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ABSTRACT

This paper contends that a person's readiness for academic learning should be based on his/her developmental readiness, not on chronological age requirements. Human beings develop at their own neurological rates (biological clock). The paper first cites research on a "sensitive learning period" in which learning is mastered in a more efficient manner. It then traces three imaginary midlines used to better evaluate children's developmental levels both in body-space and paper-space, defines the terms used for different types of skills, and provides examples of these skills. The paper suggests activities to develop these different skills in combination with reading, writing, math, spelling, and social studies. It also offers the following insights: (1) use movement activities that encourage the child to be active; (2) a child learns only when things interest him/her; (3) children enjoy playing because it is challenging to them, not because it is easy for them; and (4) some children learn primarily through the kinesthetic (moving and tactile) mode. The paper concludes with a list of messages that parents often send to young children about learning developmental motor skills and another list of messages that children often hear from their teachers at school. Contains 24 references. (NKA)

Children who desperately want to read, but are not working at grade level: Use movement patterns as "windows" to discover why.

Part IV

Crossing All Three Midlines Automatically

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Children, who desperately want to read, but are not working at grade level:
Use movement patterns as "windows" to discover why

Marjorie Corso, Ed.D

Part IV

Crossing All Three Midlines Automatically

The physical educator observes the locomotor, manpiluative, and nonlocomotor skills performed in a mature motor pattern (Gallahue, 1993) with little thought or effort. The academic classroom teacher evaluates the children working at or above grade level with very little effort in all curricular areas.

The Learning process, the nervous system, crossing midlines, and academic learning

Ever wonder why once you learn to ride a bike, you can always ride a bike? Or why children forget things they have learned in the classroom over the summer?

It is the opinion of the author that we need to base a person's readiness for academic learning on his developmental readiness, not on chronological age requirements. Human beings develop at their own neurological rate, by their own biological clock.

According to Gallahue (1993), research shows that:

(1) Each person has a "sensitive learning period" in which learning is mastered in a more efficient manner.

(2) This developmental process can not be hurried.

(3) It is important to expose children to learning environments that are conducive to and safe for exploration.

(4) Learning can be delayed by withholding exploration and learning environments during the individual's "sensitive learning period."

(5) If a person does not learn a skill during a 'sensitive learning period," he can learn the skill later with remedial help or he can compensate for the void.

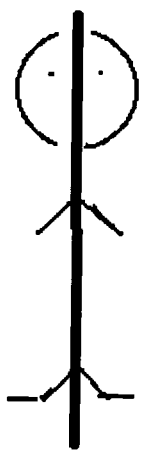
Doctors Benjamin Spock and Michael B. Rothenberg agree with the research:

Developmental stages are dependent on individual characteristics, temperament, and an individual "blue print" of developmental readiness. Before the children have the coordination to succeed, they want to try.

Although adults attach "fun" to play and movement activities, children approach these activities as a serious business. Every home and classroom should have an area in which children can move and play safely. Adults need to see this area as a "learning area" not as a playroom or rec room.

In this study, there are three imaginary midlines used to better evaluate children's developmental levels both in body-space and paper-space.

The Sagittal Midline

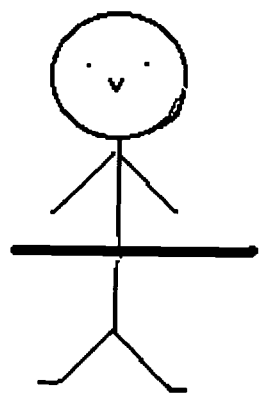


The sagittal midline divides the body into the right and left sides.

The left hemisphere of the brain controls the right side of the body.

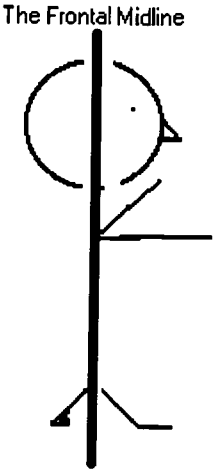
The right hemisphere of the brain controls the left side of the body.

The Transverse Midline



The transverse midline divides the upper half of the body and the lower half of the body.

