

Working With Young Children

Children are our future. Being in a position to work with children and guide them through the maze of **learning** experiences is both a special privilege and a challenge. Success in meeting this challenge is dependent upon our love for children, our understanding of them, and the knowledge we have regarding the planning and implementation of activities that encourage their growth and development.

Information about the brain and learning has emerged very rapidly since the decade of the 1990s and continues into the present. As a result, we now have an expanded knowledge base from which we can provide a stronger support system for the development and learning of all children. Throughout this book you will find concrete ways to put into practice the necessary elements to enhance the growth and development of children by meeting their learning needs in all areas of development. To lay the foundation for putting strategies for working with young children into operation, the first part of this chapter presents a summary of some of the major findings from brain research. The second part of this chapter is devoted to child development concepts that have stood the test of time and resonate with the findings from brain research.

MAJOR FINDINGS FROM BRAIN RESEARCH

Most theorists now believe that both nature and nurture play a significant role in a child's development and ultimately who that child becomes. There is an acknowledgment that everyone comes into the world with a genetic inheritance (nature). However, it is the environment (nurture) that provides the

stimuli for an individual's growth and development relative to intelligence, talents, and social abilities. The nature and nurture concept is significant information for all parents and adults who are responsible for a child's well-being and learning. The nature with which children come into the world plus the type and amount of environmental stimulation is a dynamic interaction represented by the following equation: $Bf = C + E$. **Behavior** (learning, social, etc.) is a function of the child and the environment.

Behavior (physical, mental, emotional, social) = the Child + the Environment

This dynamic interaction makes it imperative that we always consider both factors when providing learning experiences for children and in planning strategies to change their behavior. The power and influence of environmental stimulation and experiences gives encouragement to adults for helping children reach their potential. It is critical that parents of young children, child care providers, and educators understand what this means and apply it to all environments where children live, play, and learn. Creating these environments is a wonderful opportunity to help children develop their potential. At the same time, it is a major responsibility to provide the environments that will support each child's growth and development. To be most effective, the timing of different types and amounts of stimuli should coincide with the child's readiness to receive it.

Children come into the world with a full set of (about 100 billion) brain cells (neurons). Stimuli from the environment are mandatory for these neurons to grow, develop, and form pathways of communication. These pathways are necessary to provide the means for language development, visual abilities, motor functions, and social and emotional growth to take place. The foundations for the development of these mind/body functions begin during the prenatal period. From birth to the first five or six years of a child's life is a critical time for the brain's neural pathways to be hardwired. Future learning and behavior are dependent upon the communications between the neurons in the brain and the cells throughout the body that are established during these early years. Young children need experiences and nurturance from adults to accomplish this important task. The richer the environment, the greater the number of interconnections are made. Consequently, learning can take place faster and with greater meaning.

In being and working with children, it is necessary to approach all we do from a mind/body/heart approach. Neuroscientists and other researchers devoted to studying the physiology of the mind/body/heart have established that these three components are interconnected and work in concert with each other. What we eat affects how we think and feel. What we think and feel affects our body's functions. In other words, cognition, emotion, and physiology are all intertwined. What we do for or to our body directly affects our ability to reason and to maintain a state of emotional balance. What happens to children (and adults) emotionally either enhances or compromises thinking ability and body functions. The body, brain, and emotions contribute to each other in complex

and interdependent ways. Knowing this dynamic interplay can help adults to become more aware of ways to provide conditions and experiences that contribute to a balanced state of being rather than the less productive state of imbalance. For more information on this topic, refer to the books, *Creating Balance in Children's Lives* (Moore, 2005) and *Creating Balance in Children* (Moore & Henrikson, 2005).

Until recently, emotions were viewed from a psychological perspective consisting of both mental and feeling processes. As scientists became more adept at measuring the effect of emotions on body functions and reasoning abilities, emotions as a study moved into the circle of topics worthy of scientific enquiry. For example, scientists conducting research at the Institute of HeartMath in Boulder Creek, California, have measured the power of emotions by tuning in to heart frequencies and variability rates. They have found that the heart and the brain are constantly communicating with each other via the pathways of the nervous system to connect our thoughts, emotions, and body systems. Emotions, the physiological response of the body to external stimuli, are activated when one or more of our five senses take in information from the environment. This information is then evaluated by the brain's feeling and thinking systems to determine which response is needed. The response can vary from joy and excitement to anger and despair, which response in turn affects our cognitive and body functions either in a positive, neutral, or negative way.

