

How to Help Students with Dysgraphia

- with Michelle Morgan

Reach All Readers Podcast #253

Anna: Welcome, Michelle.

Michelle: Hi. Thanks for having me.

Anna: I'm so excited to have you here to talk to us about handwriting and dysgraphia. I hear a lot of questions about that. But before we do, could you introduce us to yourself and talk to us about what you've done in education and what you're doing now?

Michelle: Sure. I am a speech-language pathologist. I've been a speech-language pathologist for over 20 years. I have a private clinic in Kentucky, just north of Lexington, and we specialize in seeing kids with dyslexia and dysgraphia. That's pretty much all we do.

I got to this point in my career because I have a daughter with dyslexia and dysgraphia, and that was a rough road at the beginning to try to figure out what she needed and how to find something that was effective for her.

In learning what I needed to help her, it completely changed the trajectory of my professional career, and here we are. She is now reading and writing on grade level, and about to graduate eighth grade. She's put in a lot of hard work, and I'm grateful to all the people that helped her. In turn, I try to help a bunch of other kids.

Anna: We're here today to talk about handwriting, and let's start by talking about why handwriting's important and why you believe it's important to spend time on it, whether that's in the class or in an intervention setting.

Michelle: Sure. So, it's pretty well established that we have to build a reading brain. We are not born with the ability to develop the skills for reading and spelling. They have to be taught. It's not like our oral language, where kids are going to pick that up naturally just from being around other people. I'm just going to pull information from a couple journal articles.

The National Association of Elementary School Principals published an article by Dr. Virginia Berninger in 2012. It's called "Strengthening the Mind's Eye: A Case for Continued Handwriting Instruction in the Twenty-First Century." What she tells us is that when kids are learning to write a new letter, it activates more areas of the brain than once they've learned a letter. We're activating more brain power when we're learning to write these letters.

She also makes the case that when we're learning handwriting and we're using a pen or pencil, then we're activating the opposite side of the brain, because that's how our connection works. If we're using our right hand, we're activating the left side of the

brain, while keyboarding requires the use of both hands.

And since kids in the elementary grades still have brains that are developing, they don't have that cross-connection that they need to integrate that information. And so she makes the case that really until about middle school, kids benefit more, and they can process the new information that they're learning more, by writing by hand, and that kids really get an advantage of keyboarding once they're in middle school, because they have a more developed brain where they're using both sides.

She also makes the case that learning handwriting activates what's called the orthographic loop of language. That's where we are connecting the letters to sounds, and that learning handwriting helps readers recognize letters better when learning to read, as opposed to being on the keyboard.

She also makes the case that yes, we still have to learn keyboarding, but let's do it at a developmentally appropriate rate. We don't want to stick kids on computers, and that's all they get access to in early elementary school. They need to be using handwriting because it engages more of their brain power.

There's a more recent journal article, it came out in 2024, but it's had a resurgence on social media. It's shown up a couple times in my social media accounts. It's from the journal *Frontiers in Psychology*, and it's called "Handwriting But Not Typewriting Leads to Widespread Brain Connectivity." They used EEG studies to show this. They took thirty-six college-age students, and they had them copy words in cursive with a digital pen versus typing on a keyboard.

What they found was that, even with these students where the letters were established... Virginia Berninger was saying that when you're learning a new letter, it engages so much more of the brain. But what this study shows is that even once letters have been learned and established, when you're writing by hand, the brain connection patterns are far more elaborate than when keyboarding.

It shows that we have different brain patterns in use when we're writing by hand versus when we're keyboarding, and that the brain regions that are involved in handwriting use connectivity patterns that promote learning, not just in reading, but learning in general. And so when we're processing information and we're incorporating handwriting, it helps use those parts of our brain that we need for learning and remembering things across all areas.

So that, to me, is a pretty strong case for using handwriting. Of course, they both say, yes, we're in a world of technology, and yes, we need to learn keyboarding, but we cannot stop using handwriting, because it's so important to developing our brain for learning.

