EARLY LITERACY LEARNING

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According to the National Institute of Child Health and Human Development (NICHD), too many children in our nation are having difficulty reading. The National Institute of Health (NIH), part of NICHD, has conducted and supported research addressing reading failure since 1965. They report that the illiteracy rates are unacceptably high. Over 40 percent of fourth grade students performed below basic levels on the National Assessment of Educational Progress (NAEP) in 1994 and again in 1998. Over 10% of fourth grade children could not even participate in the NAEP because of severe reading difficulties. Results from longitudinal, population-based data indicate that at least 17 to 20 percent of children have a serious reading disability. Furthermore, a disproportionate number of children experiencing reading failure are poor, racial minorities, and non-native speakers of English. NICHD also reported that a significant number of children from all social classes, races, and ethnic groups have difficulty learning to read. Since reading is so critical to becoming a productive citizen, the reading crisis is considered to be both a major public health problem as well as an educational problem (National Institute of Health, 1999).

CONTEXT FOR EARLY LITERACY LEARNING

In an era of systemic educational reform that calls for higher standards and improved achievement for all students, early childhood educators are being challenged to build their professional capacity to teach young children, ages birth through six, the literacy skills that are essential for success in school and life, particularly for increasingly diverse learners. Professional capacity builds organizational capacity by increasing the quantity and quality of personnel supporting early literacy instruction, the interaction within and among organizational levels, and the material resources available (Massell, 1998). Creating a professional learning community is the primary strategy for building personal and organizational capacity. Professional learning communities focus on teacher learning in collaborative teams that engage in a constant cycle of reflection, planning, implementation and evaluation. In support of professional learning communities, Newmann and Wehlage (1995, p.37) concluded, "if schools want to enhance their organizational capacity to boost student learning, they should work on building a professional community that is characterized by shared purpose, collaborative activity, and collective responsibility among staff." Building professional and organizational capacity in learning communities to accomplish the goals and content of early literacy instruction, targets the need for professional environments where teachers can grow in their ability to make decisions about how best to improve literacy learning. More and more school leaders are involving early childhood educators in an array of opportunities to improve their professional skills and increase their effectiveness to teach early literacy. This chapter is designed to support the efforts of teachers and support personnel of young children as they seek to create professional learning communities as a strategy for building and sustaining personal and organizational capacity to effectively teach all children the foundational literacy skills.

CRITICAL QUESTIONS IN EARLY LITERACY TEACHING AND LEARNING

The critical questions driving early literacy reform agendas for the 21st century are: "What should early childhood educators know and be able to do to foster competence of early literacy skills?" and "How will we know when (and if) teachers

know and can do what they ought to know and be able to do to teach early literacy"? (Cochran-Smith, 2000) Seeking answers to these questions engages educators in a discovery process that offers insight into the relationship that exists among teacher learning, teaching practice, and student learning. The answers to these questions require an account of the essential knowledge and skills required to teach early literacy, the effective research based early literacy instructional practices, the nature of early literacy professional renewal in learning communities, and exemplary accountability systems for ensuring quality teaching and learning. This chapter, Early Literacy Learning, is a starting point for early childhood educators and support personnel on a personal journey to create cultures of continuous learning to enhance professional relationships and practices that ultimately impact the literacy achievement of all children birth through six years old.

EARLY LITERACY RESEARCH: THE FOUNDATION FOR EARLY LITERACY TEACHING AND LEARNING

"What should early childhood educators know and be able to teach early literacy skills?" stimulates our thinking about the essential knowledge, skills, and dispositions of effective teachers of early literacy. Implicit in this knowledge question is the role, if any, of research in the process of making literacy instructional decisions and identifying effective teaching strategies and processes used by effective literacy teachers. The president of NAEYC rephrased this knowledge question, "early childhood educators must define what young children should know…" (Kagan, 1999, p. 3). Researchers and experts in the field of literacy from across the nation were called upon in the late 1990s to review and

evaluate over thirty years of existing research on literacy teaching and learning in an attempt to answer the knowledge question. The reports generated from these panels of experts provide educators with a blueprint for effective early literacy teaching and learning. These seminal works include: _On the Road to Reading (U.S. Department of Education, 1997); Preventing Reading Failure in Young Children (National Reading Council, 1998); Starting Out Right: A Guide to Promoting Reading Success (National Reading Council, 1999), Keys to Successful Learning (National Institute of Health, 1999); How Are the Children? Report on Early Childhood Development and Learning (1999); and Report Teaching Children to Read: An Evidence-Based Assessment of Scientific Research Literature on Reading and Its Implications for Reading Instruction (The National Reading Panel, 2000)._ Each of these publications makes a significant contribution to the improvement of literacy teaching and learning by synthesizing effective research based practices and reporting implications and implementation strategies for creating literacy rich experiences in the early childhood classroom. This chapter examines these and other publications in an effort to summarize the essential skills children need to learn, the optimal timeline for acquiring those skills, the most effective strategies for teaching the skills, and the elements of quality learning environments that support successful language and literacy development during a child's first six years of life.

EARLY LITERACY DEVELOPMENT

Reading instruction in the primary grades is dependent upon high-quality early childhood and kindergarten environments created by teachers and support personnel who are "well prepared, highly knowledgeable,

and receive ongoing support" (National Reading Panel, 1998, p. 6). Before completing kindergarten, young children need to *acquire spoken language skills, listen to and interact with books, experiment with writing, learn the letters of the alphabet, engage in activities to develop phonemic awareness and alphabetic literacy, and develop world (concepts) and word (vocabulary) knowledge.* Similarly, early childhood teachers and support personnel need to understand the similarities and differences between written and spoken language; acquire knowledge of the critical cognitive, linguistic, genetic, neurobiological and instructional conditions and factors that promote and foster early literacy development; be consumers of the research on early literacy; acquire knowledge of research based literacy instructional approaches and strategies; apply those strategies when teaching children the essential reading skills; use assessment for the purpose of instructional planning and engage in ongoing, relevant professional development.

The essential knowledge and skills identified emanated from a review of research in three interrelated areas of study critical to understanding, promoting, and facilitating early literacy learning. These areas of study are child development, cognitive and neuroscience, and language and literacy development. A summary of the findings from research in these disciplines lays the foundation for understanding, planning, implementing and assessing early literacy teaching and learning.

> *Children develop in four, interrelated areas-cognitive and language, physical, social and emotional. Physical development includes gaining control over the small muscles used to pick up and hold things and building the large muscles used to walk or throw a ball. Cognitive and language development include the thinking and reasoning skills used to solve problems and the acquisition of language. Social development involves learning to develop relationships and get along with other children and adults. Emotional development is closely tied to social development and leads to a sense of identity. Most children follow the same sequence and pattern for development, but do so at their own pace. Language skills are closely tied to and affected by cognitive, social, and emotional development. Children first learn to listen and speak, then use these and other skills to learn to read and write. Children's experiences and interactions in the early years are critical to their brain*

development and overall learning. Emerging literacy is the gradual, ongoing process of learning to understand and use language. Children make numerous language discoveries as they play, explore, and interact with others. Children build on their language discoveries to become conventional readers and writers. Effective readers and writers know that print carries meaning, know what written language looks like, can identify and name letters of the alphabet, know that letters are associated with words, know the sounds that letter make, recognize letters and words, follow writing rules, and create meaning from text. Successful programs to promote children's reading and literacy development should be based on an understanding of child development, recent research on brain development, and the natural ongoing process through which most children learn to read (U.S. Department of Education, 1997, pp. 1-12).

