and telling child letters to use to code the sounds.

Phonological Awareness: Examples of Child Behavior		
Physical Setting	Materials	Child Behavior
Story time	Book: <i>Round Is a Pancake</i>	<p>Teacher is reading book. Pauses to let children fill in second of rhyming word pairs. Children have turns. First child fills in <i>drum</i>, second <i>ring</i>, third <i>drum</i>, and fourth <i>bake</i>. Fifth child's word is <i>reel</i>.</p> <p>When he pauses, teachers starts.../r/ and he quickly adds word.</p>
Story time	Book: <i>Round Is a Pancake</i>	<p>After reading book, and discussing fishing reels, teacher turns to pages with <i>cake</i> and <i>bake</i> rhyming pair. Says each and tells children, "These words rhyme." Asks, "Let's see if we can think of other words that rhyme with cake and bake." One child offers <i>lake</i>. Another offers <i>make</i>. Third child: "Hey, make a cake! Get it?"</p>
Story time	Book: <i>Do Like a Duck Does</i>	<p>Children chime in with "flop, flop, flop; hup, hup, hup; yum, yum, yum"; and other syllable series in book.</p>
Group time	<i>Down by the Bay</i> song	<p>Teacher has just finished leading children in singing <i>Down by the Bay</i>. Teacher says, "Maybe we can think of some new verses to sing to our song. I've started some, but I need your help to finish them. This first one (refers to chart paper on which first idea has been written) says, 'Did you ever see a goat, wearing a ____.' What could we say the goat is wearing? It must be something that rhymes with goat. What do you think?" One child says <i>coat</i>. Followed quickly by another child who says <i>boat</i>. Children decide on <i>coat</i>, because "You can't wear a boat."</p>
Snack table	Typical snack items, including napkin, cracker basket and small milk cartons	<p>Children are playing guessing game, giving hints about items in the room.</p> <p>Child gives these clues with snack time juice pitcher in mind: (1) It is white, and (2) It has a handle. Teacher leans over to whisper in his ear. Child then adds, (3) "It's name starts with /p/."</p>
Writing table	Paper in varying sizes, markers, pencils, envelopes, stickers to use as postage stamps	<p>Child finishes writing own name on drawing. Comments to teacher: "A is for Abigail, you know." Teacher: "And for Alexander and Adam and (pauses)." Child continues: "And <i>ant</i> and <i>apple</i>."</p>



CHAPTER 6

Content Guidelines for Literacy

The domain of literacy is concerned with acquisition of the knowledge and skills required to learn to read and write, and with the knowledge and skills children need if they are to make good progress in reading and writing throughout their years in school. For the young child, the learning of interest in this domain includes print awareness, knowledge of various functions of print, print conventions, alphabet letter knowledge, the alphabetic principle, specific sound-letter association knowledge, beginning writing skills, and knowledge of both narrative and non-fiction text structures.

Skill in oral language is also critical for literacy development. As we discussed in Chapter 5, children need phonological awareness at the phoneme level if they are to understand that alphabet letters represent individual sounds in spoken words. A good vocabulary is also critical to literacy development, given that books heard or read cannot be comprehended well if the listener or reader does not understand a lot of the words. We also discussed background knowledge in Chapter 5 as part of vocabulary development, given that background knowledge typically includes knowledge of specialized vocabulary. The reader is encouraged to revisit Chapter 5 to review these three aspects of language development. Readers should keep in mind that good literacy development requires a solid foundation in oral language.

In this chapter, each kind of literacy learning of interest for teachers of young children will be described and explained. Classroom contexts that teachers typically create to support each kind of learning will be listed and briefly described in boxes placed throughout the chapter. Examples of behaviors that a teacher might see children exhibit in these contexts are also provided.

Print Awareness

As the label for this kind of learning implies, print awareness indicates that a child notices print, and also that a child has developed the general understanding that print conveys a message, that it “says” something. Very young children (i.e., children under three) may not be much aware of print at all, even when it is right under their nose. For examples, they may notice the illustrations in books that adults read to them, and they may notice the pictures they see on food cartons. Their visual attention, however, may rarely drift to the print that accompanies pictures in these contexts.

Even after print itself has been noticed as one of many kinds of visual display available in the environment, children do not fully realize what print is. Although they see print, and even inspect it visually, they do not know its purpose—that it represents meaning. Print is just one of many visual displays that a child encounters each and every day. An infant holding a board book that has bright, colorful pictures accompanied by big, bold labels might finger the black patches of print that stand in sharp contrast to the shiny, white pages. Despite the baby’s attention to these print displays, however, we would not say that the baby has ***print awareness***. Only when a child realizes that these visual displays are unique in their design and organization, and represent meaning that is expressed verbally after print has somehow been “translated,” would we say that a child has acquired print awareness.

Contexts that support children’s acquisition of print awareness include those in which print is available to convey meaning and those in which print can be created to convey meaning. Of

course, mere exposure to print itself or to printmaking materials will not prompt children to acquire print awareness, because the essential understanding a child must acquire is that print conveys meaning. To acquire this understanding, a child must see people engaged in the process of both gaining meaning from print and creating print to convey meaning. Several examples of such contexts are listed in Box 6-1 (p. 73).

Examples of child behavior that are related to print awareness are provided in Box 6-2 (p. 74). Absent from the list of child behaviors is pointing to print in books while a child reads (i.e., retells), or visual focus on the print that an adult reads when reading aloud to a child from a book. If a child were to focus visually on the print in either of these contexts, the behaviors certainly would indicate that a child is aware of print. Their absence, however, does not indicate that print awareness is lacking. The truth is, long after children actually understand that print carries the message or meaning in books, they continue to focus primarily on the illustrations, both when someone reads books to them and when they retell books to themselves.

This makes sense, given that children do not yet know how to access the print to derive meaning from it. Moreover, books for young children are especially designed to give them access to meaning through pictures. Thus, children often focus on the illustrations to confirm the meanings they are deriving from the words they hear adults recite while reading books to them. Likewise, when children retell books to themselves, they use pictures, not the print, to prompt their recall of what they already know the book says on each page, which they repeat verbally from memory, without reference to the print actually on the page.

Only when children have some print skills do we see them pointing to the print while they retell a story. We see this in its fullest form in children who finger point read when they retell a familiar story. In **finger point reading**, children virtually stab at every word on the page, while they slowly recite from memory the text they know is there. They use the illustrations to prompt their recall of the patch of text on every page, and they focus in their minds on the first sounds in the words. Then they match the first sound in each word to a letter name, if there is a letter name match, which then calls to their minds an image of that letter. They then look for that letter at the beginning of a word on the page, and they point to that word. Children who finger point read also have well-developed knowledge about how print is accessed from a page (left to right and top to bottom), which causes them to start at the far left of the first line of print they see on a page in a favorite book. They then move to the right, as we do when reading English, pulling from their memory of the text, as prompted by illustrations, and coordinating this knowledge with specific phoneme-grapheme (i.e., letters) knowledge. It is through this process that some children actually teach themselves to read.

Unlike some kinds of language or literacy behavior for which we see a long sequence of behaviors emerge over an extended period of time, with each indicating a bit of progress made toward reaching full understanding of a concept or full mastery of a skill, print awareness itself is an "all or nothing" phenomenon. The underlying skills for finger point reading require a long period for development, but children have basic print awareness (i.e., they know that print carries meaning), long before they finger point read. Once a child gets the idea that visual displays with certain physical characteristics (i.e., the marks used are organized in specific ways) are used to represent meanings, a child has print awareness. Thus, any of the child behaviors listed in the right hand column of Box 6-2 (p. 74) could have been the first behavior to signal the dawning of print awareness in the child. Or it could have been the fiftieth instance of such behavior.

Print Awareness: Contexts that Support Acquisition		
Physical Setting	Materials	Instruction
Writing center	Variety of paper, markers, several sets of word cards	Teacher talks to 3-year-old about scribble picture she has just drawn. "This is for Mommy? Is that what you said?" Child says "yes," and begins to fold it up to put in an envelope. Teacher helps child with folding, and with getting picture inside envelope. "We could write 'Mommy' on the envelope," the teacher suggests. "Then, that would tell your Mommy that the picture is for her. Do you want me to write that?" Child says, "yes." Teacher writes word naming each letter as she writes it. When finished, she runs her finger under the word and says, "Mommy. That word says Mommy, it means that what's inside the envelope is for her." The child smiles, as she takes it to her cubby for safekeeping until time to go home.
House dramatic play area	Pad of paper with pencil attached and toy telephone	A child playing in the block area places a call to the nearby house area. "Ding-a-ling! Ding-a-ling! Ding-a-ling!" The child playing in the house ignores the ringing, or does not hear it. Teacher answers, "Hello?" The block area player responds: "I'm, I'm, I'm at the firehouse, and we, we, we sell, are selling fire alarms. Come buy one." With that, he hung up. The teacher wrote on the message pad, tore the page off the pad, and showed it to the child who had been playing in the house (currently putting on some dress-up clothes). "Someone just called," the teacher explained, as she looked at the message she held in her hand. She pointed to it, as she said, "Someone called from the firehouse to say that they are selling fire alarms. They wondered whether you wanted to buy one." The child, who continued to dress up, shook her head no. "Okay, I'll call them back to tell them that you don't need any," the teacher said.
Helpers' chart hanging on wall not far from attendance chart and cubbies.	Helpers' chart is made of poster board and consists of three job postings. Each is indicated with words and a picture (picture of fish with words "Feed Fish"). Pocket that is underneath each job heading has a child's name card in it, to indicate current day's job assignments.	Teacher: "Jason, let's check the helpers' chart to see if you have a job today." (Jason takes teacher's hand and goes to helpers' chart.) Teacher: "Do you see your name anywhere? Are you feeding the fish today (points to name card in pocket underneath fish feeding job)? Are you watering the plants today (points to name card)? Are you ringing the bell for clean-up outside (points to name card)? Does one of these name cards say 'Jason?'" (Jason points to his name under the plant watering sign.) Teacher: "Yes! That word says Jason. J-A-S-O-N (quickly points to each letter and names it). That's your name, and you are a helper today! The watering can is on the windowsill. Do you see it?"

Print Awareness: Examples of Child Behavior		
Physical Setting	Materials	Child Behavior
Writing center	Variety of paper, markers, several sets of word cards	One child watches as another child uses name card from a set of name cards to copy his name onto a piece of paper. Sees own name card on ring of names. Points to name and tells nearby teacher, "That's mine. That says me."
House dramatic play area	Empty Jell-O boxes among food containers, mixing bowls, measuring cups, mixing spoons	Child selects a bowl, mixing spoon, two Jell-O boxes and a plastic measuring cup. With flourish, shakes Jell-O boxes, open end down, over bowl, as if emptying contents. Takes measuring cup to toy sink. Pretends to turn on faucet, and holds cup under. Returns to table and dumps cup of "water" into bowl. Returns to sink 3 times and returns to dump "water" into bowl. Stirs imaginary contents with spoon. Picks up Jell-O box, and turns to back side. Points to print, and says, "How much? How much? Okay, 10 waters." Returns to sink with measuring cup in hand.
Block area	Unit blocks, paper, markers, clipboard, masking tape	Child finishes building house of the last of the three little pigs. Gets three strips of paper and fills each with row of straight black lines. Tapes all to block structure, and then begins to look at papers as she tells story of Three Little Pigs, starting with, "I'll huff and I'll puff, and I'll blow your house down."
Nature table	Gourds, mature popcorn, acorns, colorful leaves, etc., are displayed with labels (written on tag board tents), hand-held magnifying glasses	Child notices a label from the table that has fallen to the floor. Picks up label and takes it to teacher. Asks, "Hey, what does this say?"
Writing/drawing table	Variety of paper, markers, several sets of word cards	Young 3-year-old scribbles large circular marks covering large portion of paper. Uses 5 different colors of marker. After drawing circles, uses black marker to make three rows of small zigzag black lines. Tells friend sitting nearby, "That says, 'This is fire.'"

Knowledge of the Functions of Print

The functions of print are the different ways that we use print to serve our purposes. For example, we use print to label items, mark ownership, gain admission or passage, greet and congratulate, make a record of our observations, conduct transactions, give directions or provide explanations, persuade by argument, tell stories, and express emotions. Writing artifacts that help us fulfill these functions include tickets for a train or plane, birthday and graduation cards, recipes for foods, restaurant menus, ingredients listed on food containers, message pads beside telephones, medical charts, science lab reports, story books, dictionaries, and directions for playing board games.

Children learn about the many functions of print during their early childhood years, as they listen to books that adults read, watch adults write shopping lists, and see adults follow recipes and consult phone directories. See Box 6-3 (p. 76) for a list of contexts that support children in learning about print functions. See Box 6-4 (p. 77) for examples of child behavior that relate to the acquisition of knowledge about the functions of print.



