

Helping Children Who Learn Differently: **THE SHELTON WAY**

By Joyce Pickering, Ph.D.

HISTORY

In the mid sixties, three remarkable professionals were working together at the University of Oklahoma Medical Center: Dr. Lucius Waites, a professor of neurology at the University of Oklahoma Medical Center; Dr. Sylvia Richardson a speech-language pathologist, learning disability specialist, Montessorian, and pediatrician, as well as the Director of the Child Study Center; and Dr. June Ford Shelton, a speech-language pathologist and Montessorian. They collaborated in developing the procedures for diagnosis and education of children at risk for, or demonstrating, the characteristics of, a learning disability.

From their pioneering work together, eventually came the Shelton Way. Dr. Waites and Dr. Shelton moved to Dallas, and Dr. Richardson went to Cincinnati, Ohio with her husband, a pediatric surgeon. They remained in contact for the rest of their lives. After directing the Dean Learning Center in Dallas, Dr. Shelton was asked by a small group of parents to begin a school. In April 1976, the June Shelton School and Evaluation Center was founded. The school began with 25 students, and by the end of the first year had an enrollment of 46. The school leased space from a church. In the years that followed, the school grew and moved several times until, in 1981, the board purchased a church, and the school had a permanent home. The mission of the school was to serve bright children with learning differences.

From the beginning, Dr. Shelton described the challenges the students experienced as *differences*, rather than *disabilities*. She believed if these creative, talented students were taught in the ways that they learned, they would not be disabled. She believed if they learn differently, we must teach differently.

Shelton, as incorporated, is a school, an evaluation center, and a speech-language clinic. In the early years, the school grew to offer classes through the 6th grade and then expanded to the 8th grade. Dr. Shelton was the Director until 1985. Another Director followed, and when she resigned in 1989, an interim director ran the school for one year. In 1990, Dr. Joyce Pickering became the Executive Director. Dr. Pickering brought the same training as Dr. Shelton, who had been one of her teachers. The school grew from 170 to the present 870 students. In 1991, the Outreach Center was added to the operation of Shelton. The Upper School was added in 2000. Shelton is now the largest school in the world for students with learning differences, offering services for children from early childhood through high school.

AT RISK FOR LEARNING DIFFERENCES

From their pioneering work in Oklahoma, Waites, Richardson and Shelton had indicated that the at-risk symptoms for learning differences in young children included:

Coordination
Language
Attention
Perception

The child who is at risk for learning disabilities (Shedd 1967) (Brutten, Richardson, Mangel 1973) (Crichley 1964) has deficits in attention; order and organization; gross- and fine-motor skills; perceptual confusions causing faulty concept formation; may evidence weaknesses in oral language development; has difficulty learning the written symbols and patterns of language; and may exhibit problems with the abstractions of math. The Montessori Method provides a program that allows diagnostic teaching in all of these areas and a hierarchy of skills with which the teacher may help each child match his work to his developmental level. It also provides a model in which the teacher can present materials to the at-risk child one on one, which, as Montessori frequently mentioned, was crucial to success with this population. If each of the areas is examined for the average child, and the differences of the at-risk child are contrasted, a clearer understanding of the unique components that the Montessori Method offers to the educator of at-risk children is appreciated.

COORDINATION – MOTOR SKILLS

The child whose motor-skill development proceeds through normal stages has developed the gross-motor skills of running, jumping in place, walking on tiptoe, kicking a ball forward, and throwing a ball by three years of age. By five, the same child can walk on a line forward and backward; balance on one foot for five seconds; hop on one foot; throw a ball with direction; walk up and down stairs alternating feet; and turn a somersault. He is beginning to learn to skip and jump rope. Fine-motor-skill development has proceeded from turning pages singly; snipping with scissors; holding crayon with thumb and fingers, not the fist; using one hand consistently; and making circular, vertical, and horizontal strokes at three years of age to cutting continuously on a line; copying a cross, circle, square; and copying letters at five years old.

