



by Zara Harris, MS, OT

IN THE SCHOOLS OF THE 1960S AND 70S, instruction overemphasized handwriting and spelling. During the 1980s and 90s, the pendulum swung toward process writing, and handwriting and spelling were often neglected. Now, in the twenty-first century, people question the need to teach handwriting at all, and the Common Core Standards adopted by most states require instruction in first grade only, with no mention of cursive at all.

Should we abandon handwriting, a skill that challenges many students with ADHD? Children increasingly use keyboards or touch screens from the early years. So maybe we should just go with the flow? And yet, few schools teach children keyboarding skills in the early years, if at all.

At a 2012 conference titled *Handwriting in the 21st Century? An Educational Summit*, researchers presented evidence that handwriting is indeed a critical skill which influences the processes associated with receptive and expressive language. They demonstrated that as children learn to read, they need to be learning to write at the same time. Moreover, the researchers showed that typing did not improve the

quality or length of composition in grade school. Today, forty-two percent of fine-motor time in kindergarten still involves paper and pencils, and many of our students with ADHD struggle to perform as well as others in these very visible school tasks. Why?

Handwriting is a complex skill requiring both motor and working memory skills.

An estimated twenty-five to thirty-three percent of students are struggling to achieve competency in handwriting (Conti, 2012). Many of these will have learning disabilities (LD) or ADHD alone or the “double whammy” of LD/ADHD plus developmental coordination disorder (DCD) resulting in dysgraphia (difficulty with handwriting).

Longitudinal studies also show that children who had this combination and were not treated had considerably poorer psychosocial outcomes in adulthood (Ramussen, 2000). Research also shows that children with DCD are at a higher risk of experiencing bullying and depression (Campbell, 2012). The implication is that ADHD+DCD should be identified and addressed as early as possible in our homes and schools.

To Write

Developmental coordination disorder

In the United States, DCD is a much underdiagnosed disorder, and yet it coexists in about fifty percent of students with a diagnosis of ADHD. DCD is a delay in the development of gross motor or fine motor skills or both. Teachers are usually adept at identifying this disorder when it appears on its own, but research shows that when there is an accompanying behavior issue it is often overlooked. Parents may realize that their child seems abnormally clumsy or has poor writing, but rarely bring it to the attention of their doctor in the absence of teacher concern. Then, many question whether it matters anymore.

By the time the student is in fourth grade, teachers are concerned about the content of writing and not the process. If they cannot read the child's writing, they will tell him or her to "type it." Yet, the child with DCD has to use the same fingers to type and for them the process of learning keyboarding skills is harder than it is for their peers. Until a student can type about twenty-five words per minute, it is no less frustrating than handwriting. Many a

student will have a paragraph of information, but will only produce a sentence because the process is so frustrating; thus, academics suffer.

Handwriting or keyboarding?

The answer is BOTH—and from the earliest moment possible.

There is no reason for children not to learn to write and type as they learn to read. As soon as children can move their fingers independently they can learn to place those fingers correctly on a keyboard. No one ever says that a child is too young to learn to play the piano!

The importance of starting early is that as we learn motor skills we acquire habits that become automatic. Usually this is good, but if we learn the wrong way, we acquire bad habits that are very hard to break and will be set for life. A pencil placed in a hand that is not yet ready to move it with the joints of the fingers will be grasped fist-like and result in a habituated grip that is almost impossible to change beyond first grade (even though the fingers may now be mature enough to move it). The result is that the child will be

or to Type?



Good Posture Is Essential for Good Lifelong Habits

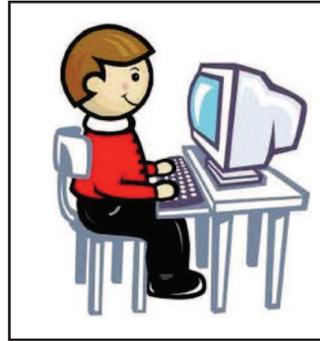
writing for life using the joints of the wrist and arm. It is better, then, that we do not put pencils into hands that are not yet ready for them. And when we do so, parents and teachers help the child to hold the pencil in a functional grip in which the fingers move the pencil.