Functions of Print: Contexts that Support Acquisition		
Physical Setting	Materials	Instruction
Story time	Book: <i>Round Is a Pancake</i>	Teacher: " <i>Round Is a Pancake</i> is the title of this book, and it was written by Joan Barnanski. Yu-Mei-Han drew the pictures for the book. I think you'll like the poem they wrote for us."
Group time	Chart paper and easel; marker	Teacher: "Yesterday, we had a visitor. Do you remember who came to talk to us about her tools?" (Children respond, "David's mom!") Teacher: "Yes, David's mom, and it was very interesting to see all of the tools she uses to repair computers. We need to send a thank-you letter to David's mom, and we can tell some of the things we liked best. I'll write those down, and then I'll leave a lot of space on the paper for you to write your names. I'll leave the letter over on the writing table where everyone can find it. Okay, what was one thing we really liked that we want to tell David's mom?"
Dramatic play setting	Message pad and pencil by telephone; sales bill from supermarket; food coupons; recipe book for children; small board books	Phone in block area picked up by child who calls child in house. Child ignores loud ringing. Teacher picks up, answers, takes message, delivers it to child. Teacher to child who is putting doll in bed: "Maybe your baby would like to hear a story before she goes to sleep. I see you have a lot of books to read to babies." Child looking at supermarket sales bill. Teacher: "If you want to make a list of things you need at the store, you could use the phone message pad to write one."
Snack table	Typical snack items, including napkin, cracker basket and small milk cartons	Child has asked teacher to open milk carton. Teacher looks at ends of top and says, "Oh, I see it says 'open' right here, so I'll try this end."
Book check-out area	Cards in pockets in back of each book in lending library; markers; chart with name on each pocket	Teacher to new child in class: "If you'd like to check a book out to take home, find a book you like, flip to the back where you'll find a card, and take it out. You can write your name on it, or just put it over here in your name pocket on our chart."
Writing table	Paper in varying sizes, markers, pencils, envelopes, stickers to use as postage stamps	Teacher: "There are envelopes on the shelf today if you'd like to write a letter to someone. There are some blank books, too, if anyone wants to write a story or maybe tell what they've noticed about our caterpillars."

Functions of Print: Examples of Child Behavior		
Physical Setting	Materials	Child Behavior
Group time	Chart paper and easel; marker	<p>Teacher: "Yesterday, we had a visitor. Do you remember who came to talk to us about her tools?" (Children respond, "David's mom!")</p> <p>Teacher: "Yes, David's mom, and it was very interesting to see all of the tools she uses to repair computers." (continues as indicated in Box 6-3)</p> <p>Child 1: "I liked the little screwdriver."</p> <p>Teacher: "Okay, I'll write that down. We need the letter I to write /I/, and then L to write /L/." Teacher continues segmenting some sounds in the words, and naming letters as they are selected and written.</p> <p>Child 2: "I liked, liked the, the case with the tools."</p> <p>Teacher: "Oh, you liked the tool kit with all of the places to keep the tools. Okay, I'll write that next." (Teacher proceeds as with Child 1, and names letters as they are selected and written down.)</p>
Dramatic play setting	Message pad and pencil by telephone; sales bill from supermarket; food coupons; recipe book for children; small board books	Phone ringing in house area. Answered by child, "Yes. Yes. Yes. Bye." Makes marks on pad, tears sheet off, and takes to co-player: "The house is on fire and the firemen are coming."
Book check-out area	Cards in pockets in back of each book in lending library; markers; chart with name on each pocket	Child writes name on book card, puts in pocket chart to leave record of which book he has checked out.
Writing table	Paper in varying sizes, markers, pencils, envelopes, stickers to used as postage stamps	Teacher: "There are some envelopes on the shelf today if you'd like to write a letter to someone. There are some blank books, too, if anyone wants to write a story or maybe tell what they've noticed about our caterpillars."
Block area	Paper, markers, masking tape	<p>Child to teacher: "We need one of those signs for 'stay out of here.'"</p> <p>Teacher: "Do you mean 'Danger, Construction?' or something like that?"</p> <p>Child: "Yes."</p> <p>Teacher: "Okay, I can help you make one, and maybe I can find some orange cones in the storage closet."</p> <p>(They get paper.)</p> <p>Teacher: "Okay, you want it to say, 'Stay out of here?'"</p> <p>Children: "Yes."</p> <p>Teacher: "Okay, we need the letter S for the first sound in Stay. /s/." (continues)</p>

Book Handling Skills and Knowledge of Book Parts

Book handling skills refer to how a child holds a book when looking at it, and knowledge of book parts refers to whether a child knows such things as where to locate a book's title.

Book handling skills. Correct, upright orientation usually appears quite early, given that children's books contain a lot of pictures, and even a young child can detect a correct versus an incorrect orientation of objects in pictures. Were a book to contain print only, many young preschoolers would no doubt hold books upside down more often than we see ordinarily.

It may take longer for a child to learn to proceed through a book from front to back. The first step is to recognize the front versus the back of a book. The front cover of a book looks different than the back cover, of course, with the former bearing the book's title, usually in large print, and also pictures that are larger and more interesting than any put on the back cover. Children who are read to with any frequency soon begin to recognize the difference in the look of the front and back of a book cover, and also look for pictures that they know "tell" what happens at the beginning of a book. As a consequence, it does not take long for children with daily book experiences at home, in child care or in a preschool classroom to learn to proceed through a book from front to back.

When we read the pages of an open book, we read the page on the left first, and then turn our attention to the page on the right. Young children do not necessarily apply this rule when they look at pages of a book, if the book is not one with which they are familiar. In these cases, a child's eyes are likely to fall on the illustration that attracts them most. In familiar books, a child often knows the sequence in which ideas in each book proceed, and the pictures are looked at in order, from the left page to the right page.

The design of some books makes it difficult for teachers to assess whether a child knows the general rule of looking first at the left page and then at the right page. In a book such as Fleming's *In the Tall, Tall Grass* (and others in that series), each spread (i.e., two-page span of an open book) contains a unified picture that does not direct a child's attention clearly to the left page first, even if the book is very familiar to a child. The entire picture, which spans the two pages, is to be apprehended as a whole. Many picture books have a spread or two with a unified picture, although some books have clearly distinct left and right pages on most, if not all, spreads. Given that the young child's exposure to books almost always involves picture books, and that some have unified pictures on a spread, teachers must keep in mind that this book handling skill will not show up strongly in a lot of preschool children on many occasions with picture books.

Classroom contexts that support children's learning of book handling skills are listed in Box 6-5 (p. 79). Child behaviors that relate to book handling skills are listed in Box 6-6 (p. 80).

Knowledge of book parts. Book parts include the front and back covers of a book, and distinctions between some of the inside pages. The title of a book is on its front cover and is repeated again on the first few pages inside the front cover, before the text of the story actually begins. Children who are read to frequently usually learn that the title or "name" of the book appears on the front cover, and they often learn as well where the text in a book actually starts.

Classroom contexts that support children's learning about book parts are listed in Box 6-5. Child behaviors that relate to book part knowledge are listed in Box 6-6.

Book Handling and Knowledge of Book Parts: Contexts that Support Acquisition		
Physical Setting	Materials	Instruction
Story time	Book: <i>Over in the Meadow</i>	Teacher: " <i>Over in the Meadow</i> is the title of this book, and the illustrator—the person who made the pictures—is Anna Vojtech. We've read another book with the same title, that is a lot like this new book (holds it up). You probably remember the person who drew the pictures in it. (Some children say, "Ezra Jack Keats.") Yes, Ezra Jack Keats. There are a few parts of the new book that are a little different—a different animal or two—but the books have some of the same animals. Let's read it and then we can compare the books and their pictures."
Morning circle	Blank books the caregiver has made by folding crossways, and stapling the folded edges in about four places. On the front of each book, the caregiver has written: <i>My Book About the Pet Store</i> . Under this title, about midway down the cover, is a long black marker line. Under it is written: The Author.	Caregiver: Holds up a blank book. "I made some books, and I put them in a tub over in the writing center. I thought some of you might like to make a book about our trip to the pet store yesterday. We saw a lot of animals there, and you might like to draw pictures of some of them. Or, maybe you'd like to make your book about the fish and fish tank supplies we bought there. On the cover, I wrote a title, which says (points to) <i>My Book About the Pet Store</i> , and then down here, there's a line for your name, and under it I wrote The Author, because you are the authors of your books. You decide what goes in them. Maybe I should have written <i>Author</i> and <i>Illustrator</i> , because you probably will draw pictures too. I can add that, if you would like."
Morning circle	Several cardboard books: <i>The Very Hungry Caterpillar</i> , <i>Goodnight Moon</i> , <i>Clap Your Hands</i> , <i>Where the Wild Things Are</i>	Caregiver: "I got some new books for our house area. Some of you have been reading stories to your "babies" there, or to your "children" when you were playing school the other day. These books are a little better for our house area than the books in our book area. What do you notice about them?" (Children comment about their size—smaller—and the thick pages. There's some discussion about the fact that their pages won't tear, so they are better for the "babies" in the house area.) "I got several different stories, so let's see what we have here." (Children call out, ... " <i>Very Hungry Caterpillar</i> "). "Yes, you saw the title and the picture on the cover." (Continues with three more books.)

Book Handling and Knowledge of Book Parts: Examples of Children's Behavior

Physical Setting	Materials	Instruction
Book area	Many different books	<p>Several children are looking at books.</p> <p>Three children are sitting in front of a big bookstand that is on the floor, and they are reading a big book (<i>Time for Bed</i>). One child is reading and turning the pages. She gets to the last page, and another child says, "Okay, now I get to." He then moves to the position of the previous child reader, flips the pages back so the book is closed, and says, "This book is <i>Time for Bed</i>," (underlines with finger) and then opens it. Turns past a couple of front matter pages to the first page of the story, and begins to read the story.</p>
Writing center	Blank books for <i>My Book About the Pet Store</i> , other blank books with title area left blank	<p>A child at the writing center (blank book without title in hand) calls to a nearby caregiver: "Ms. Eliot, I want my own title. Can you write it for me?" Caregiver comes over: "Okay, what do you want for the title of your book?"</p> <p>Child: "I want the one about kittens in the cage."</p> <p>Caregiver: Okay, but you can make up your own title about the kittens.</p> <p>Child: "I want that one."</p> <p>Caregiver: "Okay." (and begins to write it, as child watches)</p>
Dramatic play	Child has basket of the new cardboard books at her feet, as she sits in little chair in house. Has baby doll in her lap. Books include <i>The Very Hungry Caterpillar</i> , <i>Goodnight Moon</i> , <i>Clap Your Hands</i> and <i>Where the Wild Things Are</i> .	<p>Child is picking up one book at a time, holding it to show the cover in front of doll and asking if she wants it. "Do you want this one? It's <i>Goodnight Moon</i>. No? Okay, then, maybe this one about <i>The Hungry Caterpillar</i>. No? <i>The Wild Things</i>...no, that's too scary for a baby (puts it back). Maybe <i>Clapping Hands</i>? We could look at the pictures..."</p>

Alphabet Letter Name Knowledge

Alphabet letter knowledge is primarily a matter of letter name knowledge. Of course, children must learn to write letters as well as recognize and name them. Although writing letters is one way that young children can learn to distinguish among and name letters, it is not an effective way. Active comparisons of one letter with other letters are more effective. With this in mind, alphabet letter name knowledge will be considered by itself here, apart of the development of skill in learning to draw letters. The writing of letters is considered later in this chapter, in the section Beginning Writing: Development of graphic marks (p. 90).

Alphabet letter name knowledge rests on some basic understandings about the nature of these two-dimensional graphic symbols, the most important of which is that very small differences, of a kind that until now have been irrelevant for judging the differences among things, are now critical for proper identification. If children are to achieve accuracy in associating each letter with its correct name, they cannot discount small differences, which is the new rule that applies in this two-dimensional world.

As is the case with phonological awareness (see pp. 66-69 in Chapter 5), alphabet letter learning requires young children to respond to something in a way that violates basic assumptions they have already learned. How puzzling it must be to a child to hear adults use different names to refer to graphic designs that are as similar to one another as objects a child has previously learned are *the same kind of thing*. To gain some appreciation for the situation that preschoolers face, consider this: The difference between E and F is no greater than the difference between a fork with two tines and a fork with three. But in the case of E and F, we are not to consider the items as two examples of *the same kind of thing*. Rather, we are to consider one thing as an example of the category of letters we call E, and to consider the other thing as an example of the category of letters we call F. (Various fonts create E's and F's that differ slightly from one another, but all E's and all F's share specific features, which are two or three horizontal lines, attached to the right side of a long, vertical line, and positioned in specific places.)

The violations of a young child's previous learning get even worse than this. In the three-dimensional world, both a chair sitting right side up and a chair sitting upside-down are called chair. Their orientation is irrelevant. A chair in any orientation is still called chair. This is not the case with W and M, d and b, or p and q. And even though there is no chance of confusion between S and Z if one or the other is reversed (the curved versus straight lines could serve as a sole distinction between the two, regardless of orientation), there is, nonetheless, a correct and incorrect orientation for S and Z, and for each and every alphabet letter. "That's not an S," a teacher is likely to say, if a child reverses S. "That's not a J," a teacher is likely to say, when a child draws a J so that it faces the wrong way. It's nothing at all in these cases—something without a name—and how strange this must seem to a child.

As teachers observe children making progress in learning letter names, they must attend to how many letters children can name correctly, and also to which ones they misname, and which incorrect names they use. For example, it is very common for a preschooler to call E "F" and vice versa, given that preschoolers often consider these two letters to be different versions of the same letter, just as they consider (correctly) one fork to be related to every other fork, whether it has two tines or three or four. It is much less common, however, for a preschooler to call O "T" or vice versa, or to call H "S." These letter pairs are not easily confused because they share no distinctive features (i.e., kinds of lines, and orientation of the symbol). Thus, if a child misnames H, "A" is more likely than "S" to be the incorrect name used, given that A and H share many features. In fact, the only difference between A and H that matters in distinguishing

between the two is an open versus a closed top. A young child does not know at first that this little difference matters, and probably thinks that adults use “H” and “A” interchangeably to name either one of these designs. In the writing of young preschoolers, the tops of A’s are sometimes left open. If we call these H’s, the child might correct us: “No, it is an A!” If the child is not familiar with H—has not yet encountered or learned that letter—then there seems in the child’s mind no reason to close the top of an A. The child is right. If H were not in our alphabet, the closed-top feature of A would not be necessary, and variations in this aspect of A would be common and acceptable.