In working with children, we have often underestimated the power of emotions in their lives. Emotions play a critical role in their growth and development and how they view the world around them. Positive emotional input from caring adults sets the stage to support a child's physical, mental, and social development and overall well-being. Negative input or lack of emotional support not only compromises a child's learning but puts that child at risk for viewing self, others, and the environment from a hostile or defensive perspective.

Through scientific research, nutrition has been found to have a direct link to learning and behavior. A balanced diet containing all the necessary nutrients, such as complex carbohydrates, protein, "healthy fats," vitamins, and minerals, is needed for the brain and body to support learning and appropriate behavior. Diets that consist of "fast foods," other processed foods, and sugar have been linked to poor attention, learning difficulties in academic subjects, and behaviors associated with **hyperactivity**, aggression, and depression. There has been an increase in national concern about the health of our nation's children as obesity rates and the onset of type 2 diabetes have increased among today's children. It is now a well-known fact that obesity among today's children has reached an epidemic level. The long-term consequences of obesity when the children of today become adults is yet to be determined. However, at this point we do know that type 2 diabetes can be linked to obesity, and with both obesity and diabetes come a compromised health system. Behavioral problems have also been on the increase, as observed by the increased number of children of school age on some type of medication, and with medication use extending downward to younger children. One of the more promising alternatives to medication has been to treat children by natural means such as through diet (Stordy & Nicholl, 2000). Since nutrition is now

accepted as a science, more researchers are committing their time and resources to carrying this endeavor further in order to expand our knowledge of the relationship between nutrition and learning and nutrition and behavior.

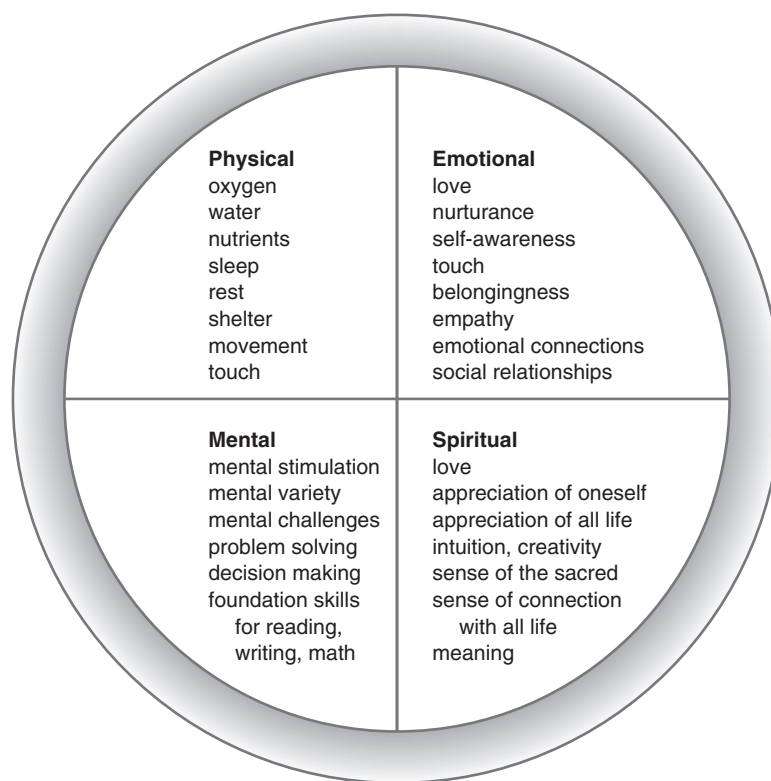
Mind/body/heart research has provided us with a substantial body of updated information to help us understand and work with children more effectively. This gives practitioners a scientific basis for evaluating current child development practices to determine which practices to keep and which to change or discard. The ideas and strategies expressed in the remaining pages of this chapter and throughout the book are consistent with the mind/body/heart research.