Anna: So I've often thought of the difficulties that some kids have with handwriting as purely a fine motor issue, but when I listened to you talk, you talked about another issue that could be getting in the way, another cause of handwriting difficulty. Can you talk about the different causes and how teachers can tell the difference?

Michelle: Yeah. Fine motor is certainly the most common reason that people know of. There are also many non-motor components that are involved in handwriting, one of them being working memory. They have to remember the motions. They have to remember the letter they're writing. They have to remember the sound and the word and the letter that represents the sound that they're trying to write, so there's a lot of working memory. Knowing the name of the letter is important, and naming skills are a language skill.

They have to be able to plan to form the letters. That's an executive function skill, that planning and then execution.

They have to be able to integrate the sensory touch information: how they feel holding a pencil, the type of writing surface, the various types of writing utensils. And while we might not think that's a big deal, I've seen kids who are completely averse to writing with a pencil on paper, but they will happily use a dry erase marker on a dry erase board, because it feels different to them. We have to move them from a dry erase surface to paper and pencil, but we do it in a way where they can slowly integrate that different sensory touch information so it sits better in their system.

There's also visual information they have to process: how big or small the letter is in comparison to the line, how big or small the letter needs to be compared to other letters, how they have to space letters next to each other if it's in the same word or a different word, and whether it needs to sit on or above the line.

So that's all visual information they have to process. And then when we're writing, there's that activation of the orthographic loop, which is a language skill. So, a lot of times it's motor, sometimes it's language and executive function. I usually just say I use a language-based handwriting approach, because so many people don't know what executive function skills are, but it's part of that planning and then the execution of that plan.

And sometimes it is both; they can have problems with both. I get most of my professional referrals from an OT in the area. She sees kids, and she works on their fine motor. If their handwriting isn't where they need it to be, she sends them to me, and we do a language-based approach, and they improve.

I have my Head-to-Hand writing program, and then within that, there is a screener that you could use to give to teachers or to parents to help them figure that out.

For example, if it's a fine motor issue, the child is probably also going to have trouble tying their shoes, doing buttons and zippers, using scissors, picking up small items, opening snack packages and things like that, and using crayons or markers for non-literacy activities. Sometimes hand fatigue happens in both, but those are fine motor issues that are going to happen in literacy activities and non-literacy activities.

If the child can do all of those things, but their handwriting is still really hard to read,

or they have a lot of difficulty planning the letter, executing the motions for the letter, it's probably this language- and executive-function-based difficulty. What you see there is lots of erasing, lots of retracing. They might be pressing really hard. They're going to be picking their pencil up and down way more often than they need to. Sometimes they can get very beautiful handwriting, but it's taken them a really long time to get there. I've got some homeschool kids where, let's say they write the alphabet. You look at the final product, and if you didn't watch the process, you'd say, "Oh, their handwriting is beautiful." But it took them a long, long time and lots of mental effort to get it to look like that. So they can get it to be accurate, but the process is not automatic, and it's not efficient.

Lots of times these kids have trouble naming letters or saying the alphabetic sequence. They probably have some difficulty with sound awareness. They're probably going to have trouble reading words and spelling words, and that's a little bit of that overlap into dyslexia.

But those are the language-based skills that you're going to have trouble with, versus if it's just a fine motor issue.

Anna: So is dysgraphia connected to the language-based issue only?

Michelle: So dysgraphia is difficulty at the sub-word level of language.

Anna: Okay.

Michelle: Before we get to words, we've got this sub-word level of language, and that is where the deficits with dyslexia fall. It can impact handwriting. It can also impact spelling, because you're going to have a trickle-up effect. Just like kids with dyslexia who have a word-level language deficit have difficulty composing and writing longer, complex sentences, because all their brain power is going into how to spell the word, and maybe they're avoiding words because they don't know how to spell words.