The at-risk child often has not proceeded through the milestones found in normal development or is

seen to have a spotty performance. In gross-motor skills the at-risk child may be much later in acquiring control of his large-muscle movements. At seven, he may still have difficulty with the alternating activity of skipping. He may have difficulty in fine-motor skills, which can be seen in tying, pouring, handling utensils, cutting, coloring, and later in writing.

In all areas of the Montessori curriculum, the child is shown and helped to coordinate his gross-motor movements; the action of carrying materials of varying size and weight; the activities 'on the line' in which the children move to rhythm, march, hop and skip to various rhythmical patterns and music. Most Montessori schools have a full, perceptual motor program done partly in class and partly outdoors.

Exercises in every area help the child to practice eye-hand coordination. From the Practical Life activities of the dressing frames, cutting carrots, and polishing silver to each Sensorial, Language, and Math work, the procedure requires the eye and hand to work together. In each of these activities, the child handles the didactic materials, which require that the coordination of the hand (and particularly the thumb, index and middle fingers) work together for appropriate grasp and release. These are the fingers that will later be used in writing.

A specific activity for strengthening the writing skills is the Metal Insets. In this set of 10 metal frames and insets are the basic geometric shapes. The child is shown how to trace the shape with one color and fill in the shape with a contrasting color. Precise small-motor movements are practiced until the child's pencil grasp and pressure are improved to the limit of his ability.

ORAL LANGUAGE

The average five-year-old has developed a minimal vocabulary of 2,500-5,000 words and can use this vocabulary to express his needs, wants, and ideas in a basic communication, which is at the level it will be as an adult. More sophisticated vocabulary and expression will be mastered, but basic communication skills are present as the child enters first grade.

The at-risk child may, or may not, have oral language disorders. Some at-risk children are very verbal, have a large vocabulary, and never



evidence problems of oral language. Their first frustrating experiences come with written language. Those at-risk children who do have oral language deficits will exhibit weaknesses in vocabulary and verbal expression. Articulation problems are often present in both the verbal group and the group with expression problems. Auditory discrimination and memory problems are frequently seen.

The child who does not perceive the 'sounds' of language accurately may not have only an articulation problem but may have a limited vocabulary and difficulty expressing himself in sentences and conversation.

The Montessori system proves ideal for the language-disordered child or for a child for whom English is a second language. All presentations are made first without language. The child may attend visually and observe the materials presented. After he is successful at perceiving the sensory information of the presentation, then language is attached to the percept, and a concept is formed.

Each activity in each area of the curriculum gives stress to the input and comprehension of sensorial information leading to a perception; and then emphasizes the attachment of language to provide the child with the concept

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and the ability to express himself concerning the attributes and functions connected with the concept.

For example, after the child builds the Pink Tower, gradating it from largest to smallest, the teacher asks the child to take it down. She moves all the cubes except the largest and smallest to the side of the mat. The teacher presents a three-period lesson.

1st period	This is big. This is little.
2nd period	Show me big. Show me little.
3rd period	What is this? What is this?

At any point, if the child cannot respond, the teacher returns to the first period.

The three-period lesson, originally suggested by Seguin, takes the child through the normal language development stages of **Identity**, **Recognition** and **Recall**. In the Identity stage, the teacher verbally labels the object for the child; at the Recognition stage, she assesses receptive language (does the child know it if she names it?); and at the Recall level, she checks the child's expressive language (can the child remember the label and give it verbally?). For each child, this process varies in length; some moving through all three immediately, and others working at the first and/or second stage for longer periods of time. This careful presentation of Identity-Recognition-Recall allows the child to expand his vocabulary and expression and become ever more precise in his communication.



The performance of the at-risk child with perceptual deficits or immaturities tends to be variable. These children tend to avoid any work that is connected to the symbols of language and their sounds.

In Montessori's presentation the exact language for an object or idea is always used with the child, never a simplified label. A sphere for example is called a sphere, not a ball. Children between birth and 5 are in a sensitive period for the acquisition of language, and 18 months to 3 years of age is a particularly critical time. Therefore, it is important that an accurate vocabulary be offered to the child.

Though children with language disorders are seen to benefit from Montessori's procedures in relation to oral-language development, they come to pre-school with much of the oral-language development expected of a three-year-old incomplete. For that reason, the teacher must become therapist: 'filling in' the language gaps in even the most basic vocabulary areas.