Typing is the same: The longer a child (or adult) “hunts and pecks,” using their eyes to guide their fingers to the keys, the harder it will be to unlearn the habit. If one watches the keys it does not matter which finger goes on which key, and so touch-typing will never develop and speeds (though sometimes quite fast) will never be automatic and really fast!

Do we need to type at all now that we have Siri?

Speech to text software has improved enormously over the last few years. For some, this will become the accommodation that is most useful for producing written output, but there are still problems using it in the classroom.

Many children do not yet speak clearly enough for the software to be effective. The skill of dictation is not as easy



as it seems. Students must organize what they are going to say before they speak it, and we know that organizing thoughts, as well as things, is often a problem for students with ADHD. Then there is the need to edit what they have dictated. But for the student who has ADHD, it was boring enough to have to dictate it the first time, and having to go back to edit it is often a step too far.

So what is the solution?

The pre-writing child. Try to involve this child in as much fine motor play as possible. Typically, the child with delayed fine motor skills avoids puzzles, art, Lego, etc., preferring passive or gross motor play. Any time you can put a tool in your child’s hand, do it! The kitchen is a great place to practice fine motor skills. Using a knife and fork to eat helps too. Do not worry about teaching the child to write before he or she starts school. If a preschooler wants to write, however, make sure that a child under age three uses large crayons and that the approaching-kindergarten child uses a small pencil grasped appropriately.

The school-age child. If you notice that your child is avoiding or not writing as well as peers, then raise the subject with your child’s teacher and ask if an observation from an occupational therapist of special needs teacher would be appropriate. An evaluation from an occupational therapist will show whether or not your student reaches the criteria for DCD or not, and she will be able to advise both you and the teacher of ways to proceed.

As with ADHD, information about the diagnosis, what it is and what it isn’t, is a vital part of any treatment plan. Understanding produces empathy and eases the frustration for all, especially the student. Good sources of information for both teachers and parents can be found at canchild.ca, the website of the CanChild Centre for Childhood Disability Research at McMaster University.

When it is time to learn to type, the best method is to use a proper keyboard, either with a desktop or a laptop computer. Tablets are wonderful for many things but are not ideal for learning to keyboard. If that is the only option, then use a Bluetooth or USB keyboard with the tablet and place the keyboard so that the ideal posture is possible. If the student is already looking at the keys it may be necessary to cover the keys, this can be done using a “skin” purchased to cover the keys or a box to cover the keyboard with holes cut out for the hands. Another method is to use a pair of boxer shorts with the keyboard placed in the waist opening and the hands going through the leg openings.

Criteria for Diagnosing Developmental Coordination Disorder

from the DSM-5; *Developmental Coordination Disorder 315.4*

CRITERION A

The acquisition and execution of coordinated motor skills is substantially below that expected given the individual’s chronological age (CA) and opportunity for skill learning and use. Difficulties are manifested as clumsiness (e.g., dropping or bumping into objects) as well as slowness and inaccuracy of performance of motor skills (e.g., catching an object, using scissors or cutlery, handwriting, riding a bike or participating in sports).

CRITERION B

The motor skills deficit in Criterion A significantly and persistently interferes with activities of daily living appropriate to CA (e.g., self-care, self-maintenance) and impacts academic/school productivity, prevocational and vocational activities, leisure and play.

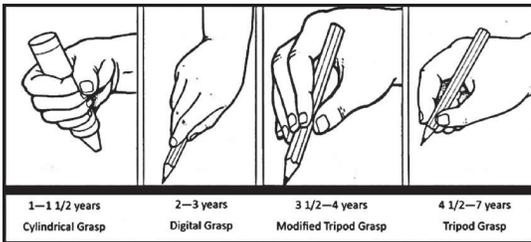
CRITERION C

Onset of symptoms is in the early developmental period

CRITERION D

The motor skills deficits are not better explained by intellectual disability or visual impairment and are not attributable to a neurological condition affecting movement (e.g., cerebral palsy, muscular dystrophy, degenerative disorder).