Kids with dysgraphia sometimes get caught up in how to make the letter. So as an example, I did an evaluation on a child one time where he was supposed to write the word. I would say, "Fox," and he'd go, "Fox. /f/. F." So he identified the sound. He then identified the letter. He had no idea how to write that letter, and so he just drew a straight line. He did the same thing for all of those sounds. Then he went, "/ō/. O. I don't know." He just drew a line. He knew he had to write something, but he could not plan how to form the letter, even though he had identified the sound and he'd named the letter. Even on the /ks/, those two sounds at the end that are represented with an X, he knew it was an /ks/ and X, but he could not write the letter.

That's a really good example of a kid with dysgraphia who had pretty good sound awareness. He knew what letter needed to represent that sound but did not know how to plan and then write the letter. So he did great with a language-based handwriting intervention, and now we're working on spelling, because we remediated

those handwriting issues.

Anna: Okay, so we're going to talk a little bit more about your program and your approach to teaching handwriting, but before we do that, I just want to address letter reversals. Can you talk about the cause of letter reversals and then when in a child's learning journey should teachers or parents be concerned about that? Like, okay, they're getting too old for this, I need to look into this.

Michelle: If someone wants to read more on it, there's a fabulous chapter dedicated to this in the book *Reading in the Brain*, by Stanislas Dehaene. He has a whole chapter in his book on this. Basically, we have this normal developmental skill where, as we grow up, we begin to recognize that regardless of what angle I see an image from, my brain recognizes it as the same image. This is incredibly helpful for three-dimensional objects.

And then we send kids to school, and they're presented with these two-dimensional symbols that look the same except for their spatial orientation, and a child's brain perceives these as the same letter. So they have to unlearn this mirror image generalization in order to recognize letters.

Some kids unlearn it very quickly, but this is why you will hear schools and teachers say reversals are normal, because they are. Kids probably reverse these because of the mirror image generalization that they have to unlearn.

This is going to be letters like "b" and "d", "p" and "q", "s" and "z". Sometimes kids will also invert letters — so you get "u" and "n", "m" and "w". Sometimes they flip those, but those are less common. Sometimes you get kids that do whole mirror writing, and they will write whole words backwards.

But again, they have to learn that spatial orientation, that with literacy-related things, we start on the left and go towards the right. Spatial orientation and direction becomes important. It's about the age of eight where reversals should correct themselves. If you're seeing reversals beyond the age of eight, they probably need explicit instruction.

Additionally, if you are seeing reversals of letters that don't have that mirror image similarity, they probably need intervention earlier, because there's not a similar letter that their brain is perceiving in reverse. So if kids are reversing "k", "r", or things like that, that's a sign that you probably need to intervene earlier, because they're having a lot of trouble working out that spatial orientation in their brain.

Anna: That's good to know. I never thought about that before, that if they're mixing up those other letters, you need to think about it sooner.

So in your program, you incorporate executive functions into handwriting instruction. Now, am I correct that this is a useful intervention for kids with dysgraphia? Is that the point of it?

Michelle: Yes. Because it helps them work out those language-based issues and the executive function. It helps them plan the letter, it incorporates language skills, it takes them from the letter writing into writing the letters inside of words. It scaffolds them all the way from that letter writing process to using it in words, which is a lot more complex than just having to write the letter.

We've taken the information that we know, a lot of Virginia Berninger's work (she's done a lot of work on handwriting), and incorporated what she says that we need for an effective dysgraphia intervention, and added these executive function questions to make sure that we're bringing their awareness to those points of letter writing that are going to help them with the planning phase and the spatial orientation, things like that.

Anna: So is your program designed for intervention solely, or is it also being used in a whole class setting?

Michelle: Currently I use it for intervention. However, starting this fall, there are going to be some schools that are using it in the whole class setting, and so that's really exciting. It has been used in small group settings in the past.

There's a cursive and a print version, because sometimes the older kids don't like it so much... If you've got an older elementary kid and you're telling them they need to work on their letter writing, they often are slightly offended by that. And so what I've found is if you teach them the same skills through cursive, now it's more of an age-appropriate intervention, and it's cool. Kids often think that learning cursive is cool because not many other kids can do it. But because what you're helping them do is organize the information for letter writing in their brain, it transfers to the print process.