Letter name knowledge is very sensitive to exposure; that is, the number and frequency of a child’s encounters with letters affects the child’s familiarity with their unique shapes and names. Given that many young children frequently are exposed to their own first names, children often learn these letters first. From there, children learn the other letters, if someone reads alphabet books to them or provides play materials, such as alphabet puzzles and magnetic letters. Of course, as in any word-learning endeavor, adults must provide the letters’ names to children in a context where each is clearly linked to a specific letter. Children also must have opportunities to practice attaching these new labels to their shapes. See Box 6-7 (p. 83) for a list of classroom contexts that support the acquisition of letter recognition and letter name knowledge.

Typically, children learn uppercase letter names first, no doubt because these are easier to distinguish than lowercase, and also because adults often use uppercase letters in children’s names and purchase uppercase puzzles and letter matching materials. Children first learn the uppercase letters that begin both their own name and the names of classmates, if names are used in preschool. From there, they learn the others from the puzzles, alphabet books and explicit letter name activities provided. Children gradually acquire lowercase letter names, at the same time that they acquire uppercase names if they are exposed to both from the beginning. Some pairs, of course, are easier to learn than others, given their graphic similarity (e.g., Kk, Ww, Zz, Ss, Cc, Jj, Mm, Nn, Pp, Tt, Vv).

When we teach children about upper- and lowercase pairs, we require that they often give the same name to two graphic designs that are dissimilar. Notice that this involves asking children to override what we have taught them previously to avoid when naming each of the 26 upper- and lowercase letters. In other words, both G and g are called “G,” both Q and q and are called “Q,” both B and b are called “B,” and so on, despite the fact that the members of the pair are remarkably dissimilar with respect to graphic features. In contrast, adults require that letters within the set of 26 uppercase and 26 lowercase be called by different names, even when one differs from another only slightly (e.g., E and F; R and B; W and M; h and n; b and d; q and p).

It is perhaps truly remarkable that young children learn the alphabet, both upper- and lowercase, with relative ease, if they are exposed frequently to materials and activities that support this kind of learning. Knowing the difficulties that children are likely to encounter in acquiring letter name knowledge, given its peculiarities compared to children’s previous learning in the three-dimensional world, can help teachers judge whether children’s progress in this area is proceeding as we might expect. In other words, we can both expect that children will gradually learn the names of more and more letters during the preschool years, and anticipate which letter names are likely to cause some difficulty. Judgments about children’s progress in letter naming can be based not only on the sheer number of letters a child can name, but also on which letter names a child does and does not know or confuses with others. Examples of child behavior related to letter-name knowledge can be found in Box 6-8 (p. 85).

Letter Name Knowledge: Contexts that Support Acquisition		
Physical Setting	Materials	Instruction
Story time	Book: <i>Dr. Seuss's ABC</i>	The teacher reads the book and points to uppercase and lowercase letters as each letter pair is introduced. On pages where the alphabet letters introduced so far appear together (uppercase), the teacher points to each letter as she reads it, and looks out at the children in a way that lets them know to read the letters with her.
Puzzle area	Variety of puzzles, including three alphabet letter puzzles	Teacher sits at table and names letters as one child places them in his puzzle frame: "The E fits in right there." "Yes, that seems to be where the M goes." "I wonder which letter comes next?"
Group time (transition from group time to snack time)	Set of uppercase alphabet cards, each about 3" x 2"	"Okay, I'm going to hold up an alphabet letter and name it, and if your name starts with the letter I hold up, you may get up to wash your hands for snack. B, B. You may go wash your hands if your name starts with B."
Book area	Several alphabet books are included in the collection of books available to children	Child is looking at colorful pictures of fruits and vegetables pictured on the pages, and is naming a lot of them. Teacher names items the child cannot and also points to and names the big pair of alphabet letters on the pages.
Book area	Big book stand with <i>Alphabet Letter Class Book</i> on it. Has page for each letter. Children's pictures are posted on appropriate pages; pictures from magazines also pasted on pages.	Two children are looking at the book and naming pictures on each page. Teacher stops by occasionally to watch and listen, and names letters or items pictured when children seem to lack this knowledge.
Easel area	Paper, paint cups, paintbrushes and marker hanging by string of easel post.	Child asks teacher to write her name. Teacher writes each letter and names each one as she writes it. "K-A-I-T-L-I-N," she says in review, as she runs her finger under all the letters in the child's name. "That says, 'Kaitlin'."
Writing area	White, wipe-off marker board is mounted on one wall of writing area. Magnetic letters are provided to use with it.	Child is lining up letters on board, trying to replicate letters on the small alphabet charts provided with writing center supplies. Teacher comments, "Yes, the C comes next on the chart, and you found it. Yes, F comes after E on the chart, and you found the F. Keep going. You can make a copy of the alphabet chart on the marker board. That's a great idea. I'll come back pretty soon and see if I can sing the alphabet song using the alphabet you are building on the board."

Understanding of the Alphabetic Principle and Knowledge of Some Specific Sound-Letter Associations

As many preschool, kindergarten and first-grade teachers know, children often know the names of many alphabet letters without knowing very much about how letters function in words. Joaquin, the child we met in Chapter 4, knew all uppercase letter names, but he seemed to lack the understanding that alphabet letters represent sounds in spoken words (i.e., the alphabetic principle). A child who strings letters together and asks, "What word is this?" usually has no idea that letters represent sounds. The child certainly knows that letters are used to make words, but he or she does not know how the letters are selected. Gradually, as children learn that spoken words can be thought of as a series of sounds (i.e., as they develop phonological awareness to the beginning phonemic level), they also begin to learn that letters are used to write these sounds.

When children have acquired the alphabetic principle, they begin to try sounding out words they want to write. They use their letter-name knowledge to match letters to sounds that they isolate in words they want to spell. Many letters represent a sound that is contained in its name. For example, "B" contains /b/ in the first part of its name, "D" contains /d/, and "M" contains /m/. Children can make quite a few sound-letter matches using their letter-name knowledge. There are some sound-letter matches that cannot be derived from letter name knowledge (e.g., "W" for /w/, and "H" for /h/). These associations must be learned, not derived from letter name knowledge.

Contexts that support the acquisition of the alphabetic principle include those that, first of all, support phonological awareness and letter-name learning, because understanding and knowledge of these two areas must come together in order for children to acquire the insight that alphabet letters represent sounds. Specific contexts in which letters are brought together with sounds are listed in Box 6-9 (p. 86), and examples of children's behavior that relates to the alphabetic principle are listed in Box 6-10 (p. 87).

Knowledge of Print Conventions

A **convention** is a specific way to do something that has been agreed upon by all who operate within a specific social or cultural niche. We observe conventions when we engage in almost any kind of behavior. When in a restaurant, we consult a menu and place an order. In a church or temple, we learn specific rituals and sequences for doing things. And so it is with print. We must know how to move our eyes across print to access it, and how to place it on a page so that others can access what we write. In English, the convention is from left to right and top to bottom of the page. In Chinese it's from right to left across the page and down a column of symbols, not across the page horizontally, as we find in English. Conventions differ from one writing system to another, but each specifies conventions by which its print must be accessed.

We need conventions to indicate where one thought ends and another begins. In English, we use capital letters for the first word in a sentence, and a period or another form of punctuation at the end. If our sentence is a question, we use a special kind of punctuation—a question mark. We should space to separate words. In some other languages, no space is left between words, but only certain symbols can appear at the end of a word. These letters then mark the end of one word and the beginning of another.

Letter Name Knowledge: Examples of Child Behavior		
Physical Setting	Materials	Child Behavior
Story time	Book: <i>Dr. Seuss's ABC</i>	Most children in the group read along as teacher reads book. Strongest chorus on first part of each two-page spread, where new letters are named, and on pages where teacher points to alphabet letters printed together in rows.
Puzzle area	Variety of puzzles, including three alphabet letter puzzles	Two children are using alphabet puzzle. Remove all letters from puzzle frame and put on table. One child picks up G and makes it dance on table, as she sings ABC song. Other child laughs and joins in. Children work puzzle and name many letters. One child corrects two naming errors made by friend.
Group time (transition from group time to snack time)	Set of uppercase alphabet cards, each about 3" x 2"	Most children get up when is held up and named by teacher. One child to another, when M is held up: "Come on, ____ (child's name). You have that one."
Easel area	Paper, paint cups, paintbrushes and marker hanging by string of easel post	Child writes name on painting. Dictates letters in name to self as writes name, as if verbal recitation of them prompts recall of sequence they form in name.
Writing area wall	White, wipe-off marker board is mounted on one wall of writing area. Magnetic letters are provided to use with it.	Child is lining up letters on board, trying to replicate letters on the small alphabet charts provided with writing center supplies. After finished replicating entire alphabet chart card, started to point to each letter and recite alphabet. Got mixed up with "LMNOP" stretch, and teacher helped out.
Writing area table	Variety of paper, markers, small alphabet letter charts, envelopes and so on	Child is writing a lot of letters on paper, as if practicing. Stops and says, "Look what I wrote," and starts to point to and name letters: "C, A, B, E," and then asks, "What's that one?" as points to another letter. Friend says, "That's R," then "Hey, I don't know. Is it R or P? What did you make?" (Line on right jutted out straight rather than downward, which made it ambiguous.)

Alphabetic Principle and Some Specific Sound-Letter Correspondences: Contexts that Support Acquisition		
Physical Setting	Materials	Instruction
Story time	Book: <i>Round Is a Pancake</i>	Teacher reading title of book, and underlining it with finger as she reads it. Lingers on R and P in Round and Pancake, and sounds out letters before pronouncing whole word: "/r/, /r/ Round is a /p/, /p/ Pancake."
Story time	Book: <i>Dr. Seuss's ABC</i>	Teacher reads verse, which makes somewhat explicit that letters are used systematically to represent specific sounds in words.
Group time	Chart paper and easel; marker	New verses for <i>Down by the Bay</i> . Children select coat to rhyme with goat for new verse. Teacher writes coat by sounding it out. Says /k/ and writes C. Then sounds next phoneme and writes OA. Sounds last phoneme /t/ and writes T.
Snack table	Typical snack items, including napkin, cracker basket, and small milk cartons	Child has asked teacher to open milk carton. Teacher looks at ends of top and says, "I wonder which end is the one to open? Oh, I see a clue right here. /o/ /p/... open." (Teacher points to first two letters and sounds them out, and then pronounces whole word.)
Writing table	Paper in varying sizes, markers, pencils, envelopes, stickers to use as postage stamps	Child has written a list of words by stringing letters together. Asks teacher, "What words did I make?" Teacher runs finger under each string, and sounds it out.

Alphabetic Principle and Some Specific Sound-Letter Correspondences: Examples of Child Behavior		
Physical Setting	Materials	Child Behavior
Book area	Book: <i>Round Is a Pancake</i>	Child picks up book in library area. Holds unopened book on lap, with cover facing him. Runs finger under words of title, and drags out each word, as if mimicking sounding out letters.
Story time	Book: <i>Dr. Seuss's ABC</i>	Teachers turns back to several pages of book, after reading it, and asks what other words might start with B and M. Several children come up with ideas (e.g., bunny and banana; milk and M and M's).
Group time	Chart paper and easel; marker	<p>New verses for <i>Down by the Bay</i>. Children select coat to rhyme with goat for new verse. Teacher writes coat by sounding it out. She says /k/ and writes C. Then sounds next phoneme and writes OA. Sounds last phoneme /t/ and writes T. Children select stick to rhyme with chick in "chick, carrying a stick."</p> <p>Teacher asks, "What sound do you hear first? Yes, /s/, /s/. And what letter do you think we should use to write /s/?"</p> <p>Some say "S" and a few say "C."</p> <p>"We use S to write /s/ in this word," the teacher explains. "Sometimes we use C to write /s/, but not in this word."</p>
Writing table	Paper in varying sizes, markers, pencils, envelopes, stickers to use as postage stamps	<p>Child has written a list of words by stringing letters together. Asks teacher, "What words did I make?" Teacher runs finger under each string, and sounds it out.</p> <p>Child laughs at most, because they are not real words. Teacher then says, "What if we wanted to write Dad? What letter would we need first? Dad.../d/...Dad."</p> <p>Child says, "D?" Teacher says, "Yes, we use D to write /d/. That's right."</p>

At the preschool level, several basic conventions usually are acquired including the knowledge that a book has a front and back, and that we move page by page from front to back when reading a book. Over the preschool years, children also learn the left-to-right and top-to-bottom progression of print on a page. They often violate this convention when they are writing and run out of space. Sometimes, they simply turn the paper and proceed to write in a direction that is inconsistent with the direction of the first patch of print they created. Preschool children also often write correctly from left to right for one line, and then write right to left for a next line. These are typical behaviors for preschoolers. By the end of the preschool years, children have a fairly good, but not perfect, idea of these conventions.