The critical experiences that promote cognitive/language, social/emotional, and physical/motor development provide a foundation for educators to create research-based early literacy curriculum and literacy-rich environments that accept and celebrate individual differences, thereby maximizing the potential for all children to experience academic success.

A theoretical and research-based knowledge of early literacy development and its relationship to the broader disciplines of child development and learning is critical to understanding how children acquire literacy competencies as they grow and adapt to the world around them. Educators' knowledge of how children learn is informed by prominent developmental and learning theories generated from cross-discipline research. Currently, child development and learning theory, specifically constructivist theory from cognitive science, brain research from neuroscience, and social cognition theory from child development influence instructional practices at all age levels. Common among these theories is the concept of learning as a social process.

Cognitive and Language Development

Learning for young children generally proceeds along a developmental continuum broadly delineated into three stages coinciding with, but not contingent upon, specific ages: infants (birth to 1 year old), toddlers (1 – 3 years old), and 3 – 6 years old. Cognitive and language skills develop as learners interact with each other, family members, and teachers during problem solving experiences. The cognitive "stages" theory of Piaget, the social development theory of Vygotsky and the constructivist theory of Bruner are relevant to the development of early literacy. Jean Piaget (1896-1980) described the process of coming to know the "stages" one progresses through as knowledge is acquired. Piaget investigated the relationship between thinking and language learning. He theorized that behavior is controlled by a mental system of organization called schemas or concepts. Schemas are "mental structures in which we store all the information we know about people, objects, or activities (McGee & Richgels, 1996, p. 5). According to McGee & Richgels, 1996, p. 6), "Thinking is calling to mind information from schemas and using that information to make inferences, predict, draw conclusions and generalize. Learning involves adding to or changing schemas."

Vygotsky's social cognition theory of literacy acquisition focused on social

interactions rather than "stages" of development. "Vygotsky believed children are able to talk about a new problem or concept in order to understand it and use it" (Richgels, 1996, p. 8). The communication that occurs between a child and adult or peer helps children to clarify and internalize the language structures necessary to adequately solve problems or understand concepts. Scaffolding, the instructional technique generated from this theory, weans children from teacher modeling of a desired learning strategy or task to student initiated learning and problem solving (Beed, Hawkins, & Roller, 1991). Constructivism views the learner as an active participant in the learning process; children acquire knowledge by interacting, both verbally and nonverbally with the people in their environment.

Language is the most complex skill that people acquire. Children develop language skills before they can speak, just as they develop literacy skills long before beginning to read (National Reading Council, 1998). Despite the complexity of language children develop from nonverbal infants to become skillful speakers and listeners. Goodman (1986, p. 8) proposes that language is best learned when it is "real and also natural, when it is sensible and interesting, part of a real event, has social utility, has a purpose for the learner, and when the learner has the power to use it." Oral language development and reading success are closely related.

Language and literacy development thrive in a pleasurable environment that offers children the freedom to explore and make choices. A longitudinal study following children from ages one to seven reported that the content and style of language used with the children were predictors of reading achievement (Hall & Moats, 1999). Young children are ready to engage in oral language and literacy experiences during the first 24 months of their lives. Social smiling is regarded as one of the first expressive milestones, followed by cooing around two or three months of age. Infants begin to babble consonants around six months. The acquisition of vocabulary begins to accelerate around one year of age. Around the second year, children begin to develop a semantic structure. Two year olds begin to understand that objects and people in their environment have names. At this point, their vocabulary increases each day. Children at this age both point to and name the objects, using single word utterances. This critical time period builds a strong foundation for later academic success (Burns, Griffin, & Snow, 1999; Strickland & Morrow, 1988). Oral language skills, which include vocabulary development, use of grammatical

structures, sustaining conversation, and problem solving, are predictors of future reading achievement (Mid-continent Research for Education and Learning, 1998; Snow, Burns, & Griffin, 1998; Clay, 1991). By the age of two years, children begin to articulate understandable speech. Three and four year olds develop literacy skills rapidly. These are the critical years for language development as children begin to use all of their senses to explore their immediate environment and build relationships with people who care for them. During the third year, grammar begins to emerge as children speak in short phrases such as "go bye bye." Toward the end of the third year, full sentences appear followed by the use of pronouns, prepositions, plurals, and verb conjugations.

Language Development
First Months Through the Second Year

Oral language precedes literacy and then parallels it (Strickland & Morrow, 1988).

Infants mimic the tones and rhythms of adult speech.

Gesturing and facial expressions and words begin to have meaning (International Reading Association, 1998).

Mouthing and playing with books is natural exploration for children who have been read to regularly.

Book handling is associated with babbling. Experts believe the child is imitating the adult's vocalizations during reading (Snow, et. al., 1998).

Children Learn the grammatical structure of language, expand their vocabulary, and gain metalinguistic skills as language develops.

Metalinguistic skills develop allowing children to use language, think about it, play with it, talk about it, and make judgments about

correct forms (Snow, et. al., 1998).

Excerpted from Pathways to School Improvement, Early Childhood, Addressing the Needs of Emergent and Early Readers (Available: http://www.ncrel)

The development of conjugations generally follows a pattern, "-ing" is learned, then "-s" and then "ed." In preschool, vocabulary continues to increase and children produce more complex grammatical constructions. They also learn the pragmatics of language, how to engage in a social conversation, how to tell a story, and how to modulate the tone and pitch of their speech to mirror their conversational partner.

Oral Language Development
Implications for Classroom Practice
Researchers found that the following oral language skills contribute to success in formal reading instruction:

    Large vocabulary
    Use of correct grammatical forms in conversation
    Ability to sustain conversations
    Motivation to use language to solve problems
(Hall & Moats, 1999)

The quality of experiences to which a child is exposed during key "learning windows" builds the foundation for future cognitive and language as well as physical and motor, and social and emotional development. Developmental stages of change combine to become a synergistic force that builds the capacity of each child to think, reason and communicate at increasingly higher levels.

Although these ages tend to be recognized as the typical milestones in the development of early literacy skills, not all children follow this exact timeline. There is evidence that the ages at which the first word is spoken has little effect on later school success. Equally as surprising is that the ages at which a child reaches the milestones are

only minimally correlated with the environment in which the child develops. Most children show tremendous resilience in language development.

Reading to children offers opportunities to develop prior knowledge, expand speaking and listening vocabularies, enhance children's natural language learning listening, increase familiarity with the way stories progress (story patterns); increase ability to comprehend and talk about stories; and have a greater familiarity with a range of books; increase attention span (Dickinson & Smith, 1994; Salinger, 1995). Children who have been read to regularly enjoy pretend reading, "reading" a picture book using clues from the pictures (Pappas, 1993). Pretend reading behaviors include carefully considering book selections; holding a book correctly while looking at and turning the pages; telling a story while holding a book; pointing at words while paraphrasing the story (this indicates that the child is aware that words are "units of meaning,") and using interesting intonations, both of which enhance reading comprehension and development of critical reading strategies. Reading to children enriches language, facilitating familiarity with language patterns, the flow of written language, and story structure. A wide range of literacy materials helps children gain an understanding of the language of their world and the different cultures that are present.

Parents as Partners in Language Development
Parents should:

Involve child in dramatic play after a song or favorite story to develop vocabulary, concepts and creativity.

Stimulate language and literacy development through one-on-one interaction with the child.

Stimulate child's mind by cooing, sing lullaby, and read aloud to a baby, toddler or preschooler.

Engage child in counting, number concepts, letter names and shapes, sound/letter associations, reading and being read to, and cooperating with other children.

Teach child nursery rhymes. Read and reread high-quality children's literature (Wells, 1985).