It incorporates things like working memory. We ease that working memory burden. We start with just writing the letter. There are executive function cue cards that they have out next to them so that they get used to answering. There are five questions. Where does the letter start? It's either going to start at the top line, below the top line, on the middle line, or under the middle line.

Then we ask them, what direction does the letter go? It's either going to go down, or there are a couple letters that go at an angle. Sometimes that word "angle" does need some vocabulary instruction. I've had some kids that rename it, and they'll say "crooked." That's fine, because the purpose is not to learn those names. The purpose is to teach them how to plan the letter. So if to them, when you start an X, it needs to go crooked, that accomplishes that goal. There are some that go in a C stroke, and that one also requires a little bit of explanation, but kids catch on to that one pretty quickly, because you draw a letter C, and then you show them, you put an arrow that goes along the top of that C, and explain there are a lot of letters that start the same way that this letter C does, so we call this motion a C stroke.

And again, they don't have to remember it. We're trying to ease their working memory burden. So we've got these arrows on a cue card, and I say, "If you don't

remember what it's called, just point to the matching arrow," because the whole purpose is to draw their attention to the direction that they need to go so that they can plan and then execute it when they're writing the letter.

We also ask them how much space it takes up, all or half, and where it sits on the line, whether it's on the line or under the line.

Then, how many times does your pencil go down? Most letters, your pencil just has to go down to the paper one time. In some letters, it goes down twice. These are letters that have a dot on top or have a cross, T or X, things like that. So once or twice, and that is part of that motor programming. How many times is my pencil going to go down for the letter?

We surround these executive function skills with language. When we first show them the letter, they have to tell me the name of the letter. We go through our executive function questions, and then as they write the letter, they state the name of the letter.

Now, one thing that's really important, there's a transition that has to happen there, because when kids are writing letters, they should be saying the name of the letter. That's all we know about the letter until it's in a word.

There are a lot of popular programs right now that are showing kids letters and want them to make a sound, but we don't know what sound letters are representing until they're in a word. Let's take the letter A, for example. It can spell short vowel A, it can spell long vowel A, it can spell the short vowel U sound, like in "what" and "was," it can spell the short vowel O sound, like in "father" and "water." So we just don't know what sound that letter is spelling until it's in a word.

So when I'm working with a kid, if we're only writing a letter, we're saying the letter name. As soon as we put letters into words, we say the sounds as they write the letters. That's a big change that has to happen. In the way we work through it, it happens pretty seamlessly, but because they have to learn both the name of the letter and the sounds that it can represent, they have to learn both.

So that's how we start with language, naming the letter, then we go through these executive function skills, and then we end with language, where they're writing the letter, saying the name of the letter if it's by itself, and saying the sound that it's spelling if it's in a word.

Let's talk about how this affects "b" and "d" specifically, right? Because those are probably the two most common letters that kids reverse. When I'm doing this with a kiddo, and we're introducing these executive function questions and going through the letters, the first thing I'll show them is I'll write "b" and "d" on a piece of paper or a whiteboard, without the starting dots or the arrows that we include in the Head-to-Hand writing program.

I'll be like, "These letters are hard, right? They look really similar, don't they?" And they're like, "Yeah, they do. They look the same to me." Because their brain is seeing

the mirror image and can't tell the difference because of that mirror image generalization.

I'll say, "Okay, we're going to add some information to these letters so that your brain can tell them apart more easily." Then I will show them the picture of "b" and "d" that each have a red dot for the starting point and an arrow for the direction that they need to go in. And to make these letters distinct from each other, we have "b" start at the top and go down, and then when we're writing a "d", we have the arrow under the middle line, and it goes in a C stroke.

When a child writes a "d", this is the only letter that I have them say additional information when they're writing it. What I have them say is, "C stroke 'd'," to put into their brain that this "d" needs a C stroke. This says two things: when they're writing, it helps them figure out what direction it needs to go, because if they get their starting point and their direction going, they usually don't have trouble knowing that this letter takes up all the space and sits on the line. If you can get them started, they'll end up with it in the right direction — the C-stroke "d".

