

## **Success with Assistive Technology: Positioning, Placement and Asking the Right Questions**

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Assistive technologies (AT) are devices that help children become more independent in school, at work and during play. AT can be as simple as a pencil grip or as sophisticated as a computerized device that enables persons who are non-verbal to communicate. The challenge to successful use of any assistive technology is choosing the right AT in the first place. One critical component of that success is remembering your “P’s and Q’s”: Positioning, Placement and asking the right Questions.

### **Positioning**

When thinking about assistive technology, it is important to take into consideration how the child is positioned. Often, a child will be sitting when using AT. Will the child be sitting in a wheelchair, in a classroom chair or on the floor? If the child will be sitting in a wheelchair, when was the last time that the chair’s positioning was evaluated? Has the child grown since receiving the chair? When you first get the chair, it is an excellent idea to take pictures of the child from the front and from the side. When you see a child every day, you may not realize that he has outgrown the chair or that her positioning needs may have changed due to the changing parameters of her particular disability.

Proper positioning is much more complicated than eyeballing symmetry or just searching for comfort. It is important to get an evaluation from a highly skilled and unbiased professional. Ask yourself if the professional doing the measuring is an employee of the equipment distributor? Is the professional a credentialed occupational or physical therapist? Did the professional measuring your child for a chair take your child out of the chair and lay him down to assess flexibility and the strength of all his joints and muscles? This is called a mat evaluation, and not every professional is trained to do this. A good evaluation allows the therapist to determine the best angles for the chair. These include the angle between the seat and back, the angles of the footrests and more.

Sometimes, changing the child’s position even a few degrees can have a dramatic effect on the child’s ability to access other technology or activities.

Once you have determined the best angles of the chair for positioning, what additional support is needed? Does your child need a tray, shoulder straps, trunk or hip guides or a special headrest? It is often tempting to remove these supports because, as able-bodied individuals, we tend to think that supports are uncomfortable and confining. We also have a tendency to believe that if we strap children down too much, they may be relying on the support rather than building their own muscles. However, properly prescribed supports are recommended for very good reasons. Often, if a child is given stability in one place (e.g., feet and trunk), he or she is able to move with more coordination and accuracy somewhere else (e.g., hands). Ask your occupational or physical therapist if different supports are required for different activities.

Check your child for pressure points. Is there a red spot anywhere on your child’s body after maintaining a position for any length of time? Does the redness go away after 10–15 minutes? If it doesn’t, the seat may need to be adjusted. Seating systems often need frequent tweaking. Make sure a professional reevaluates the chair and the child on a regular basis. It should be reassessed every 12–18 months and even more often if the child has experienced a growth spurt or has undergone a procedure such as Botox injections or a muscle release surgery/procedure.

Maybe the technology you are considering is software for a child without physical disabilities but with a learning disability. You still need to consider positioning. Do the dimensions of the child match the dimensions of the environment? We have all visited classrooms where all the desks

and chairs are the exact same size. Kids are not the same size! Try adjusting the desk (don't be afraid to remove the tray under the desk) and choose a chair that fits appropriately. Chances are the student's handwriting will improve. Don't forget to place computer monitors and keyboards at appropriate heights. If you are unsure what the proper dimensions are for your child, ask the school's occupational or physical therapist.

### **Placement of and Access to Technology**

What type of access should be used? Examples of modifying the technology so someone with a physical disability can access it include adapted handles on eating utensils, joysticks or adapted keyboards for computer use and switches to drive a power wheelchair or use a communication device.

Where should the assistive technology be placed? Should it be to the right or the left of the child? Should it be close to the child's body? You know your child better than anyone, and your observations can provide invaluable insight for the therapist who is helping the team determine the most appropriate access method and placement for your child. The following section will give you ideas about what to discuss with your therapist.

Where will the technology be used? If the technology is used in school, proper placement of the equipment is essential. Will it block the child's vision? Will it affect the child's ability to use manipulatives or to socialize? If the child has to transport the technology by mounting it on a wheelchair, will it fit through doorways or allow the child to pull up to a desk?

Determining an appropriate access method can be especially challenging when your child has limited coordinated movements. Stand back and just watch your child move. Don't ask him to move, just stand back, observe and take note. Think of all movement as a potential access method. Look for finger movement, leg or foot movement, head movement and facial muscle movement. Try to determine which movements are done intentionally by the child rather than as part of a reflex or due to muscle tone changes.

Consider your child's muscle tone. Does your child have stiff muscles? If so, does the stiffness affect your child's ability to move with accuracy and smoothness? How does the tone affect your child's timing? For instance, if your child reaches for something is he or she able to release it quickly? How long does it take your child to start moving once he or she is asked to move? Does your child's tone increase with excitement or stress? Does your child's ability to move fluctuate from day to day? Does your child move with consistent patterns? Discuss with your therapist whether using these patterns would be appropriate for access or whether it would encourage muscular skeletal asymmetries. Your therapist may ask you to discuss tone management with your physician.

What is your child's endurance? How long can your child move in a certain way without fatiguing? Does your child move better in the morning, afternoon or evening? How long does it take your child to recover when he or she becomes fatigued? What does your child do to recover? Remember that even if your child's movement does not fluctuate from day to day, it may change from year to year. You may have to reevaluate the access method or the site from time to time. Don't be afraid to try something that did not work in the past.

Sometimes a child gains motor skills with maturity and experience.

Asking the right questions and bringing information to your child's AT evaluation will make you a more informed consumer. Proper positioning of your child and placement of the AT will help ensure that the technology is used to its highest potential. Make sure as much thought is put into the positioning of you child and placement of the AT as is put into the features of the technology.