A strong connection exists between oral language development and early literacy learning. In contrast to oral language development, reading does not emerge naturally from interactions with adults, even in print-rich environments. Between the age of three to six, children become more cheerful,

energetic and enthusiastic. Their language mirrors their general mental activity, i.e., their language offers a window for observing what they know and what they are thinking (http://www.nncc.org/Child). Many five-year-olds begin kindergarten, while others are viewed as not ready. Bruner appears to have captured the essence of "readiness for school" (Katz, @http://readyweb.crc.uiuc. edu/lebrary/1991/katz91.htm) dilemma facing educators and parents:

> *if readiness consists of a mastery of simpler skills that permit one to reach higher or more complex skills, one child's readiness may be another child's long-ago-accomplishment or another child's yet-to-be-achieved success. Whenever we define readiness in terms of a specific level of accomplishment, we are omitting children from this definition who have not had similar life experiences or opportunities for learning. (CIERA Report # 3-002, p. 5 http://www.ciera).*

Reading requires systematic and explicit instruction although the degree of explicitness, directiveness, intensity and duration of instruction requires developing specific reading components that would vary across children. Learning to read is a relatively lengthy process that begins very early in children's development and before they enter formal schooling. There is a strong and critical relationship between the amount and quality of early language and literacy interactions and experiences and the acquisition of the linguistic skills necessary for reading. Moreover, frequent language and literacy interactions from birth onward serve to aid in the development of "*oral vocabulary, an awareness of print and literacy concepts, and an understanding of the goals of reading.*" Exposure to oral reading and language play (e.g., rhyming) has been found to

serve a foundation role in the development of phonemic awareness (National Institute of Child Health & Human Development, 1999).

Brain Research

In a publication, How Are the Children? "Report on Early Childhood Development and Learning (U.S. Department of Education, September 1999), emphasis is placed on 10 key lessons drawn from current research on child development. Together, these lessons clearly indicate the need for careful attention to children's development during the early years. Each lesson summarizes findings from brain research in easy to understand language for parents and early childhood educators and care givers. The ten lessons include: new brain research underscores the importance of education and the power of effort; early experiences affects how brains are "wired"; the young brain is a work in progress; every child is unique; children learn in the context of important relationships; "small talk" has big consequences; children need many kinds of stimulation; prevention is crucial; and the cradle will rock (warm, responsive, consistent care).

Literacy Learning Practices from Brain Research

Uninterrupted time to play

Repeated exposure to oral and written language

Opportunities to listen to quality children's literature

Time to explore a literacy rich environment

Safe, non-threatening environment

Strong bonds with caregivers or educators

Interaction with physical development equipment in the environment

Time to interact with books

Exposure to manipulatives designed to improve

fine motor skills, encourage problem solving, and improve visual perceptual skills

Discovery of the tactile way of knowing, and increase attention span

Engagement in authentic conversations with peers

http://mdk12.org/practices/good_instruction/brain_research.html

Neuroscientists have added to our knowledge of the biological basis of consciousness, perception, memory, and learning. Their research has linked human observation about cognitive behavior with the physical processes that create the behavior. Brain researchers have reported that the processing brain makes meaning for the learner. "The brain seeks and perceives patterns, creates meanings, integrates sensory experience, and makes connections" (Brain Research/Best Practice @ http://mdk12.org/ practices/good_instruction/ brain_research.html). Dr. Harry Chugani (1996), a physician from Wayne State University who conducts brain-imaging research reported that children learn fastest and easiest between the ages of 4 and 10. These years, according to Dr. Chugani, are the years that children receive the least cognitive input.

Complicated and highly technical research coming out of neuroscience tells us that infants' brains develop at a rapid rate immediately following birth. Brains learn automatically, in response to rich stimuli. The capacity for children to learn depends on the quality and frequency of experiences provided by the adults who care for them. Reading, according to experts, has been described as creating a context in which learning can occur. Evidence is now available that supports the importance of reading in a young child's life. Reading, it has been shown, is one of the experiences that actually influences the way young brains develop—that is, the way the brain's circuitry is "wired" (Shore, 1997). Twenty years of brain research also confirms that reading stories, storytelling, singing, and conversations with young children promote the natural development of language skills. Early language learning experiences not only nurture cognitive growth, but also encourage social competence and emotional connections as well.

Neuroscience and cognitive science present educators with a deeper understanding of how the brain works, i.e., how children learn. This information has the potential to alter our practices to maximize the windows of learning opportunities for each child from birth (Caine, 1997). Two researchers have

identified twelve learning principles that emphasize the connections and patterns the brain makes as we learn (Caine & Caine, 1994). Embedded in these principles are several nuggets of information that provide important insights into optimal learning environments: ❶ We learn from each other as we interact in different contexts, ❷ Our brains seek connections to what it already knows and ❸ Human beings are intelligent in different ways and have different learning styles.

Researchers report that the brain learns faster in challenging, creative, accommodating, and healthy environments. To provide for the growing, learning brains of our children, we must not forget that the environments we design have a major influence in building smarter brains. They suggest that optimal learning environments that engage, challenge and interact with brain growth include: art and music programs with appropriate facilities; architecture and landscaping that are aesthetically stimulating; and exercises such as spinning, crawling, rolling, rocking, tumbling, swinging and jumping to strengthen the brain's main areas (Chan & Petrie, 1998). Jenson (1998) suggests that learning is enhanced by environments that incorporate daily stretching, walking, and dancing in rooms that are spacious with moveable, stackable, or collapsible furniture; provide warm colors and brilliant lighting to stimulate muscular tension, respiration, pulse, blood pressure, and brain activity; and offer comfortable temperatures and protection from distracting sounds that send comfort messages to the brain.

Critical Lessons from Brain Research

The critical lessons to be learned by educators from brain research are ❶ the years birth through three are critical learning years for all children; ❷ synaptic connections made during this critical developmental period become stronger with age; ❸ children who do not have rich literacy opportunities during these early years can, with considerable time and effort on the part of caring and supportive adults, close the achievement gap; ❹ the debate as to whether nature or nurture dominates development is no longer a "competition," instead scientists now agree that it is a "dance" (Nash, 1997); ❺ policy makers have critical findings from brain research that can support high quality early learning environments for all children; and ❻ "three principles from brain research-emotional safety, appropriate challenge, and self-constructed meaning-suggest that a one-size-fits-all approach to classroom teaching is ineffective for most students and harmful to some" (Tomlinson & Lalbfleisch, 1998, p. 1).

Neuroscience informs us that fostering a positive relationship in a caring and stimulating environment motivates children to learn through active interaction and engagement with adults, peers, and the materials. Motivation to learn, according to neuroscientists, is directly related to relationships (Caine & Caine, 1994).

Emerging brain research supports constructivist learning theory, suggesting that learning is affected by the context in which an idea is taught. Cognition is a fluid process, enabling active learning as children structure meaning of the world and develop thinking skills. Natural early learning environments encourage children to explore, problem-solve, and construct new meaning of their world. The learner in the constructivist classroom makes meaning of new concepts by reflecting upon

and integrating new learnings with prior knowledge. Constructivist learning theory promotes children taking an active role in learning experiences, assuming responsibility for their own learning, demonstrating understanding, exploring a variety of materials and striving for deep understanding in authentic learning experiences.

Language-Rich, Literacy-Rich Early Learning Environment

Vygotsky's learning theory of social cognition has influenced some of the current research on collaboration and conversation among students and teachers and on the role of cultural learning and schooling. Human beings are products not only of biology, but also of their human cultures. Intellectual functioning is the product of our social history, and language is the key mode by which we learn our culture and through which we organize our verbal thinking and regulate our actions.