Also, when they're reading, if they misread the letter, say a "b" when they should say a "d", I can say, "Do you see a C-stroke in that letter?" And their brain immediately recognizes that, and they can figure out what letter it is without having to think about an unrelated image that can then be transposed. I'm sure you've seen the images I'm talking about, the bat and the ball, and the baby and the belly. Those images can be transposed in their mind also.

Another thing that a lot of kids learn is to use their thumbs. They hold their thumbs up and put their fists together, and it makes a bed, and they learn "b". The problem with the thumbs is it interrupts the writing process. and it interrupts the reading process. Because if I'm writing a word and I need to use my thumbs, I have to put down my pencil, pick up my thumbs, figure out which one's "b" and which one's "d", put my thumbs down, pick my pencil back up, and then remember what it was. It really interrupts that writing or reading process. Whereas if we can just give them a cue to help them figure out the spatial orientation and the meaning of that by helping them think about C-stroke "d", it's a much smoother, more effective way for them to figure out the letter and associate the correct sound if they're reading, or to help them hear the sound in the word and figure out what letter they need to write if we're writing. Getting them to differentiate "b" and "d" is tremendously effective.

Now, what often happens is once they figure it out, sometimes they don't like to write it like that anymore. And so what I tell the kids in my clinic is, "I don't care where you start that letter, as long as you don't flip-flop it." Because the purpose of the different directions and the different starting points is to help them learn that the spatial orientation has meaning and to figure out the directionality of the letters. If they figure that out, and then they want to start both at the top, but they're no longer reversing them, I'm not real worried about that. But if they start doing it too early, and they're still flip-flopping it, I'm like, "No, you have to use that C-stroke 'd'."

Anna: I've always thought of the point of teaching letters from the top down most of

the time is just to teach them something consistent that they can do, so they develop automaticity with writing the letter. Some people feel very strongly about the importance of pulling down. Can you talk to that? Is that really necessary, or is it just to get us all on the same page?

Michelle: Yeah, it does speak to efficiency and it speaks to planning. I think it's more something that, if we're doing different starting motions for all letters, it helps them. It's like self-organization, and some kids can do that without the explicit instruction.

Now, if it's a fine motor issue, and the OT needs them to pull down instead of moving up, that has to do with sort of... If you're thinking about when you write, we pivot at our elbow, which is why they also want the paper turned. It's easier to pull down versus to push up.

Sometimes the kids that I've got have so much on their plate from a literacy standpoint that if their letter is legible, and it's an efficient process for them, and we can use that to move on to bigger skills like spelling and then sentence writing, it's a battle that I don't always choose to fight.

Anna: Yeah, people have different opinions about it, but that's helpful to think about. So depending on the child, it might be a useful thing to focus on. But if there's a whole lot of other issues at play, the time spent may not be worth it.

Michelle: Yeah. In a perfect world, yes, we would pull down. If we're doing a D, we would start C stroke D, go to the top, and pull down also.

I was just talking to a mom today. Her child has gotten really good with going C stroke D, and then he takes up all the space, but he doesn't pull down. I told the mom the same thing. I was like, "That's a battle for a different day," because you're going to work on the pulling down at the end of the D when you're working just on letters, and that's why at home they are working on accuracy and automaticity of writing just the letters. But he's doing good enough that in the clinic, when I'm spending time with him, our focus is now on spelling with correct letter formation.

Once we move into spelling, there are so many other layers of brain involvement and brain power that he needs, that if he is writing the word and it has the D oriented correctly, and all he did was not pull down at the end, I am thrilled! This is a kid who, when he started, couldn't read or spell anything. They're continuing to work on it at home, but when I'm with him, we're facing bigger battles.

I'm not saying it's not important, but I'm saying sometimes you have to pick those battles.