Syntax forms are modeled through the sentence structures until they are automatic and can be used in spontaneous speech. The procedure of moving from vocabulary to sentence form to spontaneous speech becomes an emphasis with the teacher in all her presentations to language-disordered children. The remediation of language deficits must be done in direct teaching procedures, repeated until automaticity is achieved. Indirect teaching of the same vocabulary and sentence structure may be reinforced through shelf activities.

WRITTEN LANGUAGE

Children with normal auditory and visual perceptual skills learn the sounds of the English language during their pre-school and kindergarten years if they are exposed to them. Many can blend sounds and begin to decode words, and some read quite effectively if just exposed to the patterns of the language

in some organized and sequential way. A few linguistically talented children can read at the second- or third-grade level when they enter the first grade.

The performance of the at-risk child with perceptual deficits or immaturities tends to be variable. These children tend to avoid any work that is connected to the symbols of language and their sounds. When these are presented as choices, they are ignored completely. When they are presented as direct teaching lessons, the child who is at-risk evidences difficulty maintaining sound/symbol relationships, faulty ability to perceive word patterns, weaknesses in blending sounds into words, and slow and labored decoding skills. An understanding of the specific deficits of the at-risk child is necessary for the teacher to apply Montessori's language program to this student.

As examples of the specific strengths of the Montessori written language curriculum in relation to at-risk students, the three beginning language presentations will be described. Letter sounds are introduced with the Sandpaper Letters. The child learns to trace over the Sandpaper Letter as he says the letter's sound. The procedure is visual-auditory-kinesthetic and tactile. Children who evidence no problem with the symbols love to work with the Sandpaper Letters and to play with them until they know the sound-symbol association. These children may choose the letters in any order. They move easily to the activity in the next level of difficulty: the Sound Boxes. The Sound Box are small boxes containing objects or pictures and two letters. The procedure involves the discrimination of the two beginning sounds.

As the child becomes automatic on the sounds at the beginning, ending, and middle of words, he indicates readiness for the next activity: the Moveable Alphabet, letters cut out of cardboard. The vowels are blue and the consonants red. The child chooses a picture and then sounds out the word, selecting the symbol for each sound he hears. He places the letters next to the pictures, which are arranged on a mat. He can check to see if he has constructed the word correctly by turning over the picture card to see the correct order of the letter sounds in the word.

By this time, the average student is copying the Sandpaper Letters in various writing activities and often spontaneously begins to copy the words he constructs in the Moveable Alphabet activity. From word building of CVC (consonant-vowel-consonant) short-vowel words, the presentation proceeds to long-vowel patterns, including all of the phonograms of the English language, then from regular to irregular patterns (including sight words) of the English language.

At-risk children require that the Sandpaper Letters be presented directly, in a logical order for structured word building. For example, the average child may work with the Moveable Alphabet, building words with all five short-vowel sounds easily, while the at-risk child needs the teacher in very specific presentations to help him master the 'short a' CVC pattern before presenting another vowel sound.

He will generally need longer and more direct work with the teacher on the Sandpaper Letters and the Sound Boxes before he attains mastery and can apply this knowledge to word building. Since sound blending is often a marked deficit for the at-risk child, the word building may proceed much more slowly, and it is necessary to structure the presentations of the language much more precisely (from simple to complex) than is necessary for the average child. For example, the order of selection of the phonograms for the average child may be quite random, while the order for the at-risk child is best modeled on the order of the Orton-Gillingham Method. At Shelton, the Sequential English Education (SEE) model is used. For at-risk children with blending difficulties, presenting a word family model is seen to be more effective. The child may blend a beginning sound to a word family instead of each letter sound by sound.

The child moves in the language curriculum from word building to sentence building to reading/writing stories and books, to grammar analysis.

Each new concept can be presented in a multi-sensory, hierarchical, procedure matched to the child's level. Each activity can be broken into reduced levels of difficulty or increased levels of abstraction as fits the student. For this reason, the at-risk child may move more slowly than another child, but he will not know complete confusion.