Children learn such higher functioning from interacting with the adults and other children around them as they engage in activities and dialogue with others. Children gradually internalize this dialogue so that it becomes inner speech, the means by which they direct their own behavior and thinking. For example, as adults use language such as, "That piece does not fit there; let's try it someplace else," children may initially just imitate this strategy. However, they gradually use it to regulate their own behavior in a variety of contexts. Eventually, this dialogue becomes internalized as inner speech. When alone, very young children tend to talk about what they have done after they complete an activity. Later, they talk as they work. Finally, they talk to themselves before they engage in an activity. Speech now has assumed a planning function. Later they internalize this speech. Inner speech, a major mode of learning, planning, and self-regulation, is conversations we carry on with ourselves that begin as social dialogue with other people.

Various experiments demonstrate this self-regulating function of inner speech. Vygotsky reasoned that when people are asked to solve difficult problems or to perform difficult tasks, inner speech becomes external, taking its more primitive form. In other words, people frequently talk to themselves when they face a problem. This internalization of speech is often observed in children. When they engage in familiar, simple activities, they usually do so without talk, but faced with difficult tasks, they may whisper or talk out loud to themselves. Adults do this, too. When they are faced with perplexing or unfamiliar tasks such as figuring out how to work a VCR—they often talk themselves

through such tasks. Children interacting toward a common goal tend to regulate each other's actions. Other researchers have observed that when students work together on complex tasks, they assist each other in much the same way adults assist children. In such tasks, dialogue consists of mutual regulation. Together, they can solve difficult problems they cannot solve working independently. Effective early childhood educators engage in regulating dialogue with children almost naturally. As children learn, adults change the nature of their dialogue so that they continue to support the child but also give the child increasing responsibility for the task (for example, the adult might say, "Now see if you can find the next piece of the puzzle yourself."). Bruner referred to this as scaffolding. It takes place within a child's zone of proximal development, a level or range in which a child can perform a task with help (Piaget referred to this as "teachable moments" when adults stretch a child's capacity, but stay within what they are capable of understanding). The **zone of proximal development, scaffolding, and dialogue** are especially useful concepts or frameworks for school learning. Vygotsky observed that effective teachers plan and carry out learning activities within children's zones of proximal development, through dialogue and scaffolding.

Role of Play

High quality early literacy learning environments consider play to be the work of children. Play is the curriculum for early childhood. "Play involves free choice that is non-literal, self-motivated, enjoyable and process oriented (Wardle, 1999, p. 6). According to Wardle, non-literal, non-realistic free choice means, "external aspects of time, use of materials, the environment, rules of the play activity, and roles of the participants are all made up by the children playing" (1999, p. 6).

Play fosters learning as youngsters explore their world and engage in conversations about the things they are seeing, touching, smelling, and tasting. In other words, they are sampling their environment through their senses. There are several types of play that are critical to future academic success: physical/motor play, social play, constructive play and fantasy play. Physical play provides opportunities for children to develop their gross and fine motor skills and the integration of the mind (brain function) and body (muscles and nerves). Shore (1997) confirmed that a vital link exists between motor activities and brain development. Social play develops an understanding of pro-social behaviors including helping, sharing, cooperating, taking turns, and negotiating. Constructive play occurs as children manipulate their environment to create a new learning situation. Building blocks, for example, become an intricate, busy highway leading to a city with tall buildings, a gas station and grocery store. Wardle (1999) elaborates on constructive play, explaining that it "allows children to experiment with objects; find out combinations that work and don't work; and learn basic knowledge.

Through play children increase their language skills, engage in social interaction, build their physical strength and motor coordination, and master appropriate cognitive skills. Goodman (1986, p. 8) reports that language is learned best when it is 'real and also natural, when it is sensible and interesting, part of a real event, has social utility, has a purpose for the learner, and when the learner has the power to use it. In a literacy-rich early childhood setting children experience books being read to them and have opportunities to enjoy "reading books", telling stories, singing, reiterating finger plays, and engage in dramatic play.

Dramatic play with literacy props promotes and fosters early literacy development (Burns, Griffin, & Snow, 1999; International Reading Association & National Association for the Education of Young Children, 1998; McGee & Richgels, 1996; Neuman & Roskos, 1993). While engaged in dramatic play, young children interact with other children; share and take turns; role-play characters in stories or adults in their environment; exercise their imaginations; deal with personal relationships; build oral language skills; extend and enrich their language; and make sense of the world around them. Communicating in spoken language and in play are very closely related to communicating in written language," note McGee & Richgels (1996, p. 17). They add that "play provides a rich context for extending children's understandings about written language" (p. 288). In their play, children can use a variety of literacy materials to act out everyday events requiring the use of reading and writing. " Sociodramatic play activities give children a chance to develop language and literacy skills, a deeper understanding of narrative, and their own personal responses to stories," (Burns, Griffin, & Snow, 1999, p. 72).

Language play involves the use of language in rhyme, alliteration, and repeating patterns in order to amuse and delight children. Literate environments providing experiences in language play support the development of phonemic awareness (Hall & Moats, 1999; Burns, et al., 1999; International Reading Association and National Association for the Education of Young Children, 1998; McGee & Richgels, 1996). http://www.ncrel.org /sdrs/areas/issues/content/cntareas/reading/li1lk27.htm

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Literacy Learning Practices that Incorporate Play

Teachers in literacy-rich classrooms

Select play themes that are familiar to children and have literacy potential.

Separate the play center from the classroom with screens or tables.

Label the play center with a sign hung at the children's eye level.

Select dramatic play props related to play themes.

Select literacy props related to play themes (such as appointment cards and book, patient charts, and prescription slips for a doctor's office).

Arrange materials within the space to suggest a realistic setting related to the play theme. McGee and Richgels (1996).

Games, fingerplays, songs, nursery rhymes, poems, and stories that contain rhyme, alliteration, and repeating language patterns provide a context for playing with language (Hall and Moats, 1999; Burns, et al., 1999; International Reading Association and National Association for the Education of Young Children, 1998).

High quality language/literacy-rich environments engage learners in a variety of books – picture books, rhyming books, alphabet books, short stories, poetry books, chapter books, and information books –that encourage language play, conversations, book discussions, extended discourse, dramatic play, reading and writing experiences, and literacy learning through the visual and performing arts.

In high quality early literacy programs, reading and discussing books are critical components of the curriculum. Quality children's literature engages children in the exploration of print that is requisite to understanding that written language conveys a message, words have meaning, pictures can be "read," and spoken words match written words. Children who have had ample experiences listening to stories often reproduce the new ideas from the story during their play. During parallel play, a term used to describe children playing beside each other not with each other, children often repeat ideas that they heard in a story. After the age of three, children begin to enjoy playing together and sharing ideas, thoughts and experiences. They create the context for their contrived social interaction, (e.g., you be the mommy and I'll be the daddy and you be the baby). Children older than 3 begin to retell the stories read to them, generally acting them out using props located through out the room.

Researcher Susan Neuman, Professor of Education at Temple University in Philadelphia and the current director of the National Center for the Improvement of Early Reading Achievement (http://www.ciera.org), found that young children from poor families have limited access to high quality books and that teachers of young children have limited financial resources to build an adequate classroom library. Neuman (1999), in her study Early Years, reports that, "Without significant public support for needed books and professional development for teachers, children from low-income families will continue to bear the brunt of this literacy gap that has powerful long-term negative consequences for future school achievement (Full text available online: http://www.ciera.org).