The Frontal Midline



The frontal midline divides the body into the front and back.
This midline pertains to the direction that the body is moving and the direction the letter is facing.

Just think about the incredible job the brain has crossing all three midlines at the same time!

Definition of terms

(A) Large motor skills are "windows" to the developmental levels of the brain and nervous system. They are overt signs that parents and teachers see every day.

These skills involve various parts of the body working together to perform a movement. Large motor skills need to be learned before or in conjunction with fine motor skills (reading and writing).

(1a) Locomotor skills are movements that move the body from one place to another place.

(2a) Manipulative skills are movements that involve the hands and/or feet to apply force to an object or to gain control of an object coming to a person.

(3a) Nonlocomotor skills are movements in which the body moves in its personal place, but does not move from one place to another.

(B) Fine motor skills are small muscle movements, particularly by the hands and fingers.(Haywood, 1993)

(1b) Writing

(2b) Cutting

(3b) Coloring

(4b) Reading (Movements of the six eye muscles.

What classroom teachers and physical education teachers should look for in crossing all three midlines automatically.

Examples of crossing all three midlines through movement.

Locomotor skills

(1) Walking forward with good arm swings.

(2) Walking backward with good arm swings.

(3) Walking sideward (grapevine step).

(4) Running forward with good arm swings.

(5) Running backward with coordination of the arms.

(6) Skipping forward with large arm swings.

(7) Hopping forward on one foot with the opposite leg held down and back and arms used for balance.

(8) Walking up and down stairs alternating one foot per step and a mature arm swing.

Manipulative skills

(1) Jumping rope with an individual jump rope.

(2) Tapping a balloon repeatedly with both hands simultaneously in the space over the child's head.

(3) Using the same hand for eating, writing, cutting, throwing, and hitting an object.

(4) Throwing a ball up with one hand and catching it with two hands out in front of the body.

Nonlocomotor skills

(1) Sitting on the floor with legs crossed and arms crossed. (Children who sit on the floor in a W-sit should be targeted as a "red flag" for not crossing midlines.)

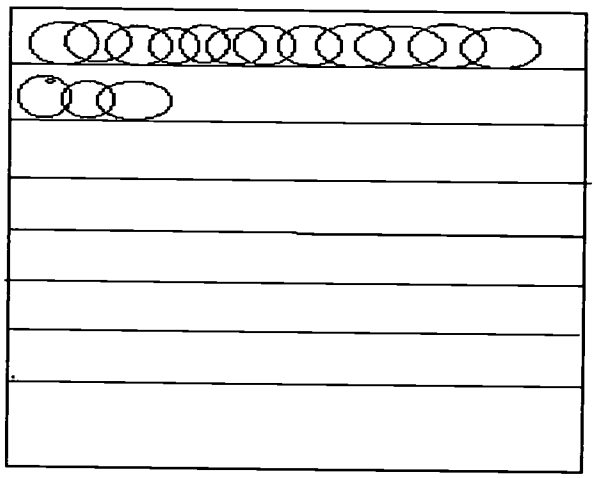
(2) Performing hand jives easily.

(3) Juggling three objects easily.

(4) Completing dot-to-dot patterns easily. These children can design an original dot-to-dot page that forms an animal, bird or person when completed.

(5) Can use lined paper placed in the middle of the desk with the appropriate slant to make connected circles from the upper left hand corner of the paper across the paper and continue on the next line. The right-handed children should make the circles counterclockwise, while the left-handed children will make the circles clockwise.

Writing Sample



Sponge activities

(1) Combine reading and moving. Write the directions that you want the class to follow as they enter the classroom. Observe which children read and follow the directions.

Begin with very short commands and include drawings or pictures that demonstrate what the students are to do and in what order. Change the directions weekly and then daily.

(2) Label objects in the classroom that will be used during the week, i.e., chair, table, wall, pencil, and scissors. Direct the children to say the word out loud before using the object.

Kindergarten and pre-school teachers should label every object in the room that begins with the "letter of the week.".

(3) Combine writing and moving. Ask the children to create rhymes for jump rope activities.