ATTENTION

In the normal child, inhibition proceeds to develop, so that by three years of age, the child has the ability to filter out extraneous sights and sounds. Attention, focus, and concentration are functional for learning.

In at-risk children, this development does not proceed normally, and the child must be taught to attend. The teacher must help the child reach a level of attention that is within the learning range, and she must use techniques during her presentations to help him maintain it. She has to help him learn to make choices, or he may wander and do little meaningful work. The techniques for focusing attention are found in Montessori's classroom structure, presentation procedures, and in the Silence Game.



To create the classroom structure, the teacher prepares a beautiful and well-ordered environment for the class to explore with her guidance. Each presentation is set up on a separate tray. Each tray is placed on a shelf. Each group of shelves defines an area of curriculum.

All language activities are grouped in an order of difficulty on shelves in one area of the room. Within this area, there may be the structured language activities, a reading corner, a listening center, a record player with earphones and possibly activities with a typewriter and a computer. In the math area, the activities are arranged in a hierarchy of difficulty, so the child is assisted in finding the materials on his level. The independent usage of each of these activities has been carefully presented, and then the child is encouraged to bring his unique creative talents to his work.

The teacher is a calm, supportive person who waits for the child to understand or finish his work. She requires that he wait when it is her turn to present, and she does not interrupt him when it is his turn. She requires that he learn to inhibit his actions as appropriate for living in a group. He must, at times, wait for her while she works with others.

The room is a relatively quiet place with the hum of work sounds. Children are helped to be aware of sound levels and help return the level to a work level, if sound becomes too distracting. The teacher usually talks in a clear, quiet voice close to the child to whom she is speaking and on his level so he can see her mouth. She usually does not talk across the room and asks that the children come to her or to each other to converse rather than yell across a distance.

Young children seem to feel secure in this environment of ordered calm and are usually very cooperative in modeling their behavior on that of the teachers. The environment is far from barren, but it is orderly and limited in distraction and helps the child focus his attention on each work task.

The procedures of the presentation of materials provide the child with the security of a clear structure or way to proceed in learning. Attention is focused as the child watches a presentation for its steps and conclusion.

When the child requests, or when the teacher determines a child is ready for a certain presentation, she invites the child or more than one child to join her either at a small table or at a mat placed in an area on the carpet. Part of every presentation is: 1) setting up the work area; 2) selecting the activity; 3) usage of the materials (basic/extensions); and 4) return of the material to the shelf.

In preparing the work area, a mat is used to delineate the child's area of work. No one may disturb his work or join him unless he gives permission. The children are shown how to walk around these mats on the floor, how to respect others' work, and how to ask if they may join another in his work. The child is shown how to get materials from the shelf. Some activities are all on one tray and can be moved easily from the shelf to the mat. Others have numerous pieces and require repeated trips to and from the shelf. These trips, carrying materials of various size and weight, help the child to develop body control and to improve inhibition/initiation of motor movements. To accomplish the tasks of setting up the work area and obtaining the materials,

attention is focused and refocused on the work area and the material.

When the material is on the mat, the teacher calls the attention of the child/children saying, "Look." She waits for focused attention in each child. She gives time for his concentration to begin.

During the first presentation, she usually does not distract the child from the visual input by any verbalization. She uses slow hand movements in which she analyzes for the child each step of the motor movements required for the task. She does not present the motor movements in a rapid flow as an adult usually does them. Attention generally stays focused once attained, but if it does not, she may stop her hands in mid-motion, say the child's name, and/or say, "Look." She will do this as often as necessary for the child to 'see' the whole presentation.

After her presentation she says to the child, "Your turn." She observes. She notes attention, order, percept, and concept. She notes what the child understands and what he cannot yet do. These notes will lead her to further presentations. She uses the time after his turn to discuss the work and attach language concepts to his visual/tactile/kinesthetic perceptions of his exploration of the material.

After he has completed the exercise, she shows him the steps for returning the work to the shelves or area of the room where it belongs. Many of these areas or shelves are marked with symbols, which match symbols on the materials. These symbols assist the child in finding for himself where things go. They also direct his attention in this final step of each work he does.