Role of Caregivers and Teachers in Play

Children, who have not learned the pragmatics of language at home, need a safe environment with an attentive adult to encourage mastery of the art of conversation. When caregivers, teachers and parents have daily one-on-one conversations with a child, they have an opportunity to assess language development, understanding of concepts and thought processes, and familiarity with the techniques of verbal interchanges. Group discussions create opportunities for sharing experiences, listening attentively before speaking, taking turns communicating ideas, building prior knowledge and clarifying concepts. Small group conversations enhance interpersonal skills, helping young learners listen to and learn from others.

In a literacy rich classroom, teachers and young children can build bonds through conversation. Young children discover the social world of language through these positive interactions with a caring adult. Teachers can learn about children's language and how they can help students expand their range of communication skills by engaging them in conversation. A relationship exists between

young children's motivation to learn and their perception that adults care about them as individuals and their learning. Caring is one element that appears to most strongly influence whether children enjoy school (Lumsden, 1999). This suggests that caring environments with clear, high expectations are the underpinnings of motivation. "The nature of students' relationships with teachers is central to what makes school appealing or distasteful, inviting or uninviting.

Extended discourse refers to the involvement of children in "talking and writing extensively in a variety of settings (with a variety of partners, including the teacher, in small groups, and in whole-class gatherings)" (McGee & Richgels, 1996, p. 401). The emphasis is on the sustained use of language, such as a conversation (as opposed to a single directive) or a poem, short story, essay, or book (as opposed to a single printed label or sign). Such conversations and communications support children's development of oral language, reading, and written expression.

Burns, et al., (1999) in their comprehensive publication, Preventing Reading Difficulties in Young Children (1998), reported that "for young children whose developing minds are striving to become literate, talk is essential—the more meaningful and substantive, the better" (p. 19). They conclude, "talking to adults is children's best source of exposure to new vocabulary and ideas" (p. 19). Adults can encourage extended discourse by providing a comfortable setting, allowing children to take the conversational lead, and joining in their play. It is important that children are encouraged to engage in conversation with a variety of attentive partners—particularly parents and teachers—on topics that interest them (Burns, et. al., 1999).

Early Literacy Development: Birth Through Kindergarten

Landmark research by Marie Clay in 1966 on early literacy learning launched three decades of an extensive body of research that elevated our understanding of the critical literacy skills needed for academic success (Ramsburg, 1998). She embraced the theory of **emergent literacy** that grew out of the research from child development, psychology, education, linguistics, anthropology and sociology. Emergent literacy has replaced the term reading readiness and has redefined the field of literacy. Emergent literacy suggests that the development of literacy skills occurs within the child over an extended period of time. Emergent literacy, unlike reading readiness, focuses on the development of the critical reading, writing, speaking and

listening skills. Reading readiness, on the other hand, specifies one point in time when a child is ready to engage in formal reading and writing instruction, usually at the beginning of kindergarten.

Emergent Reading

According to the theory of emergent literacy, learning to read and write begins very early in life. Children have very early contact with written language. By age 2 or 3 many children can identify signs, labels and logos in homes and communities. Young children also experiment with writing. Early scribbling displays characteristics of the writing system of their culture. *Reading and writing develop concurrently and interrelatedly in young children. Writing is actually an easier first learning activity for young children than reading.* Literacy develops from real life situations in which reading and writing are used to get things done. Function precedes form. For children, literacy is functional, meaningful, and authentic, just as it is for adults. Literacy is used to "get things done. Children learn literacy through active engagement. Children learn literacy through their favorite reading and rereading of storybooks. When they "reread" the book it is not a memorization of text. This is an example of the child reconstructing the meaning of the book. When you see invented spelling you witness a children's attempts at reconstructing knowledge of written language. "Invented spelling" is a way to see the phonetic elements a child knows. Being read to plays a special role in the literacy development of the young child. By listening to the printed work children can develop a feel for the patterns, the flow, and the nature of written language. Children receive a global sense of what reading is all about and what it feels like. They develop a positive attitude towards reading which is a powerful

motivation when the child reaches school. Learning to read and write is a developmental process. Children pass through the stages in a variety of ways and at different ages. The theories of Piaget and Vygotsky were instrumental in understanding the developmental processes that children experience in learning. There are developmental stages in a child's reading acquisition (Mason, 1980) and developmental stages in a child's writing growth (Sulzby, Barnhart, & Hiesima, 1990).

Emergent Writing

We now know that reading and writing skills emerge together and are interrelated (Teale & Sulzby, 1986). During the early literacy learning years, children develop writing skills in several stages: understand that written language conveys messages; pretend read and write; turn pages of books; invent the story using pictures and their memory of a story begin to match spoken words with print (concepts of print); may know some letter names and some letter - sound associations; may recognize some words and letters in their environment or in text; but not again in a different context; they may still be unsure of the concept of "word" or "letter"; can write some letters, usually those in their own names; in writing may reverse some letters, and may use mostly upper case letters; may make scribbles or strings of random letters with no spaces; one letter may represent a whole word; may "read" or attribute meaning to his or her marks; may not be able to "re-read" these marks at a later time.

Children in this phase benefit from seeing reading and writing modeled through listening to good stories and seeing others write meaningful messages; supported practice while reading engaging predictable books with pictures that clearly relate to and illustrate the

story line; encouragement to experiment with writing; experience with sorting words and pictures to build letter and sound recognition (phonemic awareness); experience with rhyming and other word play; activities that engage students in using oral and written language(Bank Street College, 1997).

Once children have acquired these skills, they are ready to practice the sound structure of words, i.e., the letter/sound correspondences, usually during the later preschool years or in kindergarten. Acquisition of these competencies during the early years is fostered in environments where children actively engage in authentic learning experiences that integrate the cognitive, physical/motor, and social/emotional developmental domains.

Early literacy skills do, to some extent, develop without intervention; the level of early literacy skills needed to achieve success during formal instruction, however, require a human, social, language-based, and meaning making context. Acquisition of beginning reading and writing skills involves several critical competencies: cognitive and language skills, print concept/print awareness, letter knowledge, phonemic awareness (linguistic awareness of words, syllable, phonemes), and alphabetic principles (graphophonic symbols/sounds) (Diamond & Mandel, 1996; Allington and Cunningham, 1996; Hall & Moats, 1999; Holdaway, 1979). Burns, et. al., (1999) report that three early literacy learning competencies are heavily correlated with later literacy success: oral language skills and phonological awareness; motivation to learn and appreciation for literate forms; and print awareness and letter knowledge. Teaching beginning reading and writing skills "must be purposeful, strategic, and grounded in the methods proven effective by research" (Fitzsimmons, 1998, p. 1).

Young children use phonetic spelling, also called invented spelling or transition spelling, to write their thoughts. Many teachers and parents are concerned that the continued use of phonetic spelling during writing will lead to a life time of poor spelling. Burns, et al., (1999) support invented spelling to allow young children to express their thoughts in writing. "It is important for parents and teachers to understand that invented spelling is not in conflict with correct spelling. On the contrary, it plays an important role in helping children learn how to write. When children use invented spelling, they are in fact exercising their growing knowledge of phonemes, the letters of the alphabet, and their confidence in the alphabetic principle. A child's 'iz' for the conventional 'is' can be celebrated as quite a

breakthrough! It is the kind of error that shows you that the child is thinking independently and quite analytically about the sounds of words and the logic of spelling" (p. 102).

Stages of Developmental Spelling

Graves (1983) describes five general stages of invented spelling: the child emphasizes the initial consonant of a word (such as the g in grass) and writes the letter G; the child emphasizes the initial and final consonants (such as g and s in grass) and writes GS; the child emphasizes initial, final, and interior consonants (such as g, r, and s in grass) and writes GRS; the child emphasizes initial, final, and interior consonants, and the vowel placeholder (the vowel may be incorrect, but it is in the correct position) and writes GRES; the child uses "the full spelling of the word, with final components from visual memory systems and better vowel discrimination and writes GRASS" (Graves, 1983, p. 185).