Anna: Yeah. Well, and I do hear that question from teachers who teach intervention, and they say, "Well, I've got students whose handwriting is maybe illegible or maybe it's inefficient, but there are so many other things I need to be doing with them. What kind of priority should I be giving this in the intervention setting? How long should I be spending on handwriting?" Can you speak to that at all?

Michelle: Yeah, sure. So I think one thing that we need to remember when we're thinking about this is the studies that we mentioned at the beginning, and how much brain power it gives them to work on handwriting. There's also a framework for literacy called The Language Literacy Network, by Dr. Jan Wasowicz, and she includes handwriting on there as a foundational primary skill.

If we've got kids with illegible writing, and we're working on spelling without backing up to work on the handwriting, we're skipping an important step for them.

Now, sometimes people think that working on handwriting means we have to spend our entire intervention time on worksheets and copying letters. I don't believe that is the case, because another thing we know from Virginia Berninger's work is that we only get language activation writing these letters in the first one to three iterations of that. Once you move beyond that, if you've got a kid copying letters five or seven times, you lose that language activation.

And if you're working with them on handwriting because they need this language-based approach, they don't need to write it that many times. So what she advocates for, and what we do in the Head-to-Hand Writing program, is we write each letter once a day. 26 letters. Every single letter. It doesn't take that long.

When I start working with a kid, I have to do two, maybe three sessions where we only work on handwriting. We're introducing all these skills, the executive function skills and the process of going through that, for every letter. They learn that pretty quickly, because we do the same questions in the same order every time, and they've got the visual cue cards in front of them. In fact, they learn it so quickly that at some point they're like, "Do I have to say it out loud?" Usually at that point, that's when we fade those, because it's so ingrained in their brain that they know it without having to go through it out loud. That's when you can fade those, but their brain is still planning and using those skills.

Going through each letter just once a day doesn't take that long. After those initial sessions, I spend 10 minutes of the session doing handwriting, and then we move on to spelling.

Now, when we're spelling, of course we're still trying to incorporate good handwriting, and you will see a drop, because now our brain is thinking about other things besides letter formation, like the sounds. But it's so critical to incorporate handwriting into the spelling when we're doing that.

If I know that I'm working with a child and they have lots of b-d reversals, and they're writing a word like "had," and they've written their H saying the /h/ sound, they've written their A saying the /ă/ sound, and I see them pause to do the "d", and I know they're thinking about it... You always want to let them try to problem solve on their own, but if I see them go to that top line, I'll go, "C stroke D." And they can immediately correct it with just that very quick verbal cue, because you've worked on it so hard.

I'm still incorporating handwriting instruction in this spelling lesson, but I can only do that, and it works so well, because we spent the time teaching those executive function planning skills.

Anna: Can I go back to that one child you were talking about before, the one writing the word "fox," and he just wrote a line? What would be the first thing you would do with him in intervention?

Michelle: So we start up with handwriting. For the Head-to-Hand Writing program, each card has a letter, and the way that we introduce it is I separate them by starting place. The very first time, and only the very first time we go through letters, we introduce them with the different starting places. I want to see if he can name the letters. If I show him the letter T, can he tell me it's a T? And if he can, great. And if he cannot, we have to teach it. They have to learn the skill. I say, "Well, this is a T," and then I need to make sure that they're paying attention to all the parts that make this a T.

We use, again, those executive function questions. "Do you see this red dot on the T? Where does it start?" "It starts at the top." "Right. What direction am I going to go when I write this T?" "Well, it's got a green arrow. It's going to go down." And they can either be telling me again or pointing to the matching arrow. "How much space does this T take up, all or half?" "All the space." "Is it on or under the line?" "It's on the line." "Right. How many times is your pencil going to go down to write this letter T?" "Well, this one happens to be two."

We go through that process to then teach them what the letters are, and that's how we teach them the letters.

There are ten levels that we go through with the Head-to-Hand Writing program that give them full support at the beginning and then gradually fade support until they are able to write the letters to the name with automaticity. That level that we just described would be level one, with full and complete support, where we are teaching the name of the letters. Then on level two, he is tracing the letter. And as long as he is doing all five of those executive function questions correctly, the letter goes to the next level. The first few levels are pretty easy. We want to name the letter, we want to trace the letter, then we want to copy the letter next to it, and then we're going to copy it with fading visual cues.