In all four steps of each presentation, attention is required. The presentation procedure helps the child with attention difficulties to focus through the teacher's physical presence and movement, the high-demand quality of the materials, and, possibly, by the human desire for closure.

The Silence Game is an exercise in which the child is given the opportunity to practice self-control and focus of attention. The children are invited to sit on the line. The line is a tape placed on the carpet in a rectangle or oval shape, large enough that the entire class can sit cross-legged on it. As work time nears a close, the teacher may turn down/off the

lights or ring a small bell, which is the signal to put away work and come to the line for some group activity. As the children come, the teacher may begin reading a story, singing songs, or using finger plays or motor activity on the line. When the entire group is present, there may be a quiet discussion of some of the work they chose during the morning. The teacher slowly brings the class tension level down by talking quietly and slowly. She announces to the class they may now play the Silence Game. The point of the game is to see how long the children can maintain silence with no talking or movement. The teacher asks for all children to cross their legs, sit up very straight, place their hands on their knees. At a signal from her, the game starts. The class

A child learns through his five senses of sight, hearing, feeling, smelling, and tasting. The eyes, ears, skin, nose, and tongue bring sensory impressions to the brain, where this information is interpreted.

may use a clock, kitchen timer, or sand timer to see how many seconds or minutes they can "make silence." Many classes make it only for a second or two at the beginning of a year but may extend to 5-10 minutes or longer by the end of a year. As meditators know, the longer the silence is maintained, the deeper the calm felt by each child. For all children, the purpose of this activity is to inhibit motor movement, to increase concentration skills, and to focus attention on a task. For the at-risk child, this experience may be one of the first times he has felt 'quiet' within himself or really attended/concentrated. He can do it, but not easily. With practice and help, he can enhance this skill and transfer it to periods of work and to the inhibitions necessary for behavioral

control. Even if it is hard for them, children seem to love this game.

Attention then, is enhanced in the Montessori Method through the structure of the classroom procedures, the presentation procedures, and the Silence Game. The teacher accepts as her role the teaching of inhibition; helping the child to learn to wait for his turn, to know how to walk slowly, to talk in a quiet voice; and to control his body and behavior in a work environment.

PERCEPTION

The average child in the Montessori classroom is able to match and discriminate sensory information that relates to the visual perception of size, shape, color; the auditory input of pitch, rhythm, and intensity of sound; the feel of texture, weight, temperature, shape; the taste of sweet, sour, salty and bitter; and the sense of smell. He perceives patterns in shape, color, and number.

The at-risk child frequently can match within normal limits. However, difficulty is sometimes seen in the discrimination of sensory information. Discrimination and memory weaknesses for math and/or letter symbols are usually seen. Association of a symbol to a name is often a problem. These children often react to stimuli in either of two directly opposite ways. Sometimes, they seem to be unaware of the sensory stimuli, and at other times they are perceiving it with such force that it is very agitating to them. For example, one child sits at lunch day after day with milk around his mouth and never wipes it away. He does not seem to have any sense that it is there. If asked to wipe his mouth, he will do so, but not unless trained to do it regularly does he develop the habit that most children do because they feel the substance on their upper lip. Another child reacts very strongly to anything on his face or any touch that most children would not notice. A shirt that is not really soft might be perceived by this child as unbearably scratchy. Some at-risk children often choose only black to use in drawing or coloring. They may not note differences in color, even though they are not usually color blind, and they do poorly with shading activities. Another child may be very sensitive to color. This child has great difficulty inhibiting the irritating colors in his environment. What seems to be significant is the over- and under-reaction to sensory stimuli.

➔ **Cont. on pg. 35**

A child learns through his five senses of sight: hearing, feeling, smelling, and tasting. The eyes, ears, skin, nose, and tongue bring sensory impressions to the brain, where this information is interpreted. This process of interpretation of sensory input is perception.

In at-risk children, the processing of sensorial information may be different. Dr. Montessori did not assume with any child that he would perceive the differences in quality that are the primary colors: red, blue, and yellow. She developed a visual activity that isolates the quality of color so that the child may match like colors. The size, shape, texture of the activity does not vary; only the color of each color tablet is different. If the child is seen to perceive the primary colors, the Secondary Color Box is presented, including green, purple, orange, brown, black, white, gray, pink. If the child can match these color qualities, the language is also surveyed. If, at any point, the child cannot be successful at the perceptual or conceptual level, the teacher notes the problem and plans specific presentations on these weaknesses.