“WHOLE CHILD” PERSPECTIVE

Children need to be viewed from a “**whole child**” perspective in order to encourage and ensure a balance in their growth and development. It is the responsibility of adults to be aware of and to address the physical, emotional, cognitive, and spiritual needs of each child. An example of what each category encompasses is shown in Figure 1.1.

If one area is overemphasized relative to other areas, children will not obtain the balance they need to develop as “whole people.” Balance is critical for children to attain their full potential in all realms of life.

Figure 1.1 Categories of Development



Addressing the needs of the whole child in a learning environment gives children the opportunity to optimize talents as they surface and to address their individual needs, which may be expressed as limitations. This becomes especially significant for children who experience difficulty in the learning process, as they tend to translate their areas of difficulty to all areas of their lives.

How children feel about themselves is based both upon the love and understanding they receive and upon their performance. Children with learning difficulties need to be encouraged and supported in the processes of discovering their talents and learning to use them. This allows them to develop positive feelings about themselves as people. The possibility of young children imposing the stigma of their learning difficulties universally on all areas of their lives without recognizing their talents in other areas is something that educators and parents need to recognize and prevent in order to avoid the establishment of permanently formed negative patterning.

DEVELOPMENTALLY APPROPRIATE PRACTICE

Everything we plan and do with children needs to be based on the concept referred to as **developmentally appropriate practice**. This concept is based on two principles. The first principle conveys the fact that all practices in working with children need to reflect realistic expectations for children typical of their age group. The second principle refers to the fact that practices in working with children should also be individually appropriate. Practices that are both age appropriate and individually appropriate provide the greatest opportunity for children to develop and learn at a pace that will maximize their progress. One application of these principles can be observed in curricula such as those based on the concept of differential instruction.

Development and learning are interdependent. This relationship can be implemented for each child by planning and delivering instruction and materials that fall within a child's zone of proximal development, a concept developed by L. S. Vygotsky, a Russian psychologist. According to Vygotsky, a child's level of learning and progress is determined by knowing where a child is when placed on a continuum of mastery from "can do independently" to "cannot do." This links learning to development. Expanding on Piaget's work, Vygotsky applied the concept of how social interactions and **collaboration** supported learners in the learning process. The zone of proximal development continuum appears as shown in Figure 1.2.

A child's placement on this continuum for a specific area of development is based on observation of the child's spontaneous behaviors and the child's

Figure 1.2 Zone of Proximal Development

Child does alone	Child does with assistance	Child cannot do
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assisted behaviors. Informal and formal testing can supplement the observations made by the adults working with a specific child. The zone of proximal development for a particular child lies between what the child can do unassisted and what the child can do if prompted by a peer, an adult, or some other stimulus. Possible supports include interaction with the teacher, another child, or equipment and materials. All children can do more with support than they can manage alone, but the direction of growth, development, and learning is toward independence.

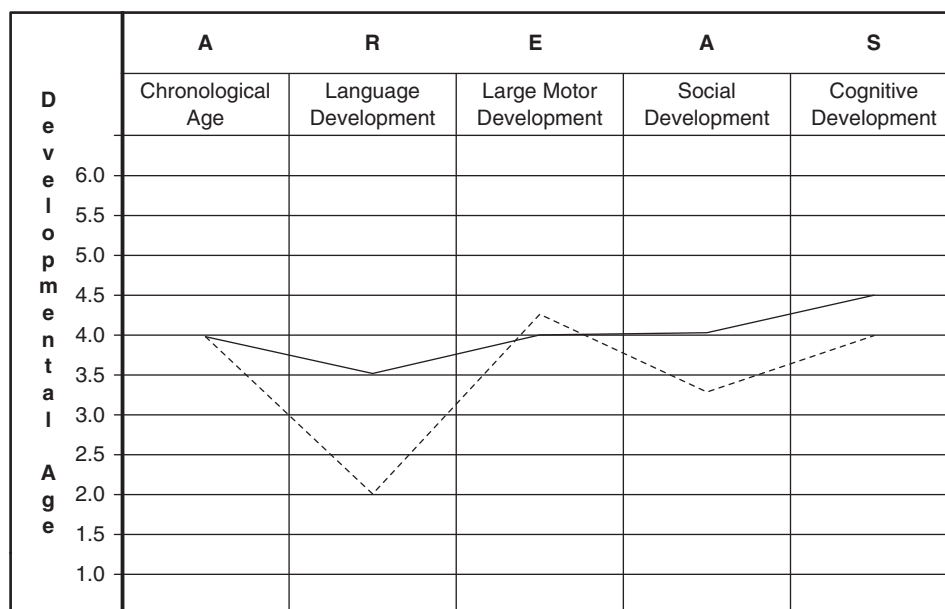
Another important aspect of linking learning to development is to be aware not only of where a child is in his *overall* development, but also where the child is in *each area* of development. This includes assessing where a child's language, motor, visual-motor integration, cognitive, social, and emotional abilities and adaptive behaviors lie on the developmental continuum.