Preschoolers also are beginning to learn about the conventions of upper and lowercase letters. During the preschool years, children become aware of these two kinds of letters—the “big ones” and the “little ones,” as they usually say—but they do not acquire considerable knowledge about the conventions of their use. Children usually know that their name begins with a big letter, for this is how they see it written in their classroom or day care center. When it comes to their own writing, however, they are very likely to mix upper and lowercase letters in words they write. It seems that children notice the lowercase letters, and have some sense that this is a more grownup way of writing than is writing with all uppercase. So they try to use lowercase letters, but for quite some time their repertoire of such letters is smaller than their repertoire of uppercase letters. As a consequence, they use uppercase letters where convention requires adults to use a lowercase letter. We would not expect anything else from such young children, and are happy to see their interest in using lowercase letters at all in their own writing.

Knowledge of Narrative (Story) and Non-fiction Text Structures

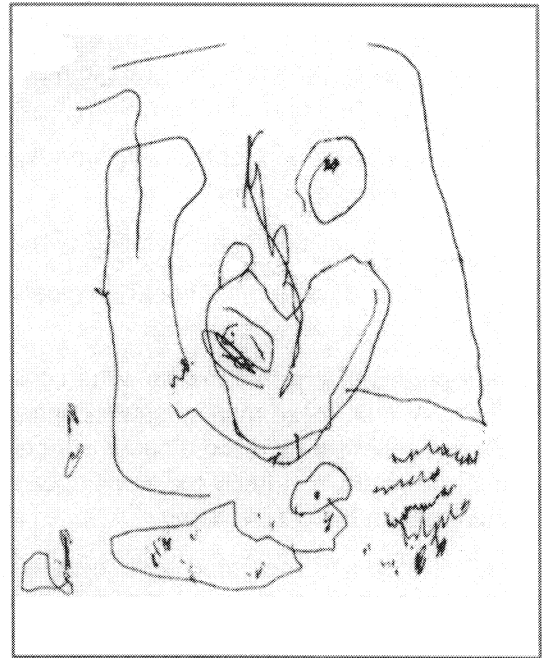
Text structures vary. The two big categories of text structure are narrative (stories) and non-narrative or expository (non-fiction). Narrative text has settings, characters and plots that serve to solve a problem that has been introduced early in the story. Expository text is structured differently. Expository text describes, explains cause and effect, makes comparisons, or answers questions that are posed explicitly.

Through exposure to various kinds of books, children learn about these different text structures. They expect **plotted narratives**—stories—to have characters and a plot (i.e., a series of events). In stories, children also learn to expect that a problem will be introduced and then solved by the end. Similarly, they learn to expect expository texts, or **information books**, as they are commonly called, to provide information. The information might be a list of features and habits of an animal, or an explanation for thunder or the drying up of a puddle. Children also learn to expect pictures or diagrams, often with labels for specific parts, in expository books, while they learn to expect illustrations of scenes, in which characters are embedded, in their storybooks.

In children's own writing, we see both plotted narratives (stories) and information pieces. We also see personal or **autobiographical narratives**. These are stories about children's own experiences, such as how they got hurt and got their stitches, or what they dreamed about the night before. These stories are similar in many ways to plotted narratives, which are fictional and have a problem to be solved. In both autobiographical and **plotted narratives**, events are typically related in chronological order, and there is a setting or settings as well as characters, including the children and parents, siblings or dragons, as the case may be, such as in a personal narrative about a dream. Such personal or autobiographical narratives are not fictional, unlike the stories in books we read to them, and unlike the occasional plotted narratives that

children create for writing down, perhaps in a blank book we provide. In that sense, autobiographical narratives are a kind of expository text, although biographies share many characteristics with plotted narratives.

Children sometimes write a wide range of non-fiction pieces if situations encourage it. For example, they might draw pictures of plants they are growing from seeds, and write brief labels for each picture. Or they might observe a caterpillar through its changes into a butterfly, and document these changes with pictures and some print. Children often make lists, menus, tickets and signs while they play, and sometimes as preparation for a new dramatic play theme. Sometimes, especially when asked and helped, children write directions for doing something. Often, these are recalled from an experience the child had recently in doing the very thing for which the directions are written.



Example of drawing and scribble writing

Beginning Writing

Children begin to make marks on paper and other surfaces with crayons and markers when they are toddlers. At first, the marks themselves, as well as their placement, are not organized to resemble the conventional system of marks that we call writing. Nor do the youngest children use marks to represent and convey meaning. Their interest is in the marks themselves, *in the sheer physical making of them*. They are not intended to stand for any message at all. What remains at the end of an episode of exploration is a record of the child's motor and visual delight.

Things begin to change during the early preschool years. Young preschoolers begin to understand that marks can be representational—they can convey meaning. Young preschoolers also figure out that there are two distinct ways to organize marks to convey meaning. Marks organized on a surface in one way are intended to convey meaning to others by “*showing* them something.” These are called pictures. Marks organized in a different way are intended by their creators to convey meaning by “*telling* them something.” These marks constitute writing. Even in the absence of the skill needed to picture something distinctively or to write something using marks that we can identify as alphabet letters, children can create one kind of display of marks that they intend to serve as pictures and a different kind of display of marks that they intend to serve as writing. They are glad to tell us what samples of the first kind are and what samples of the second kind say. The marks, and the behaviors we see associated distinctly with each one, signal the dawn of writing in a child.

Writing contributes to literacy development in many ways. It provides a context in which children can learn about the many functions of print, about letter shapes and names, and about phonological awareness and sound-letter correspondences. It also provides a context in which children can create messages, such as stories, which relates to their knowledge about literary forms.

In this section, four aspects of writing are discussed:

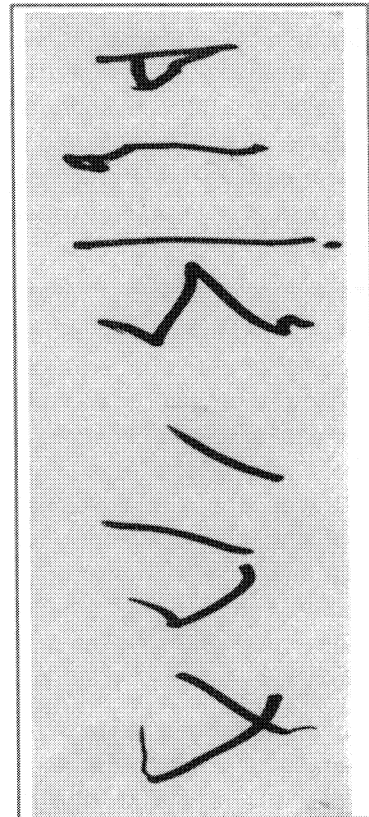
1. Development of the graphic marks themselves—their evolution from scribble to conventional letter symbols;
2. Development of the child's understanding of how letters are used to represent speech;
3. The development in writing of the use of print conventions; and
4. The development of skill in creating meaning—in composing messages that are conveyed with writing.

Development of graphic marks. When children first begin to write, they use marks that we call scribble. At first, these marks usually consist of continuous loose loops or zigzags. These early marks are followed by discontinuous scribbles, which children create by moving a marking tool round and round in virtually the same spot. A number of circular, tight and separate scribbles are created on the child's paper.

Tightly formed and separated scribbles are followed by marks that are composed of a variety of lines, both straight and curved. A child's writing at this point often consists of a mixture of single, straight lines and closed curves (circles), and complex designs made by combining a variety of lines, sometimes all straight ones, and sometimes a mixture of straight and curved. These marks resemble actual alphabet letters, because they are composed of the same kinds of lines that are used to make alphabet letters, even though the graphic designs created are not actual letters. These forms are called **mock letters**, given their resemblance to the real thing.

Mock letters gradually give way to conventional letters. The transition, however, is not abrupt; rather, for a period of time, children combine mock and actual letters in their writing. The change is detected in the *balance* seen between the two in a child's writing. The balance shifts gradually, so that children create more and more actual letters and fewer and fewer mock letters. There is considerable variation across children in this transition, in large part because letter knowledge varies significantly in different groups of children. Without exposure to alphabet letters provided in puzzles, alphabet books and magnetic letters, children will not develop a clear idea of the specific designs that make up each letter, and mock letters will remain for a very long time in their writing.

Although actual letters are not perfectly formed when they first appear, nor for quite a long time afterward, they are real, not mock, letters. Actual letters contain the lines used to compose one of the 26 alphabet letters, and the composition is roughly correct. The letter may not be drawn precisely, but all the essential parts are there, in approximately the correct places. For example, a child making an uppercase H will use three lines. Two of these are roughly long, straight and vertical, and one is a line that connects the two vertical lines, roughly at their middle. The vertical lines might be wobbly. One of them might be a bit longer than the other. The horizontal line used to connect the two vertical posts might also be wobbly or wavy. It also might



Example of mock letters

spaces between the lines on lined notebook paper. Without knowledge of letter shapes, a child cannot create mock letters or approximations to actual letters, *no matter how mature the child's fine motor skills*. Conversely, even in the absence of highly developed fine motor skills, a child can form actual letters, if he or she has acquired knowledge of letter shapes and names and has had experience in making marks on paper and organizing them.

The final step in graphic skills—from creating letter approximations to creating conventional letters—is also a gradual process that extends over several years. It can begin for some children in the later preschool years, and extend through kindergarten and first grade. For some children, it does not begin until kindergarten. During this phase, children's letter formation becomes more precise. For one thing, children typically learn the standard order in which lines for each letter are composed. During the preschool years, children often create fairly accurate letter designs, but the process they often use is not the standard one, nor is it very efficient in some cases. Children's letters also become more precise because their fine motor skills allow them better to control better the lines they make. Their letters are gradually formed better and become more regular in size as time goes on.

Development of understanding about how letters represent speech. While children are developing their skill in creating designs on paper, including designs that are alphabet letters, they are learning how to create words. When we say that children “know about letters,” we mean that they know letter names, and also that they know that letters function to represent sounds in words.

At first, and for quite a long time, children are completely unaware of the basis for determining the selection of letters to make a word. Their first thought is that the selection should result in a series that looks like a word. We call words that children create from their visual knowledge of words they have seen **mock words**. These letter string words look very much like actual words. Children vary the letters they use, they typically use one letter no more than twice in succession, and they limit their strings to 5 or 6 characters, about the average length of the words they see in the environment. When playing at word creation, they often ask an adult, “What word is this?” thinking that each string is in fact a word. Adults often sound these out, and children recognize when they are “funny” (i.e., not real words), which is much of the time.

As children are exploring word making in this way, they are also learning some words by sight. Chief among these is their own name and the names of other children in their class or child care group. They also might learn words they see frequently in the environment (STOP, EXIT, K-MART).

Sooner or later, and sooner if children are provided good phonological awareness experiences that are sometimes connected to print (i.e., adults sound out a word and the children write letters for each sound segmented), children begin to realize that letters are used systematically to represent sounds we hear in words, in the sequence that we hear them.

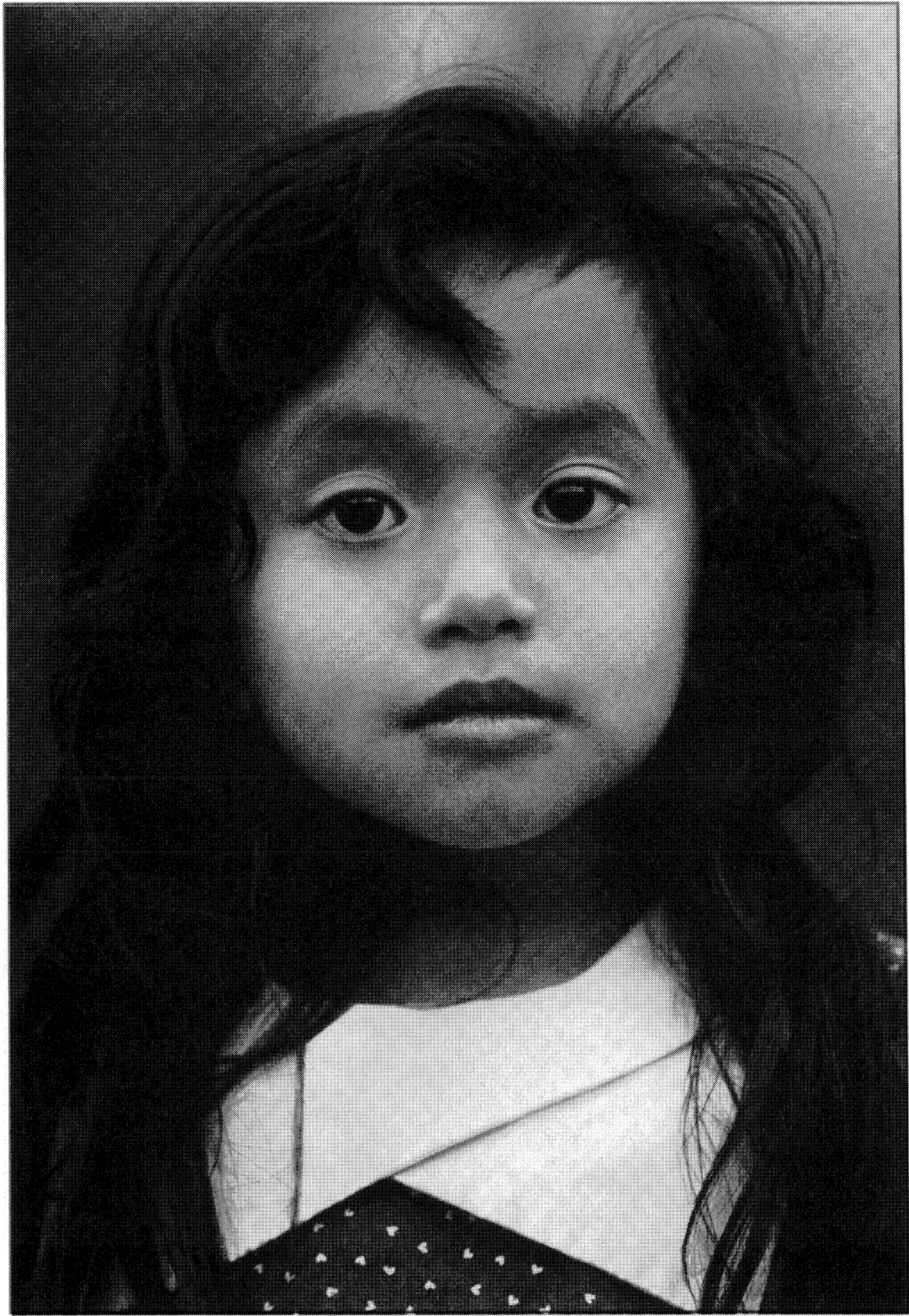
It is a long time, however, before children's phonological awareness reaches the phoneme level required for them to create phoneme-based **invented spellings**. In the meantime, they sometime write by coding syllable level segments. For example, a child might write baby, as BB, using just one symbol to represent an entire syllable. Later, when phonemic awareness dawns, the child will change the spelling to BAB or BABE. In the case of BAB, the final B is used to represent both /b/ and the final phoneme in baby, given that the letter B has both of these sounds in its name, in this order.

