UNDERSTANDING PRAXIS:

HOW WE DEVELOP THE ABILITY TO PLAN AND EXECUTE ACTIONS

By Zoe Mailloux, OTD, OTR/L, FAOTA

When most people think about "motor skills," actions such as running, jumping, catching, and throwing might come to mind. Children are continually developing new motor skills, throughout their early years.

Getting dressed, using eating utensils, playing with toys, and learning to write are all examples of motor skills that are usually mastered during childhood. In general, there is often less awareness of the process which allows actions to become automatic skills that are accomplished without a lot of effort, or even attention to the fact that we are doing these things. This process is called "praxis" or motor planning. Praxis involves forming ideas about what is possible to do, planning the actions to do those things, then executing the actions.

We now know that praxis is highly dependent on adequate sensory perception. Starting in infancy, babies have the inner sense of touch, body position, and movement at the same time they begin to gain mastery and control over their actions. For example, babies automatically make facial expressions which go along with the way they feel inside (e.g. irritated, hungry, satisfied, comfortable, etc.). Their caregivers mimic their facial expressions and narrate their meaning (e.g. "Oh, you are so mad, aren't you?" or "Now you are happy").

Starting with the internal feelings from the babies own skin and muscles that accompany their facial expressions, coupled with the feedback from caregivers, babies eventually gain control over their actions and can not only have ideas about making a variety of "kinds of faces" but can also, in fact, intentionally make their face look angry or happy. Making a "happy face" is an example of a simple motor plan. Later, when a child is asked to "smile for the camera", they will not need to plan that action, because it will be an automatic motor skill.

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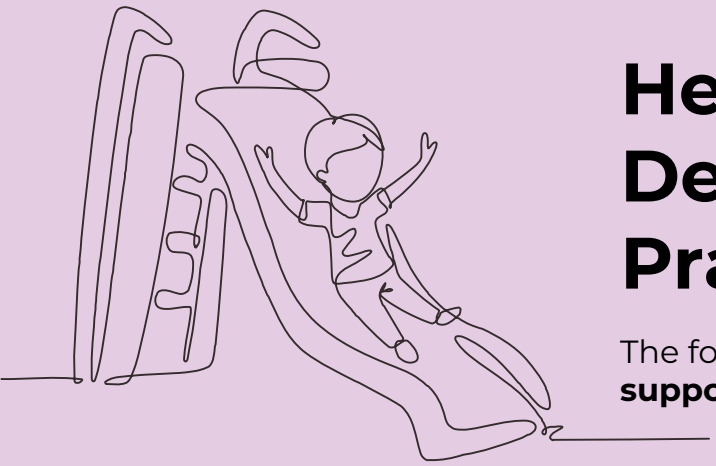
In this way, children need to use praxis or motor planning for the many actions and skills they need to master, in early life. Learning to brush teeth, button buttons, tie shoes, cut paper, make a sandwich, ride a bicycle, or fold laundry, are all examples of actions that initially require praxis, but soon become automatic motor skills, if the sensory functions needed to guide actions are working sufficiently. For most of us, these actions, once mastered as skills, are completed without needing to "look at what we are doing" or to pay attention to the task.

Adults tend to use familiar actions and skills, and may, therefore, have some difficulty remembering what it is like to need praxis, unless they do something such as taking up a new hobby, trying a new sport or learning to play a new musical instrument. Many adults can remember learning to drive a car, which is an example of praxis. When we learn to drive a car, we are highly dependent on integrating information from all our sensory systems. However, once we "learn," driving the car becomes an "automatic skill" supported by all our senses, working away in the background.

The process of learning to drive, versus driving, is an example of praxis versus motor skill. Children with unreliable or inefficient sensory perception often struggle with praxis, thus, motor skills may be more difficult to attain. Imagine how stressful it would be if the ability to drive a car never progressed past the "learning to drive" phase? For some children, many actions constantly require praxis which can be stressful, distracting, and frustrating.



Help Your Child Develop Better Praxis and Motor Skills

The following are some examples of activities that can **support the development of praxis and motor skills.**

1 Remember that planning and executing actions depends on sensory perception. If your child is struggling with learning new motor skills, seek an assessment with an occupational therapist who is qualified to assess all aspects of sensory integration.

2 Encourage sensory exploration and play, especially through tactile activities. Play with water, soap foam, and lotion in the bathtub or on mats can enhance sensory feedback and support planning and executing actions.

3 Ask your child to do familiar actions in new or different ways. For example, suggest going down a slide, climbing up a ladder, or rolling down a hill in a different position or manner.

4 Demonstrate novel ways to do things or unexpected actions that your child can then imitate.

5 Provide opportunities for your child to participate in activities at home such as setting the table, helping with meal preparation, folding and putting away laundry, wrapping gifts, arranging a room for various events, etc. Not only will participation in these novel activities support praxis, but they will also give your child a sense of accomplishment and foster independence in important daily living skills.

6 Consider multi-step activities that need to be planned over time and engage your child in determining how to sequence the necessary steps.

7 Limit verbal instructions when a child is trying or learning something new. Processing language and planning actions at the same time can be challenging.

8 Try to give your child enough time to plan actions. Although it is not always possible to wait for children when time is pressured, try to find times in the day when your child can plan actions without time pressures.

9 Never do anything for your child that your child can do on their own.

These are just a few ideas. Use common sense and don't pressure or stress a child by making demands beyond their abilities. Observe your child's reactions to various activities and experiment with different strategies to find out what seems to help your child the most.