13.6: Supporting Perceptual-Motor Skills and Movement Concepts

Perceptual-motor skills and movement concepts are essential to all facets of young children’s lives. Perceptual-motor coordination is the process of receiving, interpreting, and using information from all of the body’s senses. Perceptual-motor development requires children to integrate both sensory and motor abilities to carry out physical activities. All voluntary movement involves an element of perception, and perceptual-motor coordination plays an important role in children’s development of movement skills.

Movement concepts are the cognitive component of movement. Preschool children gain important knowledge about how the body can move in an almost endless variety of ways. For example, they learn to move at different speeds and with different degrees of force, in various pathways, around different types of obstacles, and in relation to other people. They are also acquiring new vocabulary (e.g., zigzag, under, or behind) that describe their movement experiences. Movement concepts enable children to problem-solve how the body should move during certain activities and situations. Movement concepts provide critical foundations for learning how to move in novel situations (e.g., when playing a new sport). To become proficient movers, children need to acquire both the movement skills and the movement concepts underlying those skills.

Children enter preschool with various experiences and abilities in perceptual-motor coordination and understanding of movement concepts. Children’s growth in perceptual-motor skills and movement concepts leads to increased success and confidence when exploring, performing personal care, and playing cooperatively with others. Perceptual-motor skills and movement concepts are also key building blocks for future learning in areas such as reading, writing, and mathematics.

Perceptual-motor skills and understanding movement concepts includes body awareness, spatial awareness, and directional awareness.[1]
Body Awareness

Children’s knowledge of their bodies becomes more accurate and specific. They develop a clear understanding of how body parts interrelate (e.g., the shoulder connects to the arm, which connects to the hand). Children are also learning to identify, describe, and differentiate an increasing number of body parts. Furthermore, they can demonstrate different ways to move specific body parts (e.g., the shoulder can move up and down, out to the side, or in a circular motion). Body awareness is necessary for coordinating physical movements when new skills are being learned, such as hopping or throwing. Accurate knowledge about body parts also enhances children’s ability to care for their own bodies, such as during toileting, bathing, and dressing.

Figure 13.7: Caption: These children are acting out the song “Head, shoulders, knees, and toes.” Some children have more developed body awareness.[2]

<table>
<thead>
<tr>
<th>At around 48 months of age</th>
<th>At around 60 months of age</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Demonstrate knowledge of the names of body parts.</td>
<td>1.1 Demonstrate knowledge of an increasing number of body parts.</td>
</tr>
</tbody>
</table>

1.0 Body Awareness

Teachers can support children’s developing body awareness with the following:

- Use multisensory teaching strategies to reinforce children’s learning.
- Use body-parts vocabulary in the child’s home language.
- Use alternative communication methods, as appropriate, to teach body-parts vocabulary.
- Use body-parts vocabulary in the natural context of daily living activities and child-initiated play.
- Introduce body-parts vocabulary during structured group games.
- Engage children in singing and movement activities to teach body parts.
- Encourage children to identify and describe body parts in books or in pictures of themselves and family members.
- Provide opportunities for dress-up play.
- Provide opportunities for children to see external representations of their bodies.
- Provide constructional play for children to build or put together body parts.
• Ask children to describe their drawings of people.

Spatial Awareness

Children’s understanding of their location and the location of objects and people around them. Preschool children are learning to judge how much space their bodies and other objects take up and whether something is “close” or “far.” They are also developing vocabulary for describing the position of two objects relative to one another, such as whether a ball is “in front of” or “behind” them. Children gain awareness of their body dimensions and body position by physically exploring their world and by maneuvering around different obstacles (both people and objects) during play.

Figure 13.8: Jumping “over” the rope is helping this girl develop her spatial awareness.

2.0 Spatial Awareness

<table>
<thead>
<tr>
<th>Age</th>
<th>Spatial Awareness Ability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Around 48 months of age</td>
<td>2.1 Use own body as reference point when locating or relating to other people or objects in space.</td>
</tr>
<tr>
<td>At around 60 months of age</td>
<td>2.1 Use own body, general space, and other people's space when locating or relating to other people or objects in space.</td>
</tr>
</tbody>
</table>

Table 13.1: Developmental Sequence of Spatial Awareness
<table>
<thead>
<tr>
<th>Age</th>
<th>Spatial Awareness Ability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Around 4 years of age</td>
<td>Children are able to participate in seated activities without bumping into others.</td>
</tr>
<tr>
<td>Around 5 years of age</td>
<td>Children are able to participate in standing activities (primarily staying in place) without bumping into others.</td>
</tr>
<tr>
<td>Around 5½ years of age</td>
<td>Children mostly maintain space around themselves without bumping into others, with prompting during a locomotor activity in which children move in the same direction</td>
</tr>
<tr>
<td>Around 6 years of age</td>
<td>Children maintain space around themselves without bumping into others during a locomotor or movement activity in which children move in different directions (e.g., chasing games or dancing)</td>
</tr>
</tbody>
</table>

Teachers can support children’s developing spatial awareness with the following:

- Set up obstacle courses
- Provide opportunities for children to experience moving at different levels of body positioning, ranging from high to low.
- Provide games for children to explore changing the size of their bodies.
- Play games that allow children to move around with objects balanced on different parts of their body.
- Provide pushing and pulling games with peers.
- Play games that require two to three children to work together to transport a large, lightweight object.
- Use dancing and musical games to promote the development of spatial awareness and body control.
- Use positional-concepts vocabulary within the natural context of daily routines.
- Have children participate in cleanup routines by putting away toys.
- Engage children in helper roles by performing “heavy work” activities.
- Narrate or ask questions about children’s play using positional-concepts vocabulary in English and the child’s home language.
- Engage children in songs and rhymes with body movements or spatial concepts.
- Reinforce spatial concepts when reading or looking at books.
- Use props or play objects to guide children in positioning their bodies.
- Use the child’s home language to introduce spatial-concepts vocabulary.
- Provide alternative ways for children with physical disabilities or other special needs to learn spatial concepts.
- Provide additional cues and assistance as needed to ensure safety for children who have spatial-awareness challenges.
• Allow opportunities for risk taking.

Directional Awareness

Children’s understanding of what it means and how it feels to move up, down, forward, backward and finally sideways. Most preschool children begin to understand that their bodies have two sides but cannot yet identify the left or right side of their body. Children are also learning to identify the top, bottom, front, or back of objects, but they do not clearly understand that objects have a left or right side. Preschool children also enjoy following pathways on the floor or creating their own movement pathways, such as straight, curved, or zigzag.

Figure 13.9: You can see children’s inability to understand left from right when acting out the “Hokey Pokey.”[4]

3.0 Directional Awareness

<table>
<thead>
<tr>
<th>At around 48 months of age</th>
<th>At around 60 months of age</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Distinguish movements that are up and down and to the side of the body (for example, understands “use that side, now the other side”).</td>
<td>3.1 Begin to understand and distinguish between the sides of the body.</td>
</tr>
<tr>
<td>3.2 Move forward and backward or up and down easily.</td>
<td>3.2 Can change directions quickly and accurately.</td>
</tr>
<tr>
<td>3.3 Can place an object on top of or under something with some accuracy.</td>
<td>3.3 Can plan an object or own body in front of, to the side, or behind something else with greater accuracy.</td>
</tr>
<tr>
<td>Age</td>
<td>Directional Awareness Ability</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Between ages 2 and 3 years</strong></td>
<td>Children can identify front/back and top/bottom on their own bodies.</td>
</tr>
<tr>
<td><strong>Around age 4</strong></td>
<td>Children are aware that their bodies have two distinct sides and are learning to determine which side is left and which is right</td>
</tr>
<tr>
<td><strong>By age 6 or 7</strong></td>
<td>Children can accurately identify the left and right sides on their own body parts.</td>
</tr>
<tr>
<td><strong>Around age 8</strong></td>
<td>Children become aware that objects also have a left and right side.</td>
</tr>
<tr>
<td><strong>Ages 10 years and older</strong></td>
<td>Children can give directions to another person, such as “Go down the hall and turn left to get to the school office.” They can accurately identify the left and right sides on another person, even if the person is facing a different direction.</td>
</tr>
</tbody>
</table>

Table 13.2: Developmental Sequence of Directional Awareness

Teachers can support children’s developing directional awareness with the following:

- Provide opportunities for child-initiated play in areas with open space.
- Provide safe environments in which children can climb up and down.
- Encourage children to move in different directions and in different types of pathways (e.g., straight, curved, or zigzag) during group movement games.
- Design activities for children to practice moving alongside or in a line with other people.
- Play games that require children to coordinate moving with others to manage a physical object or prop.
- Provide opportunities for children to move and use their bodies with force.
- Provide opportunities for children to move and use their bodies lightly.
- Engage children in two-handed play activities.
- Position drawing activities vertically.
• Provide pretend-play activities to reinforce directional concepts.
• Use the child’s home language for introducing directional-concepts vocabulary.
• Adapt movement experiences as needed for children with physical disabilities.
• Allow opportunities for risk taking.[5]

Vignette

Several children in Mr. Clay’s class are interested in trains, and during circle time they read a book about trains. Later that day, a group of children go through the obstacle course outdoors. Spencer asks, “I wonder if a train could go through our tunnel.” Ming responds, “Yeah, the train in the book went through mountain tunnels.” Mr. Clay suggests, “Well, maybe this obstacle course is a railroad today?” The children all agree excitedly.

Children begin to go through the obstacle pretending to be trains and saying “choo-choo” along the way. After awhile, Mr. Clay asks, “Do any of you trains want to carry freight?” “I do!” volunteers Mei enthusiastically. Mr. Clay retrieves a bucket of beanbags, which will be the trains’ freight. The teacher asks Mei, “Mei the Train, where will you carry your freight?” Mei replies, “here” while pointing to her shoulder. “On your shoulder? Great idea!” responds Mr. Clay. As children continue with the activity, Mr. Clay assists them in coming up with other variations, such as having everyone line up in a row and stay close together as one long train. When Ming gets to the cardboard tunnel, the teacher lifts up the cardboard box to provide clearance for Ming and his wheelchair to fit through the tunnel. Later, the teacher asks, “I wonder if it would be fun for the trains to go in reverse?” “What’s reverse?” Spencer asks. Ming responds, “I know! Watch this,” and demonstrates wheeling his wheelchair backwards.[6]

Pause to Reflect

Think of other movement activities children enjoy. How could each be modified to include children with differing disabilities and special needs?

References

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