As children continue to learn about printed words, they incorporate visual knowledge about spelling with their phoneme-based derivations. For example, a child who spells eggs, EGGZ,

has seen the word somewhere, and has incorporated two G's, which we would not see if a child simply sounded out the word and selected letters based on letter-name knowledge to represent only the sounds heard. Similarly, an older preschool or kindergarten child who writes *kite* or *cake* correctly, with the silent E on the end, has no doubt seen those words someplace and knows the "e" is there. And when we hear Abigail say, as she writes, "Oh! I know what letter ask starts with! It's A like in Abigail," we see further sophistication in word making. The phonics instruction children receive in the primary grades helps them move from their naive and literal phoneme-based spelling to spelling that accommodates the vagaries of English spelling. It takes a long time.

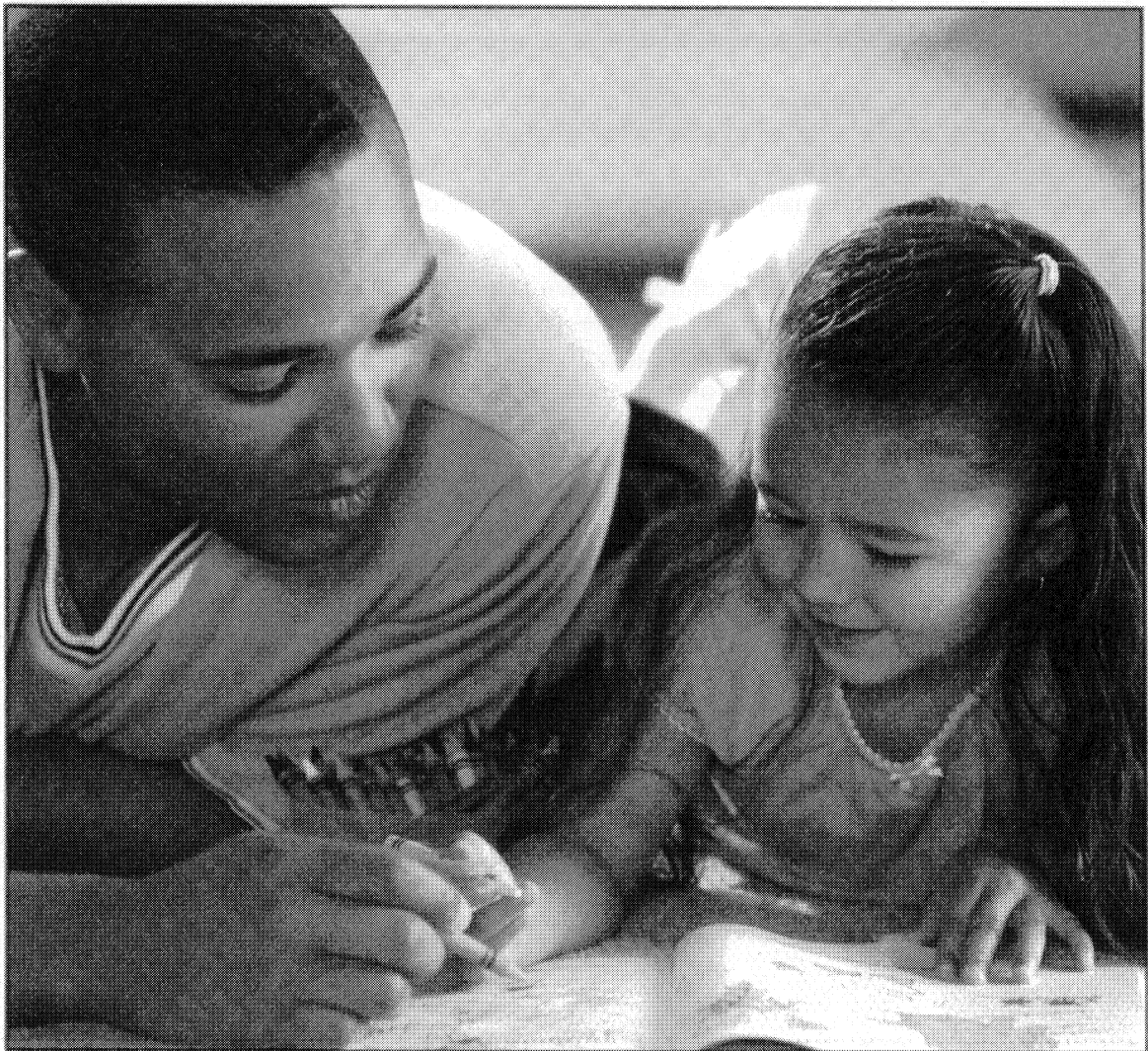
Development of composing. Writing also involves the composing of a message. Letters and words are tools for recording thoughts. Composing is what puts the meat on these bones. Young children learn to compose through conversations with adults who help children think about what they have to say and how to organize it. Look back at the conversations provided in Box 5-7 (p. 64) in Chapter 5, to see examples of adult scaffolding of children's composing of messages (one about stitches and one about a bad dream). These oral language experiences help children build composition skills. The addition in a writing context is the writing down of the message composed, often by an adult who offers to serve as scribe for the child's dictation.

Gradually, over a long period of time, children learn to compose longer and more coherent messages, and different kinds of messages. Their knowledge of narrative (i.e., fictional) and expository (i.e., non-fictional) text structures from books and conversations helps them adapt their messages to the form that is most appropriate.



Part III

Drawing Conclusions and Using Checklists to Summarize a Child's Current Level of Development on Program Goals



Part III: Introduction

Periodically, teachers must review all the data they have collected and interpreted, and draw some conclusions about a child's current level of understanding or skill with respect to several domains of interest. In many programs, assessments are required two or three times a year. Teachers usually prepare some kind of written progress report, and they meet with parents to discuss the summary they have prepared for each child. At the end of the year, these reports become the official records that remain in a child's file and follow the child to the next classroom or new school.

Drawing Conclusions

At intervals, usually two or three times a year, a teacher must make evaluative judgments about children, based on analyses and interpretations they have made of data collected. Considering all the data a teacher has collected over a period of time on a child's phonological awareness, for example, or on the child's oral vocabulary, the teacher must indicate to parents and often to others how the child is doing with respect to these areas. This means that a teacher must indicate where a child's current skills and understandings fall on various continua that teachers or school administrators have devised to keep track of progress in various aspects of learning.

Continua make sense for development of such things as phonological awareness or marks used to create writing. With behaviors such as these, we see a developmental sequence. It would be impossible for children to start out writing a lot of letters perfectly, or to start out by detecting the phonemes that make up a word. This is why we see gradual progress. With behavior that develops gradually over time, we learn to anticipate what behavior precedes or follows another.

For other areas of interest, however, it makes more sense to indicate the degree to which the child exhibits a desirable behavior. For example, a child's interest in books might be rated as low, moderate, or high. Similarly, a child's attention during group story time might be rated as almost always sustained, sustained only on some occasions, or rarely sustained. The most desirable level of these behaviors (i.e., the greatest level possible) could be present in a child during the first part of the year and then decline, or just the opposite could occur. Or, a child could exhibit a consistently high or consistently low level of these behaviors for an entire school year. There is no developmental course for these behaviors that is comparable to a developmental course seen in other kinds of behavior.

In Part III, you will find sample checklists designed for summarizing each child's progress on program goals. One chapter each is devoted to oral language (Chapter 7) and literacy (Chapter 8). The item categories follow the specific kinds of learning that are discussed for each domain in Part II, and they are presented in the same order. It should be easy for a reader who is uncertain about the meaning of a checklist category or specific item to consult the chapter of interest to refresh his or her understanding. The final chapter in Part III (Chapter 9) provides sets of data for four areas: oral language, phonological awareness, letter name knowledge and beginning writing. They are provided to help readers become acquainted with the sample checklists and to demonstrate the difference between data and interpretations and conclusions based on that data.

CHAPTER 7

Checklist for Summarizing Progress in Achieving Oral Language Goals

I. Listening and Oral Comprehension

A. Listening

1. Responds with orienting behavior when addressed by name (e.g., turns toward speaker, stops ongoing activity) usually ☐ sometimes ☐ rarely/never ☐
2. Varies listening behavior by social context. Is quicker to listen to an adult in contexts where adult typically talks (reading a story, giving directions during a small group activity) than in contexts where listening to an adult is less frequently expected (e.g., activity time, outdoor play time). usually ☐ sometimes ☐ rarely/never ☐
3. Child's behavior suggests difficulty in hearing what is said rather than in listening to what is said. (Often indicates need for referral.) usually ☐ sometimes ☐ rarely/never ☐

B. Receptive Vocabulary

1. Child understands basic words used in familiar contexts, with gestures or objects used deliberately as supports to meanings. usually ☐ sometimes ☐ rarely/never ☐
2. Child understand basic words used in familiar contexts, without deliberate use of gestures and objects to support meaning. usually ☐ sometimes ☐ rarely/never ☐
3. Child understands basic words and can follow conversations or discussions in which they are used out of context and without objects to support meaning. usually ☐ sometimes ☐ rarely/never ☐
4. Child's receptive vocabulary includes words beyond those that are basic (i.e., words heard often in routine contexts). usually ☐ sometimes ☐ rarely/never ☐
5. Child has content-related clusters of words (e.g., animal: fur, paws, tail, claws). usually ☐ sometimes ☐ rarely/never ☐
6. Child's receptive vocabulary includes some unusual or rare words—words not commonly known by preschoolers. usually ☐ sometimes ☐ rarely/never ☐

C. Directions, Explanations, Questions (in “here and now” and decontextualized)

- | | |
|--|---|
| 1. Responds to routine directions. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 2. Responds to unique directions, such as those provided for a new instructional activity, when object and demonstration support are provided. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 3. Understands unique explanations, such as those provided for a new instructional activity, or in response to a new phenomenon the child has observed and questioned. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 4. Pays attention to and/or comprehends important qualifying words in directions and explanations (e.g., the little dish; the small, red scissors; the chair next to Jamie). | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 5. Responds to who, what, where and why questions uniquely (i.e., does not interpret all as what or who). | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 6. Comprehends directions and explanations when concrete contexts and support are not provided. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 7. Comprehends talk about past events and events that are expected and/or planned. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 8. Comprehends discussions about story events, characters and settings. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |

II. Expressive Language

A. Speech

- | | |
|---|---|
| 1. Child's speech can be understood by adults who are very familiar with the child. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 2. Child's speech is easy for all adults to understand. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 3. Child's speech contains a few typical articulation errors. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 4. Child's speech contains many articulation errors. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 5. Child's intonation when speaking is more restricted than is typical. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |

B. Vocabulary

- | | |
|---|---|
| 1. Repeats new words in story context (chimes in when teacher leaves a slot; uses the word in discussion of the book at story time). | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 2. Names items used at group time, such as names of animals or other things for which flannel board pieces are used for songs or poems. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 3. Uses new words heard in books when an adult uses them in conversations with the child or other children. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 4. Uses new words heard in books and conversation spontaneously, in the child's own play and conversation. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 5. Overextends use of current vocabulary to meet needs for new words. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 6. Asks, "What's ____ mean?" when child hears unfamiliar words in books or conversation. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 7. Uses several words related to a specific topic or topics (e.g., spider-web, spin, traps food; butterfly-caterpillar, chrysalis, eggs). | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |

C. Grammatical Skill

- | | |
|--|---|
| 1. Speaks in holophrases. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 2. Sentences are telegraphic. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 3. Sentences are complete. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 4. Sentences are complex (clauses and phrases, not just simple sentences). | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 5. Over-regularization errors (e.g., tooths, runned, teached, mouses). | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |

D. Conversational Skill

- | | |
|--|---|
| 1. Watches and listens, but does not participate in conversations. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
|--|---|

- | | |
|--|---|
| 2. Participates when prompted by an adult (e.g.,
____Did you ever ____?). | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 3. When participating in conversation, waits for turn
(i.e., does not begin to take a turn while someone
else is talking). | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 4. Content of comments when taking a turn are related
to the topic of previous comments by others. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |

III. Phonological Awareness

- | | |
|---|---|
| 1. Engages with focused attention when teacher leads
recitation of verses and singing of songs containing
rhyme and alliteration. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 2. Participates verbally in teacher-led reciting of verses
and singing of songs containing rhyme and alliteration. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 3. Chimes in with a second rhyming word of a pair in a
poem or predictable book when the teacher pauses
to prompt it. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 4. Provides a word that rhymes with a target word that
a teacher or peer provides. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 5. Provides a word that begins with the same sound as
a target word that a teacher or peer provides. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 6. Can generate a series of words that rhyme or start
with the same beginning sound. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 7. Engages in spontaneous word play (silliness) with
other children. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 8. Claps or taps to mark syllables in child's name, or in
words in verses or songs, as these are recited. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 9. Blends syllables that an adult presents to form the word. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 10. Blends onset-rime segments that an adult presents
to form the word. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 11. Blends phoneme segments that an adult presents to
form the word. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 12. Isolates first sound in a word when asked, "What is
the first sound you hear in bird?" Child says "/b/." | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 13. Isolates last sound in a word when asked, "What is
the last sound you hear in bird?" Child says "/d/." | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |

CHAPTER 8

Checklist for Summarizing Progress in Achieving Literacy Goals

I. Print Awareness

1. Gives meaning to print available in the environment. usually ☐ sometimes ☐ rarely/never ☐
2. Gives meaning to child's own marks used for writing. usually ☐ sometimes ☐ rarely/never ☐

II. Functions of Print

1. Plays distinctively with print props. usually ☐ sometimes ☐ rarely/never ☐
2. Uses writing for different purposes. usually ☐ sometimes ☐ rarely/never ☐
3. Uses distinctive print features and organization when creating print for different purposes. usually ☐ sometimes ☐ rarely/never ☐
4. Names a variety of artifacts associated with different print functions. usually ☐ sometimes ☐ rarely/never ☐
5. Isolates the first sound in a word when asked, "What is the first sound you hear when you say _____?" usually ☐ sometimes ☐ rarely/never ☐
6. Attempts to sound out words, starting with phoneme, when writing words. usually ☐ sometimes ☐ rarely/never ☐

III. Book Handling Skills and Knowledge of Book Parts

1. Holds a book right side up. usually ☐ sometimes ☐ rarely/never ☐
2. Proceeds through a book from front to back. usually ☐ sometimes ☐ rarely/never ☐
3. Proceeds page by page, as child proceeds through book from front to back. usually ☐ sometimes ☐ rarely/never ☐
4. Looks at the left page before looking at the right page when proceeding through a book. usually ☐ sometimes ☐ rarely/never ☐
5. Announces the title of a book before opening the book to retell it. usually ☐ sometimes ☐ rarely/never ☐
6. Can find where the text itself starts after title pages of a book. usually ☐ sometimes ☐ rarely/never ☐

IV. Letter Name Knowledge

- | | |
|--|---|
| 1. Names uppercase forms of letters found in child's own first name. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 2. Names uppercase forms of letters not found in child's own first name. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 3. Names lowercase forms of letters found in child's own first name. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 4. Names lowercase forms of letters not found in child's own first name. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 5. Proportion of errors in matching and naming letters that involve highly confusable pairs. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |

V. Alphabetic Principle and Specific Sound-Letter Associations

- | | |
|--|---|
| 1. Attempts to translate letters seen in printed words into sounds. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 2. Isolates the first sound in words when trying to spell them. Selects a letter to represent the sound isolated, or asks, "How do you write / /?" | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 3. Uses letter name knowledge to make some sound-to-letter matches. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |

VI. Knowledge of Text Structures (Narrative and Expository)

- | | |
|---|---|
| 1. Relates autobiographical events coherently and with enough details to inform a listener who is naive to the episode. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 2. Can retell familiar stories with critical events included, in the sequence of occurrence in the story. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 3. Asks for expository texts when seeking information. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |
| 4. When browsing informational texts, studies pictures or diagrams, and asks or comments about information in them. | usually <input type="checkbox"/> sometimes <input type="checkbox"/> rarely/never <input type="checkbox"/> |

VII. Beginning Writing

A. Graphic Marks

1. Scribble marks. usually ☐ sometimes ☐ rarely/never ☐
2. Scribble arranged linearly. usually ☐ sometimes ☐ rarely/never ☐
3. Mock letters. usually ☐ sometimes ☐ rarely/never ☐
4. Approximations to actual letters. usually ☐ sometimes ☐ rarely/never ☐
5. Conventional letters. usually ☐ sometimes ☐ rarely/never ☐

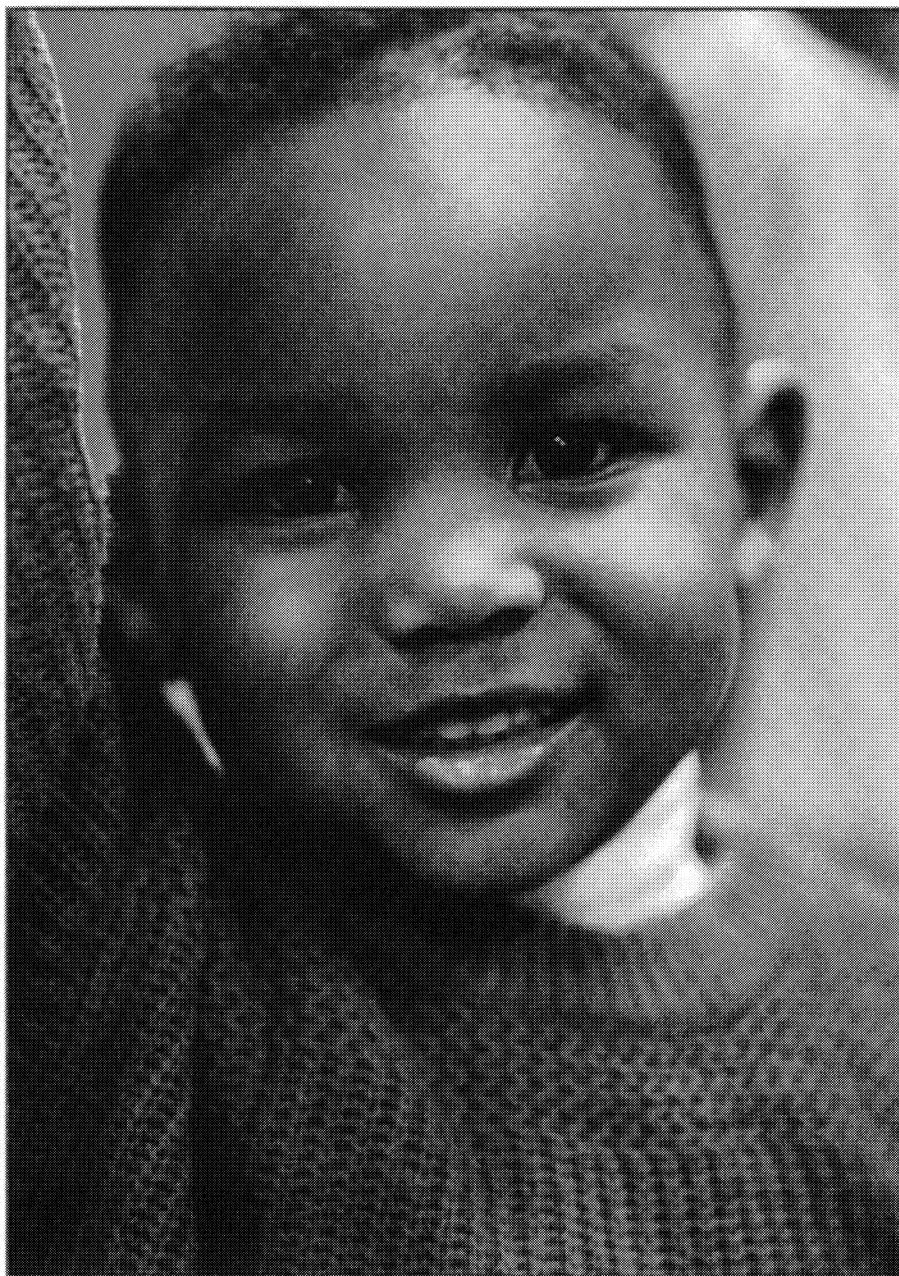
B. Level of Speech Represented (word creation)

1. Strings letters and asks, "What word is this?" usually ☐ sometimes ☐ rarely/never ☐
2. Some familiar words (e.g., child's name) written with letters in their correct sequence (not necessarily formed well—child may use some mock letters). usually ☐ sometimes ☐ rarely/never ☐
3. Writes one symbol for each syllable in a word. usually ☐ sometimes ☐ rarely/never ☐
4. Writes symbols for individual sounds (phonemes) in a word, but does not "find" all or represent them (e.g., PNETL for ponytail; NKL for uncle). usually ☐ sometimes ☐ rarely/never ☐
5. Integrates visual knowledge of words in invented spellings (EGGZ for eggs; TRKY for turkey; APPLS for apples). usually ☐ sometimes ☐ rarely/never ☐
6. Writes many familiar words with correct spellings (love, Mommy, Daddy, you, dear, and, was, etc.). usually ☐ sometimes ☐ rarely/never ☐

C. Message Creation (composing, not writing down)

1. Creates simple "messages" such as labels for pictures. usually ☐ sometimes ☐ rarely/never ☐
2. Creates messages that "tell about" events depicted in pictures drawn, but events are isolated (i.e., together, they do not make a coherent story). usually ☐ sometimes ☐ rarely/never ☐
3. Creates messages that are coherent stories, with support from adult scaffolding, when they are autobiographical. usually ☐ sometimes ☐ rarely/never ☐

4. Creates messages that are coherent stories, with support from adult scaffolding, when they are fictional. usually ☐ sometimes ☐ rarely/never ☐
5. Creates messages that are coherent stories, independently or with little adult help, when they are autobiographical. usually ☐ sometimes ☐ rarely/never ☐
6. Creates coherent stories, with little or no adult help, when they are fictional. usually ☐ sometimes ☐ rarely/never ☐



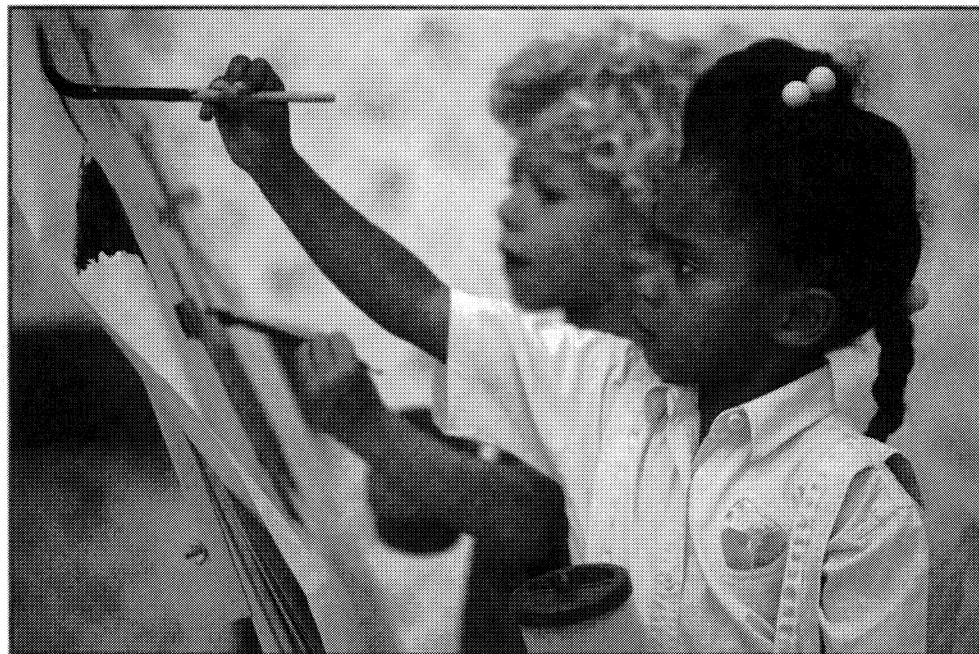
CHAPTER 9

Data Sets for Practice in Using the Observation Guide

This chapter provides observational data on oral language (oral comprehension, vocabulary, expressive language), phonological awareness, letter knowledge and beginning writing. Each data set should be treated as a list of entries that an early educator made for one child across a period of time, from September through late November or early December. The exception is the data set for Beginning Writing. It includes samples from a second year of preschool, and for the first year, samples go through March rather than December.

The data entries in each set ***actually came from observations of several children***. This was done to create “prototypical child” sets that were fuller than samples available from just one child, thus creating better data sets for practice purposes. The data sets provided here are confined to anecdotal entries. They do not include data that teachers often collect on checklists, such as those provided as examples in Chapter 3: Recording and Organizing Observational Data.

A model is not provided for analyzing the data sets. It is suggested that the data sets be used in a training session. Early educators might work in teams to analyze the data and use the checklists to record their judgments about a child’s current level in the areas for which data sets are provided. Teams also might write notes, such as those often included on progress reports provided to parents, to qualify and explain judgments. Then, teams can compare their evaluations and discuss any differences of opinion. To resolve differences, entries in data sets usually need to be reviewed again to discuss different interpretations and inferences based on them.



Data Set One:
Oral Language (oral comprehension, vocabulary, expressive language)

Entry 1

Date: September 8, 2003

Context: Story time, *Oonga Boonga*, third time we'd read this in about five days' time.

Chimed in on crying a couple of times, and on "eat eat" but not on harmonica, jig, lullaby, unison. Said "oonga boonga" several times, on page where repeated several times.

Entry 2

Date: October 16, 2003

Context: Book area, arrival time. Looking at *Whistle for Willie*. Silent, turning pages, looking carefully at pictures, before I sat down. He was on last page.