The Third Color Box has nine basic colors, and each color has seven shades. Here, the teacher can observe if the child perceives the shades in gradation and has the comparative and superlative language of darker/lighter, darkest/lightest. If he does not perceive shades, she limits the number of shading tablets to two or three, reducing the difficulty of the task until mastery and then increasing the number of shades to five and possibly seven.

In all the Sensorial Curriculum, the teacher helps the child to classify his world through his five senses and to attach the language concepts that express those perceptions.

These perceptions are also seen as prerequisites critical for higher

academic learning tasks such as mathematics. For example, the Sensorial Curriculum contains activities that allow the child to discriminate and gradate size dimensions. If the child cannot perceive that one cube in a series of 10 is larger or smaller than the next, he could not perceive the more abstract mathematics concept of greater than or less than. A child who cannot gradate the 10 cubes of the Pink Tower is not 'ready' for math concepts. Likewise, the child who has difficulty perceiving basic shapes is not 'ready' for the discrimination of the language symbols *a* and *o*. The Montessori teacher has many readiness markers in the Sensorial Curriculum to help her determine which materials are appropriate for a child at a given time.

For the at-risk child, it is critical to present carefully all of the Sensorial materials, being alert for gaps in concept formation and directly teaching these percepts/concepts in small steps for mastery. In this way, a foundation is prepared for later complex perceptions of math and language patterns.

The Montessori Method enhances the development of coordination, language, attention, and perception. It accomplishes this enhancement through a hierarchical curriculum, which a trained and skillful teacher may, by observation, match to the child's developmental level. The program enables the child to feel successful in school and, therefore, attain a concept of himself as a competent person. The Method provides this enhancement through:

- a classroom structure, which provides a method for individualization of instruction through the child's interaction with the didactic materials, proceeding at his own rate for mastery;
- specific procedures/techniques for training

attention in a classroom that are clear in limits and privileges and assist the child with inhibition control to develop those skills;

- an emphasis on work organization, which gives a child a model for learning how to set up and go about work tasks, the result of which can be a lifelong habit of investigation;
- manipulative materials, which provide the child with multi-sensory perceptions that help make abstract concepts more concrete;
- specific techniques for increasing gross-motor skill development, eye-hand coordination, and fine-motor skill facility;
- a concentration on the specific labels for people, objects, and ideas and their attributes and functions that foster oral-language development;
- presentations of academic skills in small sequential steps with scientifically researched materials to further skill development in language, math, geography, history, physical and biological sciences, art, and music; and
- an environment of encouragement to try, a de-emphasis of failure, which encourages the child's desire to be independent, an emphasis on respecting the teacher and classmates which fosters consideration for others.

J. McVicker Hunt has written that Montessori has come the closest to solving the problem of 'match' in education. (Hunt 1968) He explains the 'match' concept as placing the level of presentation to the child at the child's developmental and skill level for optimal learning and

success. This problem of 'match' is critical to teaching the at-risk child.

Dr. Joyce S. Pickering is a 40-year Montessorian, speech and hearing pathologist, and learning-disabilities specialist, who has devoted her life to addressing the needs of students with learning differences.

Currently, Joyce is Executive Director Emeritus of Shelton School & Evaluation Center in Dallas, Texas, the world's largest private school for children with learning differences.

Under Joyce's tenure as Executive Director (1990–2010), Shelton saw significant growth and development, including an expansion of the application of the Montessori philosophy and practice.

Joyce is a 2013 Living Legacy Recipient for the American Montessori Society, as well as President of the AMS Board of Directors. In her 'spare time,' Joyce travels the world to present classes and keynote speeches about Montessori education and how to meet the needs of learning-different students.

Gracious and soft-spoken, Joyce is loved by everyone in her wide circle of colleagues, friends, and family, which includes husband Robert Pickering, a former AMS President; five children; and thirteen grandchildren. □

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