Research on How Children Learn to Read

In 1997, the U.S. Congress commissioned the Director of the National Institute of Child Health and Human Development (NICHD) of the National Institutes of Health, in consultation with the Secretary of Education, to create a National Reading Panel to extract the scientific research based findings that have the greatest potential of impacting early childhood teaching practices (Report of the National Reading Panel, 2000, p. 3). The Panel, comprised of parents, teachers, administrators, researchers, administrators, researchers, policy makers, and other education and child development leaders, conducted the most comprehensive evidenced-based review of research on how children learn to read. In April of 1998, the Panel began reviewing more than 100,000 research studies conducted during the three decades since 1966 and 15,000 conducted prior to 1996. The National Reading Panel, working in subgroups, identified seven broad questions to guide their efforts to identify research based reading instruction and its readiness for application in the classroom. The panel focused on the following areas: alphabetics (phonemic awareness and phonics instruction), reading fluency, reading comprehension, teacher education, and computer technology.

The major question to be answered by the panel was, "How do children learn to read?" The findings of the panel clarify years of research in literacy development. These are their conclusions:

Reading is not a natural process. Reading, in contrast to oral language, does not emerge naturally from interactions with parents and other adults, even when children are exposed to literacy-rich environments.

Most children require systematic and explicit instruction. However, research findings have been unclear about the degree of explicitness and the intensity and duration of instruction to ensure student achievement. Learning to read is a relatively lengthy process that begins very early in children's development and substantially before they enter formal schooling.

There is a strong and critical relationship between the amount and quality of early language and literacy interactions and experiences and the acquisition of the linguistic skills necessary for reading. Moreover, frequent language and literacy interactions from birth onward serve to aid in the development of oral vocabulary, an awareness of print and literacy concepts, and an understanding of the goals of reading. Exposure to oral reading and language play (e.g., rhyming) has been found to serve a foundational role in the development

of phonemic awareness.

Reading development requires the acquisition of phonemic awareness and other phonological processing skills. Specifically, a necessary foundational skill that beginning readers must master is that the words and syllables that they hear via oral language are composed of small units of sound, termed **phonemes**.

Becoming aware of the sound structure (phonemes) within syllables and words is made difficult because unlike writing, when communicating orally, the separate sounds composing an utterance cannot be "heard" by the ear due to a process termed co-articulation. In essence, to learn to read, the individual must discover that spoken words can be segmented into smaller units of sound, that letters on the page represent these sounds, and that written words have the same number and sequence of sounds heard in a spoken word.

The beginning reader must be able to translate print to speech. In an alphabetic language, like English, the individual letters on a page are initially abstract and meaningless optical units. These optical shapes must eventually be linked to sounds - the phonemes discussed above. In essence, the beginning reader must learn the connections between the 26 letters of the alphabet and the approximately 44 English-language phonemes. The understanding that written spellings systematically represent the phonemes of spoken words is termed **"the alphabetic principle"** and is absolutely necessary for the development of accurate and rapid decoding and word reading skills.

The development of sound-symbol relationships is also frequently termed "phonics." Although the development of phoneme awareness and the alphabetic principle are necessary to learn to read, these skills, in and of themselves, are not sufficient. Specifically, in order for the novice reader to begin to devote more attention and memory capacity to the text that is being read for strong comprehension to occur, phonological and **decoding skills** must be applied accurately, fluently and automatically. Laborious application of decoding and word recognition skills while reading text reduces attentional and memory resources, thus impeding reading comprehension.

Children who comprehend well are able to activate their relevant **background knowledge** when reading - they can relate what has been read to their own experiences and background knowledge. Strong comprehension abilities are clearly related to oral language comprehension, which like

reading comprehension is also critically dependent on the acquisition of a robust **oral vocabulary.**

The development of phoneme awareness, the alphabetic principle, word reading accuracy and fluency, reading vocabulary, and active reading comprehension strategies are all necessary, but not sufficient in and of themselves, to produce robust reading capabilities. Opportunities to learn to read and to practice the application of reading skills is essential to developing accuracy and fluency and a strong sight word vocabulary.

Early identification and intervention is essential to maximizing treatment success in children who are at risk for reading failure. One factor that impedes effective instruction with children at risk for reading failure is current teacher preparation practices. Teachers need the content and pedagogical expertise at both preservice and inservice levels.

Summary of Research

The National Reading Panel determined that "effective reading instruction includes teaching children to break apart and manipulate the sounds in words (phonemic awareness), teaching them that these sounds are represented by letters of the alphabet which can then be blended together to form words (phonics), having them practice what they've learned by reading aloud with guidance (guided oral reading), and applying reading comprehension strategies to guide and improve reading comprehension" (National Reading Panel, 2000).

An important routine skill that develops over time is phonemic awareness, the ability to hear that words and syllables are composed of small units of sounds called phonemes. Research has shown that reading development requires acquiring phonemic awareness skills. Phonemic awareness is considered the best

predictor of early reading success. Children who have acquired these skills find it easier to learn to read. Many children develop phonemic awareness naturally, over time. Some children develop phonemic awareness from listening to stories, poems and rhymes being frequently read to them, while other children need direct instruction and opportunities to engage in activities designed to foster the development of these skills.

Early Literacy Research-Based Instructional Practices

Print Awareness / Print Concepts / Letter Knowledge

Print awareness is a foundation skill for learning to read. According to Adams (1990) "Children should possess a broad, general appreciation of the nature of print. They should be aware of how printed material looks and how it works; that its basic meaningful units are specific, speakable words; and that its words are comprised of letters. Of equal importance, young children should have a solid sense of various functions of print – to entertain, inform, communicate, record – and of the potential value of each of these functions to their own lives. To learn to read, a child must learn first what it means to read and that she or he would like to be able to do so."

Strategies for Teaching Print Awareness

Teach book concepts and print concepts through demonstrations as part of shared reading and shared writing.

Use teacher demonstrations/direct instruction with individual students.

Use teacher modeling to demonstrate book and print concepts such as the concepts that words

can be spoken or written and that corresponds to speech.

Provide language activities that develop listening and expressive skills (e.g., listening to stories, poems, and expository texts; telling and retelling stories; enacting stories; discussing word meanings, ideas, books, and experiences).

Provide a classroom full of print that is varied and meaningful to students (e.g., lists of birthdays and chores, labels on possessions and seat assignments). Such printed materials could be accessible to students as they go about the reading/writing routines of the day.

Teach page arrangement, story grammar, and directionality of print with repeated reading and modeling with big books.

Write students' words (what they say) for teacher and students to read aloud.

To ensure success in formal reading instruction, young children should be able to rapidly identify and name the **letters of the alphabet.** To help young children learn to recognize and print upper- and lower-case letters, the following are recommended: familiarize students with the alphabet by teaching them alphabet songs and poems, such as ABC song; play letter recognition games to help them learn to recognize both upper-and lower-case letters; teach students to print their own names and expect them to label their work regularly; play games that teach the children to pair upper-and lower-case forms of each letter; assist students in learning to print the letters with tactile, kinesthetic mediums such as magnets and sandpaper.

Learning the Language of Phonology (Snow, et al., 1998)

Alphabetic principle is "the idea that written spelling systematically represent spoken words" (p.4).

Decoding "refers to the aspect of the reading process that involves deriving a pronunciation for a printed sequence of letters based on knowledge of spelling-sound correspondences" (p.52).