It is important to remember that a profile depicting an uneven development of abilities is not uncommon for young children. This is certainly true for **children with special needs** where, in some instances, a child may be within an average range of development in one or more areas, but be significantly delayed in others.

An example of a profile of even and uneven development appears in Figure 1.3.

What constitutes a severe delay for placement into special education needs to be determined according to your school district's criteria. In most cases, age-level scores need to be translated into **standard scores** for placement

Figure 1.3 Profiles of Development



Key

— A four-year-old boy with all areas of development within (±) six months of his chronological age

- - - - A four-year-old boy with a severe language delay

purposes. As a general guideline, the Gesell Institute of Human Development uses \pm six months of a child's chronological age as representing development within a normal range of expectation. The Gesell Institute is an excellent source of information for understanding and measuring children's developmental ages relative to areas of development and age expectations. Their Web site can be found in Appendix B.

CYCLES OF LEARNING

The concept of **cycles of learning**, as endorsed by the National Association for the Education of Young Children and the National Association of Early Childhood Specialists in State Departments of Education, provides a foundation for learning experiences for children. According to this concept, any new learning by children (or adults) should follow a relatively predictable pattern or cycle. The cycles of learning concept is based on the assumption that a child's learning is facilitated when a four-phase, recurring cycle that begins in awareness, moves to exploration, then to inquiry, and finally to utilization is used as an instructional approach to learning.

Phase I: Awareness

In this first cycle of learning, children begin to acquire knowledge through experiencing events, objects, people, or ideas in their environment. As they process these various experiences, they develop an interest in what they see and begin to recognize some broad parameters, which they will explore in the next phase of the learning cycle.

It is the responsibility of adults to create environments for engaging children's interest by introducing them to new objects, events, and people on a regular basis. During this phase, it is important that teachers and other adults feed a child's interest by posing problems or questions, by responding to a child's curiosity or shared experience, and by displaying enthusiasm. These conditions will then give the child the impetus to move on to the next phase in the cycle of learning, that of *exploration*.

Phase II: Exploration

Exploration is the process whereby children activate all of their senses to evaluate the components or attributes of the events, objects, and people brought into their awareness in Phase I.

It is important that children construct their own personal meaning of their experiences during this time. Teachers can facilitate this by providing opportunities for active exploration, by supporting and enhancing exploration by asking open-ended questions, by respecting the child's thinking and rule systems, and by allowing for errors.

When the child has attached personal meaning to the experience and begins to draw conclusions about his experiences, it is time to move on to the third phase in the cycle of learning, that of *inquiry*. It is important to note that

even though this may appear to be a linear process, in reality, children can be simultaneously engaged in two or more phases at the same time, a process of continuous spiraling.

Phase III: Inquiry

Awareness and exploration are essential but insufficient for complete understanding. A child's personal interpretations and conclusions will contain limitations imposed by the child's lack of experience and knowledge. Adults must correct and expand this thinking within the context of the child's subculture and his society. Inquiry is the process whereby children can analyze and compare their own behaviors and conclusions with what is generally accepted in a context that takes into account their developmental level.

It is the teacher's responsibility during this time to help children refine their understanding through focusing their attention, asking questions, and providing information links and other support necessary for increasing the children's understanding. The realizations and knowledge gained by children during this next phase need to be brought to the application level to fully personalize the learning and make it useful.