I asked, "What's Peter doing here?" Said, "Running home." I said, "Mmm. Doesn't look to me like he's running. I think he's walking with a really heavy bag from the store." I pointed to it. Then added, "He and Willie went shopping, and I think Willie still has the list in his mouth. Do you see it?" (He pointed to Willie. I pointed to list in mouth.) "Yes, that's Willie with the list to tell them what to get at the store. They ran an errand for Peter's mommy. I wonder what they bought at the store?" Shrugs.... I said, "Maybe milk and some bread, and maybe eggs, too. Do you think maybe those are some things?" Nodded head yes.

Entry 3

Date: October 20, 2003

Context: Story time, *Whistle for Willie*, rereading of the book. Maybe fifth time for reading it. Children like it, and asked for it.

On last page, when I got there, I said, "Oh, this is the page where we find out that Peter's mother asked Peter and Willie to run an errand—to go to the store for her, I think—and we see Willie carrying the list in his mouth, and Peter carrying a bag of groceries, probably."

I started reading: "Peter's mother asked him and _____ (most children chimed in on Willie..._____did not) to go on an errand...an er" _____... (opened mouth, and I think said word.....most other children did too, so I'm not sure if _____ said it, or just opened mouth to try...)

Entry 4

Date: October 28, 2003

Context: Dramatic play area... ____ playing at stove, stirring with spoon in a pan. I enter and get a bowl, empty box of muffin mix, and put them on the table.

Announce to ____ "I think I'll make some muffins. Maybe we can have a nice dinner. Are you cooking something in your pan?" Nods head yes. "What is it?" No answer. "Smells good. Maybe I can have some for dinner when it's done." No answer. Stirs. I go to refrigerator, open it, get empty milk carton, and tip it over the bowl. Say, "Oh, dear, it's empty. I'll need to run an errand to the store before I can make muffins. Do you need anything?" No answer. "I think I'll make a list." (pick up message pad by phone...) Announce: "We probably need other things." Open the refrigerator again and look in. Maybe yogurt, and butter. (write those down, and also milk) Move to stove beside _____. Stoop down and show the list. "I'm going to run an errand to the store. I need yogurt, butter and milk. Do you need anything?" Nods head no. "What are you making, soup or something? Maybe chicken soup? Or maybe spaghetti?" Nods head yes. "'ketti..." "Oh, that sounds good. You have tomato sauce for your spaghetti, or shall I buy some for you?" Says, "Buy it." "Okay, I'll write tomato sauce on my list so I won't forget it." I write it. I say, "I won't be gone long. I have just a couple of errands to run. One to the store to shop for your tomato sauce and my butter and milk, and then I'm stopping at the Post Office to get some stamps." I say, "Bye, see you later." ____ says "Bye" and waves.

Got empty (but without label) can from supplies in closet... and a yogurt and milk container. Returned. ____ is at table with his pan and spoon. Has some dishes. Handed can to ____ and offered bowl I had there for muffin making.

"Maybe you can put the spaghetti from your pan in here... dump it out... and then pour tomato sauce on it." I put metal can on table. "Here's your tomato sauce. I bought it at the store for you." Looked at can, and did not do anything with pan and bowl. I pointed to pan, and to bowl, and then back and forth. "You can dump your spaghetti in the bowl, and then pour tomato sauce on it. Here, I'll dump the tomato sauce in first, and then you can dump your spaghetti in on top of it." I hold can over bowl, and make dumping motions... And say "dump, dump, dump." Then, I point to his pan. "Now dump your spaghetti, okay?" He picks up pan and tips it over bowl. Puts pan down. I hand him the spoon: "Now stir..." He does.

Entry 5

Date: November 11, 2003

Context: Story time, *Little Red Hen (Makes Pizza)*, Third time for reading this book across about six days' time.

_____ chimed in on "Not I" quite a bit. Did not continue with "Said the Dog," or "Said the Cat."
Attentive during story time... all the way through.

Entry 6

Date: November 12, 2003

Context: Group time (Songs and poems and such): "Old MacDonald Had a Farm" (with felt pieces).

I named animal felt pieces as I put them up on flannel board. Told children they could name them with me. _____ did not name any.

_____ sang along with some of song. Said *duck and pig*, I'm sure... and participated in saying some animal sounds. E-I-E-I-O by middle of song... was doing that part, although I'm not sure he did it all. Could not hear him above all the others. But sure about first E and then said more...just not sure if all. When I removed animals, I asked, "*Which animal is this?*" for each one. He joined in only with *duck*...but watched attentively for all of this.

Entry 7

Date: November 14, 2003

Context: Activity time. _____ started in blocks. (raised hand at Meeting to choose that area). About 15 minutes into Activity Time, _____ came to me (I was at the water table), and patted my arm (to get my attention).

I looked at him and said, "*Hi. This area is full but we can put your name on the turns list.*" He shook his head no and pointed over to the play dough table.

"*Oh, you want to play at the play dough table?*" _____ Said, "*Yes, play dough table.*"

"Okay, let's go over there. I think there's a chair." I went with him. Gave him some play dough. Asked, "Do you want a rolling pin?" I held one up. Nodded head yes, and I handed it, saying, "rolling pin." He said, "rolling pin." I said, "We'll need to ask the other children for some cookie cutters. The tub is empty. Jason, you have a lot, so I'm going to have _____ ask you to give him 2 or 3." Then, prompted_____: "Say, 'Jason, I need a cookie cutter, please.' " _____ looked at Jason, but did not say anything. "Say, 'A cookie cutter, please,' " and I held out my hand to model doing that.

He held out his hand. Jason put one in!! I say, "Thank you, Jason. Thank you, Jason," as if answering for _____. He did not follow suit. "Okay, let's ask for another one. You need two, I think." I say to _____, "Say, 'Jason, another cookie cutter, please,' " and hold out my hand again, to prompt him to do that. He holds out hand. Jason is eyeing his remaining cookie cutters, reluctant, I think, to give up another one. I say, "Jason is deciding which cookie cutter he'd like to give you. What do you think, Jason, the butterfly, the dog, the star, the little train?" Then, to _____, I ask: "Which one do you think you'd like, _____? The star?" He nods head yes. I repeat, "The star?" And he says " 'tar" quietly. Jason quickly picks up the dog and puts it in _____'s hand... I say, "Oh, Jason has decided to give you the dog. I guess he's going to use the star cutter. The dog's great. Thanks, Jason."

Data Set Two: Phonological Awareness

Entry 1

Date: September 8, 2003

Context: Group time. Predictable text, *Over in the Meadow* was read. Poem, "Ten Little Fingers," was recited.

Attended to *Over in the Meadow* throughout first reading. Eyes always on book. Chimed in with second word in pair of rhyming words in "Ten Little Fingers" after I started to say it...

Entry 2

Date: September 17, 2003

Context: Group time... "Ten Little Fingers... ." Comment about rhyming words.

When I said the first four lines of the poem again and mentioned that *me* and *see* rhyme... he repeated them... (other children did too, but I think he was among the first....not just copying them.)

Entry 3

Date: October 10, 2003

Context: Group time. "Interesting Sounding Words" (from *Noisy Nora*).

When I suggested "tra-la-la-la" as interesting sounding words, he repeated the words "tra-la-la-la." Did the same with "hush," and "monumental," after I said them a time or two. Made exaggerated mouth movements just like mine. Very attentive...expression suggested great concentration—furrowed brow... as if focusing on the feel (or sound?) of them, as I had suggested.

Entry 4

Date: October 16, 2003

Context: Group time: We did "I'm Thinking of ____ Word Clue Game" for *Five Little Owls in Old Elm Tree*.

Guessed wink... After last clue, which was "starts with /w/ and rhymes with *sink*." (Maybe just had time to process semantic clues by then, and sound clues had nothing to do with it???)

Entry 5

Date: October 16, 2003

Context: Transition to outdoor time—Used "If Your Name Starts with / /..."

Got up immediately! Very attentive, looking/waiting... and facial expression changed from thoughtful to big smile when I said first sound of his name... (Had used this just 3x earlier, once as activity in Group Time, and once for transition... not as fast then, as I recall)

Entry 6

Date: October 20, 2003

Context: Group time: Did "First Sound Matching of Story Characters and Children's Names" activity.

Matched first sound in Peter /p/ to /b/ in his name—when got to him in circle...incorrect, but close... I repeated /p/ not /b/... and he changed his mind....said, "No, not a match."

Entry 7

Date: October 21, 2003

Content: Group time: We sang "Five Green Speckled Frogs" and "Down By the Bay."

Responded enthusiastically to these two songs, and said all the words... No pause at all after I said words in these songs...He knows the words, and is saying them just as I do...or a little before.

Entry 8

Date: November 3, 2003

Context: Group time: *Little Red Hen (makes pizza)*... "Interesting Sounding Words" activity.

Repeated pepperoni—in the syllable segments that I used when presenting them first. Then faster, spoken naturally... Said *mozzarella* and *delicatessen* too. Clear pronunciation. Very attentive... engaged. Watched writing of letters to represent first sounds in these words, when I wrote them.

Entry 9

Date: November 18, 2003

Context: Reading of *Golden Bear*...predictable textbook.

Chimed in with rhyming words. (I slowed down and started first sound of most...) Right there...pretty quickly as I started, or even before on some (anticipated...)

Entry 10

Date: December 5, 2003

Context: Group time: We did "Can Think of Words that Rhyme" activity.

Did not come up with any words that rhymed with words I gave as targets (nest and green), but judged correctly when I gave examples of words that rhymed with target and asked whether they did or did not rhyme (e.g., *nest* and *rest*; *nest* and *night*)...

Entry 11

Date: December 12, 2003

Context: Group time: I did the "If Name Ends with / / Raise Hand" activity.

Didn't raise hand when I said sound. When I said his name and hung onto last sound, and then said target sound again, he raised hand, smiled... as if realized they were the same. (Maybe misunderstood directions, given prior experience with "If Your Name Begins with / /..."???)

Data Set Three: Letter Name Knowledge

Entry 1

Date: September 7, 2003

Context: Group time. "If Name Starts With _____ (name letter and hold it up), Raise Hand."

Did not raise hand when I held up B. I held up his name card and pointed to B there, and told him his name starts with B, so he could raise his hand. He raised it. Expression sort of bland...no indication he really understood "letter" "in name" "starts with," though am not sure. May be shyness in group situation...answering/responding when called on, etc.

Entry 2

Date: September 17, 2003

Context: Group time... "If Name Starts With _____ (name letter and hold it up), Raise Hand."

Held up hand quite quickly today, when I held up B and named it.

Entry 3

Date: October 10, 2003

Context: Arrival. Attendance chart.

Found his name card quickly today, in the basket. Said to me, as he pointed to first letter, "I have B."

Entry 4

Date: October 16, 2003

Context: Walking down hall to go outside.

Pointed to EXIT sign above doorway, and said, "Eric's E." (They seem to be good friends these days.)

Entry 5

Date: October 16, 2003

Context: Arrival. Puzzles/manipulatives area.

Chose the alphabet puzzle. When I sat down for a minute, pointed to B and named it. Also E and N. Also pointed to others (M? K? can't remember for sure) and asked what they were (their names). I named.

Entry 6

Date: October 20, 2003

Context: Arrival. Attendance chart.

Picked up name tag, showed it to me, pointed to each letter, and named all three.

Entry 7

Date: October 21, 2003

Context: Group time: "If Your Name Starts with _____ (name letter), Raise Your Hand."

Told _____ to raise hand when I held up G, and _____ did not raise her hand. Said, "_____, you have G."

Entry 8

Date: November 3, 2003

Context: Activity time, at writing center.

Picked up small alphabet chart card that is at writing center. Looking at it. When I sat down, pointed to several letters to ask, "What's that?" (Q, R, V... I think)

Looking at set of children's name cards. Found his own name, uppercase side first, and then flipped to other side, where conventional form is printed. Pointed to e and n and said, "that's a little e and that's a little n."

Entry 9

Date: November 18, 2003

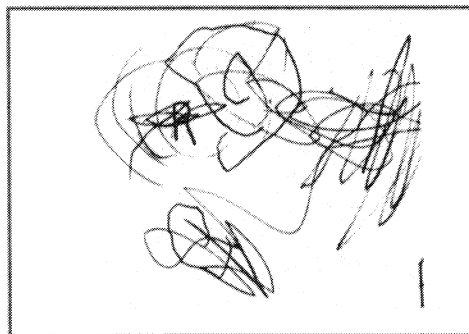
Context: Activity time, puzzles/manipulatives center, alphabet memory game (uppercase).

He and _____ were playing. Set of 6 pairs of letters (O, P, R, B, S, C). Heard him name O, S and B when turning over and looking for other one. Not sure whether he ever named the others. I couldn't stay long to watch.

Data Set Four: Beginning Writing

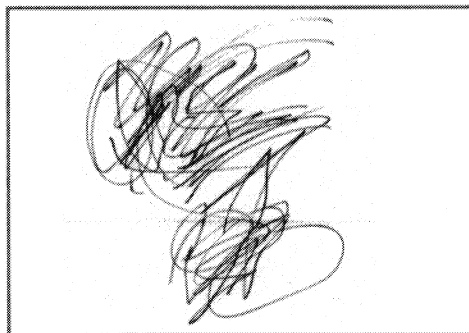
Sample 1 (early October, year one)

3 yrs. 4 mos. Save sign (name). He said he couldn't write his name. A teacher made the R (covered up in upper, middle left portion). He then scribbled the rest. He made a big spiral shape (maybe the O) to the right of the teacher's R, but then continued to scribble over it and to the right of it. Then he moved to the lower left (connecting line to upper right can be seen) and made another scribble mark there. (Sample reduced in size here.)