Phonemes are the speech phonological units that make a difference to meaning. Thus the word rope is comprised of three phonemes: /r/ /o/ /p/.

Phonemic awareness is the insight that every spoken word can be conceived as a sequence of phonemes. Because phonemes are the units of sound that are represented by the letters of an alphabet, an awareness of phonemes is key to understanding the logic of the alphabetic principle and

thus to the learning of phonics and spelling" (p. 52).

Phonetic value is the sound represented by each letter of an alphabet.

http://www.ncrel.org/sdrs/areas/issues/students/earlycld/ea5lk1.htm (p. 52).

Phonology and **phonological** refer to the sound structure of speech and particularly to the perception, representation, and production of speech sounds. Online at http://www.nap.edu

Teaching Phonemic Awareness

Phonemic awareness is a better predictor of reading achievement than more global measures of general intelligence (IQ tests) or reading readiness (Adams, 1990; Blachman, 1989, 1991; Catts, 1991; Griffith & Olson, 1992; Stanovich, 1986; Yopp, 1995). Developing phonemic awareness skills requires the advancement through eight types of tasks that have a positive effect on reading acquisition and spelling: rhyming, auditorily discriminating sounds that are different, blending spoken sounds into words, word-to-word matching, isolating sounds in words, counting phonemes, segmenting spoken words into sounds, deleting sounds from words (Ball & Blachman, 1991; Byrne & Fielding-Barnsley, 1990; Cunningham, 1990; Vellutino & Scanlon, 1987; Yopp, 1988). Phonemically aware children can consistently identify sounds in words.

Phonemic Awareness Technique

What would be left out if the /k/sound were taken away from cat?

What would you have if you put these sounds together: /s/, /a/, /t/?

What is the first sound in rose? (Stanich, 1994)

Phonemic Awareness Tasks

Phoneme deletion: What word would be left if the /k/ sound were taken away from cat?

Word to word matching: Do pen and pipe begin with the same sound?

Blending: What word would we have if you put these sounds together: /s/, /a/, /t/.

Sound isolation: What is the first sound in rose?

Phoneme counting: How many sounds do you hear in the word cake?

Deleting phonemes: What sound do you hear in meat that is missing in eat?

Odd word out: What word starts with a different sound: bag, nene, beach, bike?

Sound to word matching: Is there a /k/ in bike?

Stanovich, K. (1994) Romance and Reality. <u>The Reading Teacher</u>, Vol. 47. No. 4.

Research findings indicate that early childcare providers and educators should: begin teaching phonemic awareness directly at an early age and in kindergarten, concurrent instruction in sound-spelling relationships accelerates the development of phonemic awareness skills. Phonemic awareness may be introduced in isolation, while in kindergarten the two skills should be taught together.

In its basic form, phonemic awareness refers to the ability to "focus on and manipulate phonemes in spoken words (National Reading Panel, 1999). The next level, often called the intermediate level, involves the blending of phonemes, (e.g., /s/, /a/, /t/ = {sat} and segmenting syllables), (i.e., separating the initial sound from the ending syllable: /c/ /at/). The most complex task is the complete segmentation and manipulation of phonemes to form a new word (Hall & Moats, 1999).

Research has also reported that there is little correlation between stages of development and phonemic awareness. Like other reading skills, phonemic awareness must be learned. Catts (1995) presented seven key factors to consider when teaching phonemic awareness.

- *The level of cognitive-linguistic complexity of phonological awareness varies across activities (recognizing rhymes is easier then generating them).*

- *Tasks requiring awareness at the syllable level typically are easier than those requiring awareness at the phoneme level.*

- *Phoneme isolation tasks generally are easier than phoneme segmentation tasks.*

- *Segmentation or blending tasks are easier with continuant phonemes (e.g., s,sh,l) than with noncontinuant-stop phonemes (e.g., p,b,t).*

- *Phonological awareness activities have a greater impact on reading success when combined with instruction in letter-sound correspondences.*

- *Each sound-spelling correspondence must be taught explicitly. Explicit instruction means that the teacher or parent shows the new letter and says it. Each day, the children should have an opportunity to practice new phonemes and the ones that have been previously introduced. After practicing phonemes in isolation, they should be practiced in the context of words and stories that represent the letter-phoneme relationships the children know.*

- *Frequent, highly regular sound-spelling relationships must be taught systematically. Children can begin to read successfully with only 50 to 50 sound-spelling relationship (Appendix C). Writing, on the other hand, requires approximately 70 sound-symbol relationships.*

Past research supported the position that children should "enter school with a conscious awareness of the sound structure of words and the ability to manipulate sounds in words" (Smith, Simmons, & Kameenui, 1995, p. 2). Evidence suggests that students who have substantial phonemic awareness skills are more successful readers than those who do not. Successful acquisition of phonemic awareness skills prior to formal schooling helps to boost children's experiences with print awareness and oral language. Fitzsimmons (1998, p. 2) unequivocally states, "Children who have been immersed in a literacy environment in which words, word games, rhyming, and story reading are plentiful, are more likely to understand what

reading is all about than those who have experienced an impoverished literacy environment." Children are prepared for word recognition instruction when they have mastered the following requisite phonological awareness skills: words can be spoken or written; print corresponds to speech; and words are composed of phonemes.

The National Reading Panel (2000, p. 7) cautions educators that "phonemic awareness instruction cannot guarantee later literacy success. Rather, it provides children with essential foundational knowledge in the alphabetic system. It is one necessary instruction component within a complete and integrated reading program. Several additional competencies must be acquired as well to ensure that children will learn to read and write. Second, there are many ways to teach PA effectively. In implementing PA instruction, teachers need to evaluate the methods they use against measured success in their own students. Third, the motivation of both students and their teachers is a critical ingredient of success."

The National Reading Panel (2000) recommends that "effective reading instruction includes teaching children to break apart and manipulate the sounds in words (phonemic awareness) teaching them that these sounds are represented by letters of the alphabet which can then be blended together to form words (phonics), having them practice what they've learned by reading aloud with guidance and feedback (guided oral reading), and applying reading comprehension strategies to guide and improve reading comprehension" (National Institute of Child Health and Human Development, 1999).

Hallie Yopp (1995) recommends children's books as the most "accessible, practical, useful vehicles to enhance students' sensitivity to the phonological basis of their language…" (p.

538). Yopp has identified over 24 children's books using specific criteria for selection. She concludes that the most natural and spontaneous way to facilitate phonemic awareness is "providing children with language-rich environments in which attention is often turned to language itself by means of word play in stories, songs, and games" (p. 538).

Teaching the Alphabetic Principle

The relationship between letters and sounds and letters and meanings should be automatic to ensure rapid recognition of known words and to figure out unfamiliar words independently. During the late stages of preschool or the early months of kindergarten, children should begin to understand and apply the basic alphabetic principle: The letters of written words represent the phonemes of spoken words. Phonemic awareness and letter knowledge are prerequisites to learning the alphabetic principle. Instruction in the alphabetic principle is essential to ensure automatic recognition of known words and the ability to decode unfamiliar words independently. Without this skill it is difficult for children to read independently. Children experience difficulty with the comprehension of reading material when they struggle to decode the majority of words in a reading selection. When children master the alphabetic principle, they have confidence in their ability to read and write, thereby moving on to more challenging reading material and more advanced writing. Instruction should begin with the most regular sound-spelling relationships and phonograms.