Phase IV: Utilization or Application

This is the functional level of learning, the stage where children can apply or make use of the learning they have acquired through the experiencing of events, objects, people, or concepts. It is at this point that the learning acquires value. It is also a point at which the learning cycle repeats itself due to the new awareness that emerges from the utilization of knowledge and understanding. As children focus on applying their learning, it becomes the teacher's responsibility to create ways for children to apply this new knowledge and understanding in a variety of situations. This phase can more easily be accomplished through a child-focused curriculum rather than one with a content focus.

To illustrate this cycle, think of the process of introducing color to children through the use of watercolor paints to create a pattern or a picture.

Awareness Phase: The teacher introduces the children to the idea of exploring color through watercolor paints, by having the necessary materials set out for the children to see and having some watercolor pictures placed around the room.

Exploration Phase: The teacher encourages the children to look at the materials and pictures. Given minimal directions, children then explore the concept of color by first working with one color and then progressing to mixing two or more colors together. As the children explore color through this means, they make observations about what happens when they combine colors, how the various colors make them feel, and how the colors look.

Inquiry Phase: Children's observations are shared with each other. One conclusion reached is that if you mix several colors together you get brown. At

this point the teacher encourages children to share other things they have learned about color and which colors make them feel the best. It is the teacher's responsibility to clear up any incorrect conclusions and extend the children's knowledge about color appropriate for their age group.

Utilization or Application Phase: The focus for this phase is on the functional use of what the children have learned about the various colors: what happens when you mix certain colors together, how each color or combination of colors makes you feel, and so forth. For younger children, let them think about ways in which this information can be used in their everyday lives, such as the application of color in the clothes they wear and the foods they eat, how color is used in their homes, and so on.

Application of this framework can be applied to the process of learning to read, learning to write, learning mathematics, and learning any other subject matter or concept. All educators are encouraged to think about this conceptual framework in their daily work with children and to use it as a tool for analyzing and planning appropriate curricula for individuals and groups of children.

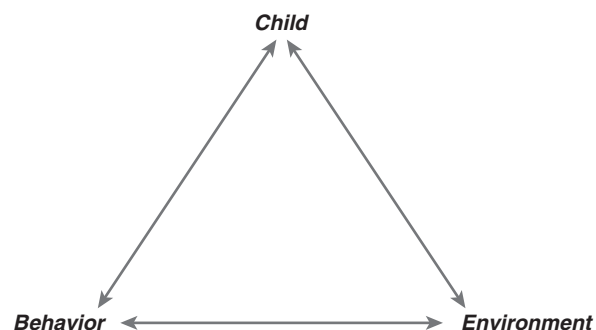
See Form 2 in Appendix A for an expansion of the format for using this approach with children.

ENVIRONMENTAL CONSIDERATIONS

The behaviors we observe and record are a result of the inner child interacting with the environmental elements of people, animals, plants, inanimate objects, and of the conditions surrounding the child's interaction. Figure 1.4 depicts this idea visually.

Behaviors (including learning behaviors) require that we pay attention to the child *and the environment* in which the learning takes place. As represented by this model, it is assumed that behavior, child, and environment are mutually and reciprocally influential. The implication of this model for meeting the needs of young children in all aspects of their development requires that we pay closer attention to the quality of children's interactions with other children and with adults in all environments and to all conditions in which these interactions take place. This model can be used to help understand children's behaviors, to determine where potential problems exist, and to plan appropriate interventions for children having difficulty in learning or behavior.

Figure 1.4 Child/Environment Interaction



The next few paragraphs will address some environmental conditions considered significant when working with young children. Comments will be restricted to physical aspects of events and space that impact children in the environments in which learning and child care programs take place.

Events

Recognizing that children participate in several environments (such as home, neighborhood, school, day care, community, etc.), it is important to have a sense of what each of these environments is like for a particular child. For example, it is generally understood that a child carries what is going on at home wherever he goes. If the child carries love, peace, and a feeling of belonging, this will be reflected in the attitudes and feelings he carries into other situations and environments. With a positive home atmosphere, the child is better able to participate and learn in the school or day care environment.

Similarly, if a child experiences conflict, trauma, continual transition, or economic hardship, he carries the burden and impact of these events and is less likely to reach out to others and participate to his full potential in other environments. When this situation exists, the teacher or child care worker needs to play a much more significant role in the child's life in order to give him love, security, and a sense of belonging—necessary ingredients for success in learning in school.