(4) Combine math and moving. Ask the children to wad up newspaper to form a ball and to give themselves two points every time the ball goes in the wastepaper basket.

Shooting hoops gives the children an excellent opportunity to count by twos with a purpose.

Give the class a math problem and have them jump up and down or clap the answer instead of a verbal or written response. Jump rope activities with long jump ropes and two people turning are great for "jumping the answer."

Hopscotch can be used for number recognition, addition, and/or subtraction. As children master the game of hopscotch, it can be played moving backward or sideward. There are plastic hopscotch rugs in most catalogs that are ideal for classroom use.

(5) Combine spelling and moving. Letter recognition can be a powerful way to motivate the children to learn. For example, if your name has a b in it, you may line up.

Ask the children to make the alphabet with their bodies. Ask them which letters need two people or three people. Ask them to put their letter together with other groups to form words.

Label objects in the room and instruct the children to spell the object out loud each time that they use the object during spelling time.

(6) Combine social studies and movement. Indian dances, rhythms, and hand jives can easily be used to further understand the culture being studied. Ask the children

to research what games and/or activities the children their age played in that culture or State.

Thoughts to ponder

(1) Brain growth is about 75% complete by age three and nearly 90% by age six. (Gallahue, 1993)

(2) It had been assumed that a healthy brain made it possible to walk, but could it be that the process of going through developmental movement stages toward walking is what creates a complete and intact brain? (Delacato, 1992)

(3) In children with delayed learning, a process of re-teaching fundamental movement skills (i.e., crawling up on the hands and knees) has been successful. (Dennison, 1981)

(4) All people retain 10% of what is read

- 20 % of what is heard
- 30% of what is seen
- 50% of what is heard and seen
- 70% of what is heard, seen and said
- 90% of what is heard, seen, said, and done. (Fauth, 1990)

Insights

(1) Use movement activities that encourage the child to be active as opposed to activities that emphasize the play object being active while the child remains inactive, i.e., video-games or remote control toys .

(2) A child learns only when things interest him. Take advantage of a child's curiosity to teach crossing various midlines. This can be accomplished in the academic

classroom (writing, drawing, cutting, dot-to-dot, etc.), and in art, music, and movement education classes.

(3) Children enjoy playing because it is challenging to them, not because it is easy for them. (Spock & Rothenberg, 1992) This play becomes an "adrenaline rush" for the children.

(4) Some children learn primarily through the kinesthetic (moving and tactile) mode. Most classroom teachers teach through a combination of the visual mode (reading, video, chalk board, computer) and the audio mode (lectures, class directions, audio-tapes).

Asking these children to forfeit the kinesthetic mode of learning (the moving and tactile) is equivalent to asking a visual learner to spend each school day wearing a blind fold.

What messages do parents send to young children about learning development motor skills? Do they hear at home:

- Don't run in the house?
- Don't play ball in the house?
- Go outside if you are going to rough house?
- Oh, be careful or you will fall down and get hurt!
- Big boys don't cry.
- Girls don't do that.
- Big kids don't act like that.
- Only babies move up on their hands and knees (crawl).
- I could never do that either.

What messages do teachers send to young children about learning developmental motor skills? Do they hear at school:

- Don't run in the hall. (At the primary level a very controlled jog is safe. A child who as just learned to skip or hop on one foot should be given a badge that says, "I just learned to skip/hop!" The event should be celebrated by allowing the child skip or hop the rest of the day.)
- Don't play ball in the classroom.
- Go to the principal if you continue to rough house.
- Oh, be careful or you'll fall down and get hurt on the playground.
- Big boys don't cry.
- Girls don't play those games.
- Big kids don't act like that.
- Get up! Only babies crawl.
- I was never any good at that game (subject) either.

Make every movement an adventure in learning!

Resources that every parent and teacher should have:

Pica, Rae (2000). Moving and Learning Series.
(1) For Toddlers
(2) For Preschoolers and Kindergartners
(3) For Early Elementary Children
Delmar Publishers: Albany, New York

This series is excellent. It has lesson plans and audiocassette tapes that are easy to understand for teachers and parents. The music is so natural that the children learn to move with ease.

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