Reading is a Social Activity

During late preschool or early kindergarten children begin to learn sound

symbol relationships and sight words. Kindergarteners and children in the early grades become real readers and writers through exposure to well-integrated instruction that focuses on three core elements: "(1) identifying words using sound-spelling correspondences and sight word recognition, (2) using previous knowledge, vocabulary, and comprehension strategies to read for meaning, and (3) reading with fluency" (Burns, et. al., 1999, p. 62). Success in kindergarten requires children to learn new social skills, (e.g., "learning to sit quietly, to listen, to communicate cooperatively and to do what is asked") (p. 65). The environment is less personal and open which often creates some anxiety and tension for children. In addition to the new social skills, children are expected to make rapid cognitive gains in the traditional disciplines. Children are expected to learn to read, a primary objective of the kindergarten curriculum, children engage in activities related to book and print awareness, phonological awareness, language, comprehension, and response to text; letter recognition, decoding, and word recognition, and spelling and writing. The challenge for kindergarten teachers is individualizing instruction to meet the range of children's literacy skills. (Burns, et al., 1999) identify two literacy goals that are critical for teachers to address to promote literacy (1) knowledge about the format of books and other print resources and (2) familiarity with sentence-by-sentence, word-by-word, and sound-by-sound analysis of language. They should achieve basic phonemic awareness and the ability to recognize and write most of the letters of the alphabet (p. 65).

Literacy Transition in Kindergarten

By the end of the year, kindergartners should have an interest in the types of language and knowledge that books can bring them. It continues to be appropriate for kindergarteners to learn through play. They should continue to sing songs, engage in dramatic play, role-play stories and situations and enjoy books and print awareness. Kindergarten children continue to build their vocabulary and broaden their experiences to enhance their repertoire of general knowledge. They also should become more proficient engaging in class discussions and one-on-one conversations.

The physical environment of kindergarten should mirror the early childhood setting, i.e., a literacy-rich setting divided into authentic learning areas. The curriculum in quality kindergarten classrooms is designed around thematic units. Learning centers

throughout the classroom designed to support a unit theme encourage children to explore thematic activities and "read" books about and "write" about thematic concepts.

Snow, et. al., (1998, p. 61) outlined the following developmental milestones as indicators early literacy learning kindergarten age children. Literacy materials in the kindergarten should include: big books and charts with poems, songs and chants in enlarged text. Fiction and nonfiction trade books, predictable books, dictionaries, and magazines are available on library display shelves, regular shelves, plastic bins and crates, and on tables throughout the room. Literacy activities appropriate for children at the kindergarten level ensure that children have "daily experiences of being read to and independently reading meaningful and engaging stories and informational texts" (International Reading Association & National Association for the Education of Young Children, 1998, p. 9). They provide "a balanced instructional program that includes systematic code instruction along with meaningful reading and writing activities" (International Reading Association & National Association for the Education of Young Children, 1998, p. 9). A balanced reading program also includes a variety of reading instruction, such as shared or interactive reading, guided reading (as appropriate), emergent reading, independent reading aloud, and one's own writing. They help children learn how to choose appropriate books for independent reading (Burns, et at., 1999).

Repeated readings of stories enable children to gain mastery of the narrative, ideas, and language (Burns, et at., 1999; Sulzby, Buhle, & Kaiser, 1999). "Opportunities for children to talk about what is read and to focus on the sounds and parts of language as well as the meaning" are important literacy activities (International Reading Association & National Association for the Education of Young Children, 1998, p. 9).

Children need class time for regular sharing of each child's thoughts, ideas, and experiences. Teachers enrich the conversation by responding to children, asking questions, and expanding on children's words (Burns, et. at., 1999). They enrich children's vocabulary by providing pictures and discussions that relate to stories that they are reading. Kindergarteners should have ample opportunities read a variety of texts throughout the day such as lists, poems, stories, letters, and reports (Burns, et at., 1999; International Reading Association & National Association for the Education of Young Children, 1998).

Kindergarteners still enjoy and learn from dramatic play. They tend to create scripts and enact them for each other (Burns, et. al., 1999; McGee & Richgels, 1996). Teachers should also model dramatic play from literacy materials that are available (Burns, et. al., 1999). Literacy materials need to be incorporated into play centers (Burns, et. at., 1999; McGee & Richgels, 1996).

Phonics instruction stresses the acquisition of letter-sound correspondence and their use in learning to read, write and spell well. Some children in later preschool or kindergarten may be ready to understand the connection between letters and sounds to form letters-sound correspondences and spelling patterns to help them to become fluent readers. The chapter in this document on Beginning Reading details systematic, balanced phonics instruction and assessment.

Assessing Early Literacy Learning Knowledge and Skills

Documenting the literacy development of young children can present many challenges. The most meaningful approach to assessment of individual young children is through continual observation by teachers and parents of

children's progress in all developmental domains including social, emotional, physical, and cognitive. Performance inventories and portfolios of children's work provide a far more meaningful picture of the young child's progress than any standardized test results. Similarly, narrative reports by teachers outlining children's progress are far more useful at the primary level than numeric or letter grades, since they provide information that can be used by parents to help their children at home (Katz, 1997). Lilian Katz (1997) reported that the main purposes for assessing children are to determine progress toward literacy objectives to make instructional or placement decisions; to pinpoint specific learning and teaching problems; to help inform instruction; to provide evidence of growth when reporting progress to parents and stakeholders; and to teach children how to self-assess their skills.

"Assessment is the process of observing, recording, and otherwise documenting the work children do and how they do it, as a basis for a variety of educational decisions that affect the child. Assessment is integral to curriculum and instruction" (National Association for the Education of Young Children & National Association of Early Childhood Specialists in State Departments of Education, 1990).

Decision-making guidelines for matching documentation of children's progress to standards for young learners may be helpful. The guidelines are: plan assessment to take advantage of natural outcomes of routine classroom activities; provide for children's different learning styles; consider the natural products of learning experiences; and document progress towards standards, not just achievement of them (Harris and Gronland, 1999, Linking Assessment and Teaching in the Crucial Early Years. http://www.ascd.org/ , click on publications, click on reading room). A wealth of information is available on observation and other appropriate assessment tools at http://www.ume.maine.edu/ cofed/eceol/ober.htm.

Partnerships that Enhance Early Literacy Learning

For decades, parents have been involved in schools superficially – planning parties, duplicating or cutting materials for teachers, fund-raising, and other school-based activities. Researchers have reported positive effects of parent/community participation in the teaching and learning process (http:///nwrel.org/scpd/sirs/3 /cu6.html).

Teachers rated strengthening parental involvement in their

children's education as the most important educational policy priority in the coming years. Family-school-community partnerships are so central to the academic success of children that schools are engaging parents and community members as full partners in the learning process. The National Goals Panel has shown its commitment to this initiative by drafting a new National Goal (No. 8), Parental Participation Goal, and added it to the National Education Goals Document. This goal states: "By the year 2000, every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children" (National Education Goals online at http://www.negp.gov/issues/publications/negp docs/negprep/564.html). Although there is a considerable amount of literature on the importance of parent involvement in education, there is not sufficient literature that identifies successful strategies for partnering with parents. Research does confirm that merely identifying strategies is of little use; how strategies are implemented is the critical component.

CONCLUSION

The journey through early literacy learning begins at birth. The road to beginning reading is paved with converging research from four interrelated disciplines that inform our classroom practices: child development, cognitive science, neuroscience, and literacy. The role of professional development in providing a knowledge base in these related disciplines must be a critical component of early childhood preservice preparation and teacher development programs. High-quality, literacy rich, early learning environments foster literacy learning in a safe, caring, and engaging environment. Building relationships among families, schools and communities to promote early literacy learning, increases the likelihood that all stakeholders will take responsibility for ensuring that all children enter school ready to begin formal reading instruction.

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