Physical Space

The impact of lighting, color, sound, and organization of physical space on children's behavior and learning ability is being researched and is emerging as a contributing factor in a child's success or lack of success in the learning process. Adults responsible for designing and implementing programs for children need to address and apply this research.

Refer to Form 3 in Appendix A for more information on this topic.

TESTING AND LABELING OF YOUNG CHILDREN

A basic premise to remember in testing young children is that *the younger the child, the less reliable the testing results*. This is due to several factors. First is that formal tests are often based on small samples (few items) of testing behaviors. Second, the difficulty inherent in testing children due to their minimal attention span must be addressed. Third, young children may have difficulty meeting the structural demands of testing, such as being unable to understand instructions, or being unable to sit still for extended periods of time. Fourth, some children "hold back" when in the presence of a stranger. Fifth, during this growth period, young children are changing at a rapid rate, which means they are always in transition. This affects the stability of test scores over time, making them less reliable.

Due to the above conditions in the testing of young children, the labeling of various handicapping conditions needs to be done with a great deal of caution. Labeling of young children is further complicated by the fact that it is difficult to distinguish between difficulties related to developmental rate and difficulties related to organic causes. This is especially true for children who display only mild difficulties when compared to the expectations for similar age peers.

To chart a young child's progress adequately and to determine his ongoing needs, it is necessary to conduct testing more frequently than for older children. Also, a variety of tests should be used in assessing young children, including formal (standardized) tests, informal (created by the teacher) tests, observations, examples of a child's work, and parental information.

WORKING WITH PARENTS

Children are more successful in the learning process when educators and parents work together for the benefit of the child in a school or day care setting. To meet the needs of the whole child, especially those with disabilities, in a regular setting challenges our creativity for adapting curricula, developing appropriate teaching strategies, and structuring the learning environment. Success in meeting this challenge requires joint cooperation of parents and educators on a continual basis. Close collaboration on an ongoing basis between educators and parents should be a key ingredient in all settings for all children. In most cases, parents can provide the developmental background for a child, whereas educators can provide an age comparison and individual progress perspective. Both aspects are needed to provide an understanding of a child's history as well as how the child is progressing relative to similar age peers to determine if a child is growing and developing in harmony with his potential. Parents and guardians play a key role in informing educators about any current home or community-related situations and events that may impact a child's learning and behavior in the school setting. Education is a collaborative process between parents and teachers, among colleagues, and between school and community. Successfully meeting the needs of today's children is dependent upon this collaboration.

TEACHING FROM THE HEART

Children are very perceptive about how adults feel toward them. They are able to discern the difference if we tell them that we love them but do not ultimately demonstrate this love through our body language or gestures. They connect with adults through feeling rather than through the spoken word. In working with young children, it is therefore imperative that we connect with them at the heart level, allowing our teaching and interactions with them to come from the heart first, and second from the knowledge of our minds.

Recent research conducted at the Institute of HeartMath in Boulder Creek, California, has led to the discovery that the heart is vital to effective learning on

all levels—mentally, physically, and emotionally. Generating feelings of love, caring, appreciation, and compassion toward young children helps reach children at the heart level to enhance their learning. These behaviors encourage children to feel, learn, and extend these behaviors to other children and adults.

When adults come from a place of love, children have a greater opportunity to self-generate feelings of love, caring, appreciation, and compassion. This, according to the research, enhances intuitive perception and increases coherence and clarity in children.

Approximately 40% of the heart's function is that of being a pump. The other major function of the heart is that of being a balancing organ that acts as an input system to the brain. This contributes to a child's emotional balance, which plays a significant role in learning and adapting to the demands of any given situation.

It is imperative that adults who work with young children understand the significance of the relationship of teaching from the heart (expressed as love and compassion) to the growth and development of children. Love, given unconditionally, is the most powerful educational tool we have. Heart intelligence, as a contributor to children's learning, is an exciting new frontier of knowledge to be explored for the benefit of all children and adults alike. To learn more about this concept and its application to working with children, visit the Web site at www.heartmath.org.