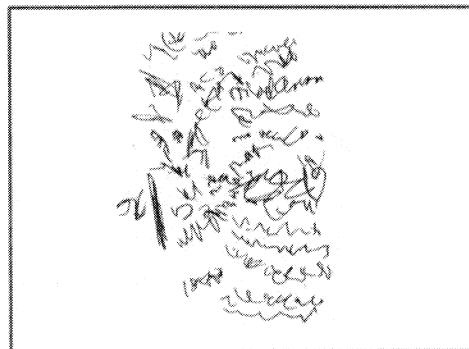
Sample 2 (early November, year one)

3 yrs, 5 mos. Child's name written on a sign for a block building. (Child said that this is what it was.) (Sample reduced in size here.)



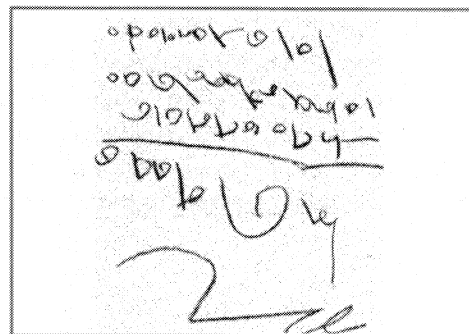
Sample 3 (early December, year one)

3 years, 6 yrs. "Grocery List." (Sample reduced in size here.)



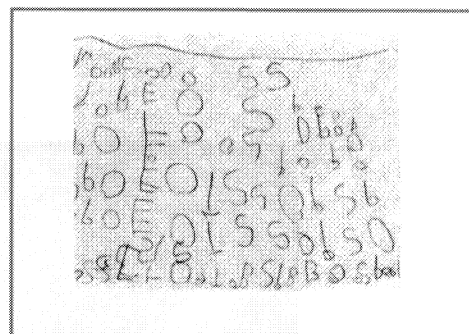
Sample 4 (mid- December, year one)

3 years, 6 months "A Letter." (Sample reduced in size here.)



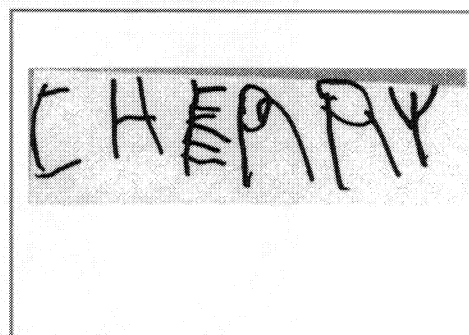
Sample 5 (early March, year one)

3 years, 9 months "Just Writing." (Sample reduced in size here.)



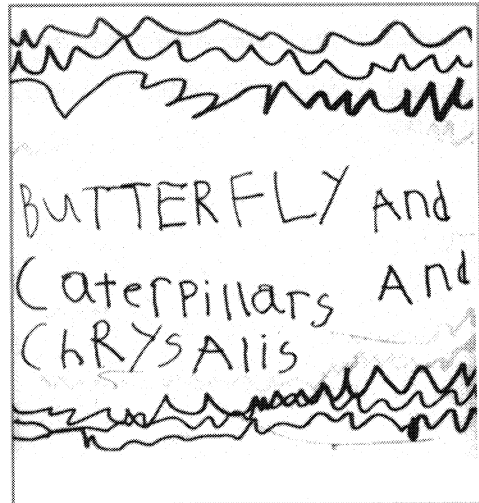
Sample 6 (March, year two)

4 years, 9 months. Entry for Color Alphabet Book: Cherry (teacher sounded out these words, and helped child with letter selection. Child did all of physical writing. (Sample reduced in size here.)



Sample 7 (May, year two)

5 yrs, 1 mo. Cover for an observation book about caterpillars and butterflies. (There was a live display in the classroom.) Child copied the words butterfly, caterpillars, and chrysalis from information books in the display area. (Sample reduced in size here.)



Glossary

Alphabetic principle

The underlying assumption of alphabetic writing systems that each speech sound or phoneme of a language has its own distinctive graphic (e.g., association of letters to sounds).

Anecdotal record

A record of an aspect of an event that is of interest and that is written after the event, not while it unfolds.

Articulation

Articulation refers to the way a speaker forms speech sounds to create words.

Authentic assessment

Tasks are not contrived specifically for obtaining information about children. Rather, information is gathered through observation while children engage in their typical everyday activities. This information is analyzed to evaluate children's learning and development.

Autobiographical narratives

Autobiographical narratives are stories children relate to others about their own experiences.

Conclusions

After reviewing and interpreting data, we make judgments about the child's progress with respect to areas of learning and development. For example, we might conclude that James is somewhat immature in his response to waiting or to requests to stop playing and to clean up, if he typically cries loudly and jumps up and down in these situations. We conclude that James is immature with respect to emotional regulation.

Content standards

Content standards are expectations for the learning and development of young children. In Ohio, the pre-kindergarten indicators within the Early Learning Content Standards describe essential concepts and skills that young children should know and be able to do at the end of their preschool experience in the disciplines of language and literacy, mathematics, science, and social studies.

Convention

A convention is a specific way to do something that has been agreed upon by all who operate within a specific social or cultural niche. In literacy, it is an accepted rule of written and spoken language.

Conversations

Conversations are the exchanges of information with two or more individuals by which the participants take turns, stay on topic and move the topic along.

Curriculum

This term sometimes refers only to content standards—the goals or expectations for children's learning. In this guide it is used more broadly to refer to both goals and expectations for learning and strategies or approaches that early educators use to help children meet these expectations. Curriculum, defined in this way, includes instruction, as well as the content goals of a program.

Domain

A domain is a broad area of child development—physical, social, emotional, cognitive or language. Children's development within any domain is closely related to their development in all other domains. Discussing learning or development by domain is a convenience for adults that should not be interpreted as an accurate representation of their dynamic functioning in children.

Evaluation

In evaluation, judgments are made about a child's progress in learning and development. Evaluating or judging data is part of the assessment process—the last step.

Expressive vocabulary

The words a person uses meaningfully in talking.

Finger point reading

Finger point reading is the act of touching every word on a page while the reader slowly recites from memory the text he or she knows is there.

Formal reporting

Reporting of data and conclusions about a child, based on the data, to parents, to other professionals involved in a child's education or care, or to outside agencies.

Goal

A goal describes a targeted and anticipated outcome for children's learning. Teachers use Ohio's Early Learning Content Standards to inform the goals they set for children's learning within the content disciplines of language and literacy, mathematics, science, and social studies. Goals focus on group as well as individual children's needs.

Grammatical

Speech or writing that conforms to syntactic rules of the language.

Holophrase

Holophrases are one-word utterances (e.g., "milk" to mean a child wants some milk).

Indicator

An indicator is a statement that provides detail about the skills and concepts a young learner needs to know and be able to do in order to master the more broadly stated benchmarks and standards statements within Ohio's K-12 Academic Content Standards. Indicators listed within each standard area in content standards documents are not in sequence according to their importance, or in terms of their known developmental sequence.

Information books

Information books refer to texts that provide facts or explanations about a topic or topics (e.g., animals, trees, water).

Instruction

Instruction is an act that provides support for young children's learning. Instruction includes different teaching strategies, such as modeling and guiding, as well as specific practices, such as reading aloud, engaging in shared writing and using literacy props in play. Ohio's Early Learning Content Standards provide a guide for teaching and learning. Differentiated instruction is instruction that is adapted specifically to individual learners. It helps to ensure that multiple pathways to learning are provided for children at risk, whether disabled or not disabled.

Interpretations of data

Interpretations are the meanings we infer from data we review. For example, if we read an entry, "James cried loudly, and jumped up and down," we might interpret the data entry to mean that he was sad, angry or perhaps in great pain.

Intonation

Intonation refers to the rise and fall of voice pitch.

Invented spelling

This term refers a child's spelling system based on his or her knowledge of letter names and/or sounds. It also is called creative or estimated spelling.

Learning opportunity

A learning opportunity is any episode in which a young child's learning or development can be fostered. Learning opportunities in early childhood settings typically are integrated and meaningful experiences that occur within a social context. Learning experiences in early childhood settings are not typically drill and practice activities. Learning opportunities include both situations that are carefully orchestrated and planned by the educator, and those captured as "teachable moments" during an interaction with children at play. They also include situations in which children learn from one another, under the supervision and guidance of the early educator. The role of the educator is to utilize all "windows of opportunity" to facilitate and scaffold children's learning with respect to early learning content standards.

Letter approximations

Letter approximations are roughly formed letters created by the writer. Although not precise, they contain the overall shapes and lines needed to make actual letters.

Mock letters

Mock letters are symbols or letter-like marks children form to represent "writing."

Mock words

Mock words are strings of letters or characters created from the visual knowledge of words seen by the writer.

Multi-word utterances

Any spoken utterance that consists of more than one word. "Me too" is a multi-word utterance.

Objective data

Objective data is data free of interpretation and judgment.

Objective observations

When observers are objective, they strive to describe details of behavior—try to focus on seeing and hearing exactly what children say and do—setting aside all interpretations and judgments. Conscious and deliberate reflections about the behavior occur after the observations, and interpretations and judgments are made at that time, not while observing.

Observation

Observation is the act of watching carefully, especially with attention to details of behavior, for the purpose of arriving at a judgment.

Ongoing assessment

Ongoing assessment is data collected continuously within the typical daily instructional context. Ongoing assessment is essential to the processes of adapting instruction and revising learning opportunities to meet the needs of every child.

Onset-rime segments

A syllable can be divided into two parts, the onset and the rime. The onset is everything that comes before the first vowel. The rime is everything from the vowel to the end of the syllable. In string, three consonants make up the onset, and ing constitutes the rime. In ring, r is the onset, and ing is the rime. In ice, there is no onset, only a rime portion.

Over-regularization

Over-regularization refers to the use of a rule for forming past tenses of verbs or plurals of nouns with words that are irregular with respect to the rule. For example, a child might say *tooths* or *runned* instead of *teeth* and *ran*.

Phoneme

Phonemes are the smallest units of sound in a given language. The phonemes in a word are not always the same as the letters in a word. In the word *dog*, there are three phonemes (d-o-g) and three letters. In the word *snow*, there are three phonemes (s-n-o) but four letters. The English language has 41 phonemes.

Phonological awareness

Phonological awareness is the ability to think about the sounds in words apart from their meanings. This general term encompasses a wide range of skills, including the ability to notice or detect rhyming words and words that start with the same sound, and the ability to break a single syllable apart into individual sounds or phonemes.

Plotted narratives

Plotted narratives refer to fictional stories that have setting, characters and a plot or problem to be solved.

Print awareness

Print awareness is the realization that visual displays are unique in their design and organization, and represent meaning that is expressed verbally.

Reliable

Reliable in reference to data means that one educator is likely to reach the same or similar conclusions about a child as those reached by most other educators who analyze the same data.

Reliability

Reliability is a characteristic of measurement tools and data. It means that similar data would be obtained if someone else were to observe the child in the same manner on another occasion, under similar conditions. If one person observes a child crying and concludes that the child is angry, while a second person observes the same child crying in the very same situation and concludes that the child is frightened, then the data collected is not reliable.

Representative data

If data is to be representative of a child's behavior, observations must be made in a variety of settings or contexts, across a period of time. One single observation about a particular aspect of a child's behavior may not be typical of a child's overall behavior in the domain; that is, the single observation may not be representative.

Running record

A running record is a method for data collecting that provides a sequential, narrative account of children's behavior while it unfolds. It includes everything (behavior, utterances) that happens within a specified timeframe.

Speech fluency

Speech is fluent when there is an absence of effort or beginning sound repetition in words in speech. Refers to speech that is without stuttering characteristics.

Syllable

Syllable refers to a unit of spoken language. In English, a syllable can consist of a vowel sound alone or a vowel sound with one or more consonant sounds preceding or following (e.g., paper; rib-bon, I, ice).

Systematic observation

Systematic observation is collecting adequate data for all children at reasonable intervals, over a period of time, and in a variety of contexts throughout the day.

Valid

A characteristic of assessment tools that indicates a tool measures what it says it measures. When used to refer to interpretations or conclusions about data, it means that adequate data exists to back them up.

Validity

Validity refers to the extent to which data is accurate or a true indicator of the behavior that the observer or researcher says it represents. For example, if the motor behavior of skipping is not related to later skill in reading, then skipping is not a valid indicator for later reading skill. On the other hand, if letter name knowledge is shown by research to be predictive of success in learning to read, then it is a valid indicator of learning to read.

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APPENDIX

Appendix A

Research Foundations: Language and Literacy Development

The material in *Ways of Knowing* is based on research on early language and literacy learning. While not exhaustive, the following research articles and reviews of research provide a set of core readings.

Beck, I. L., McKeown, M. G., & Kucan, L. (2002). *Bringing words to life: Robust vocabulary instruction*. New York: The Guilford Press.

Beck, I. L., Perfetti, C. A., & McKeown, M. G. (1982). Effects of long-term vocabulary instruction on lexical access and reading comprehension. *Journal of Educational Psychology*, 74(4), 506-521.

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Treiman, R., Weatherston, S., & Berch, D. (1994). The role of letter names in children's learning of phoneme-grapheme relations. *Applied Psycholinguistics*, 15, 97-122.

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