Normal Development of Pencil Grip



Use a good keyboarding program—there are many of them out there—and have the child practice for ten to twenty minutes at a time, several times a week. This is better than one long session one day a week. It will probably be necessary to link typing time with a positive reward in order to achieve cooperation—it is pretty boring after all. It will take time to develop twenty-five words per minute, especially if the student has DCD, but it can be done. The student will be very glad he or she did this later on!

Typing games provide useful practice, but watch out that your child is not looking at those keys. The games are more fun than the exercises and they want to do well, often ignoring the purpose for which the games were designed. Some students find the computer training is too fast and frustrating. They do better with a good old-fashioned typing book on an easel.

All children need to be able to both write and type, and both need to be taught. At minimum, handwriting needs to be useful enough for signing and completing worksheets.

If a child cannot write legibly or fast enough to complete schoolwork, then he or she must be taught to type, however long that takes. Once the student is in high school, other assistive technology options are now available to help with note-taking and longer writing projects. A good foundation in keyboarding, however, is an essential skill for everyone in the twenty-first century. 🗣️

*Pediatric occupational therapist **Zara Harris** is based in Fayetteville, Arkansas. Licensed in both the United States and the United Kingdom, she has more than thirty years of experience. Harris has worked with international schools on three different continents and is in a unique position to understand the special needs of today's mobile families. She specializes in helping students who are struggling with handwriting, homework, attention, time management, and organization.*

REFERENCES

Campbell, Wenonah N.; Missiuna, Cheryl; Vaillancourt, Tracy. "Peer Victimization and Depression in Children with and without Motor Coordination Difficulties." *Psychology in the Schools*, 49(4), Apr 2012, 328-341.

Peder Ramussen, "Natural outcome of ADHD with Developmental Coordination at Age 22 Years: A controlled longitudinal, Community-based study." *Journal of the American Academy of Child and Adolescent Psychiatry*, 39(11), November 2000.

Conti, G. "Handwriting Characteristics and the Prediction of Illegibility in Third and Fifth Grade Students." Presented at *Handwriting in the 21st Century: An Educational Summit*, Washington, DC, January 23, 2012.



FOR MORE INFO

<https://www.hw21summit.com>



Summit Teen Travel

For the special child ages 15 – 20 with social, attention or learning disorders

In addition to our Summer Camp in Honesdale, PA, Summit Camp sponsors Travel Programs. Our trips are of two and three week duration to locations across North America, Europe and Israel.

In 2013 we travelled to Alaska, Washington, DC to Orlando and Spain and Morocco. The over 100 travelers had a wonderful time and learned many skills.

For Summer 2014, Summit Teen Travel is expanding its Program Options to eight adventures.

First session will choose from three weeks of travel to Israel, the British Isles and the Southwest United States. Session two will offer two programs of two weeks duration to the Northeast and Canada, and from Philadelphia to Williamsburg. The third session trips of three weeks each include the Great Cities of Europe - Paris, Milan, Florence, Venice and Rome. The second trip is to Costa Rica. The third will be to Israel for those who missed out on the first session. In all locations we will visit the major sites, the Theme Parks and Beaches.

At Summit Teen Travel, we practice a philosophy that says all age appropriate youngsters should and can have the same experiences as their siblings. With the professionalism of an experienced staff of counselors, guides and medical personnel and a uniquely designed itinerary Summit Travel accomplishes this.

Everyone within the community is welcome and encouraged to participate.

Check out our itineraries through our website at www.summitcamp.com and press **TRAVEL**. Or contact our Travel Director at 973.732.3230 or travel@summitcamp.com.



Summit Teen Travel is a department of Summit Camp located in Honesdale, PA.