We teach them how to develop what I call a brain picture. In the clinical literature it's called a mental orthographic image. There are a couple other names, but they have to be able to essentially close their eyes and imagine that they can see the letter. We're creating this image so that they can then take that picture in their mind and put it on paper, and that's part of the planning phase.

If I know what the letter looks like, and I know what my executive function questions are — where do I start it, what direction am I going to go, how much space does it take up, where does it sit on the line, and how many times does it go down on the paper — well, then I can execute that and create the letter that's in my mind.

Those questions are in a very specific order, because that's the order in which our brain thinks about those components for most letters.

So if we go back to the T, for example, the first question is, where does it start? Well, at the top. I'm going to have to put my pencil on the top line. Next question, what direction does it go? Well, I'm going to have to start moving my pencil down. How much space does it take up? Well, it takes up all the space, so I better go all the way to the bottom line. Is it on or under the line? Well, this letter stays on the line, so I stop at the bottom line. And then how many times does your pencil go down? Two, my pencil goes down again. This letter has a cross.

The order of the questions is very specific. Sometimes they want to skip around, because these are kids that probably have some ADHD and disorganization in their other parts of their life, and they want to skip around. I'm like, "No, no, no. Same order every time," because we're teaching them a process to plan the letter, and if they think about it in that order as they're writing the letter, it's going to help them write the letter with good accuracy.

Anna: Often when I hear people talk about dysgraphia, it's used as, "Well, he has dysgraphia, so he doesn't have to do this thing, or he doesn't have to do this part." And I think it's often thought of as something we can't really do much about. Can you speak to that?

One thing I already can tell is that a regular classroom teacher can incorporate those types of questions as they're teaching letters, no matter what, and I love the way you laid out how they go in that specific order. I hadn't thought about that.

But what else should a regular teacher keep in mind? Because they may have someone with dysgraphia who's not getting extra help, and maybe they don't have the space to offer this excellent intervention. What do they do?

Michelle: So you mentioned that sometimes they just say, "Well, kids can't do it." There's a difference between intervention and accommodations. A lot of kids with dysgraphia need some sort of a scribe, especially if they wait to do intervention in the school, and he's expected to be writing sentences, but we're struggling to write any letters. That's an accommodation.

If this is a kid that's getting Tier 2 or Tier 3 instruction, even if they're not in special education... If they're having so much trouble that they need help with handwriting, my recommendation would be to take that Tier 2 and 3 time to work on handwriting for a week or two, until you establish that correct letter formation. Then move on to the reading and spelling.

Because we know, remember Virginia Berninger's work, that if we work on handwriting, it helps with letter recognition for reading. You're not taking time away from reading to work on handwriting, but you're building a really solid foundation that will help them when they get to reading.

We also know that you get more bang for your buck if you work on writing words. If we can read a word, we can read it, but we can't necessarily spell it. But if I can write a word, and I can spell it, I can almost definitely read it.

I like to give the example of the word Fahrenheit when I'm talking to parents. I could read that word. If you give me a choice of two or three words, I could be like, "That one, that's Fahrenheit." I cannot spell that word. I know there's an H and an E in there, but it's a word that I cannot spell. I can read it, but spelling is harder.

So if a child can spell a word, and we're working on spelling to support reading, well, that makes it all that much easier to integrate handwriting. If we're having kids write words, we're then working on their spelling, their reading, and on their handwriting. They're going to get so much more bang for their buck by having kids write words, because they can then incorporate the handwriting cues, and it's going to help them with reading. If we're just working on reading, they're going to leave those other two components out.

Anna: So if someone has dysgraphia, there should be some discussion among the team that this child needs some extra handwriting instruction and also a lot more practice spelling.

What about in the classroom? Even if a child receives intervention, is someone with dysgraphia typically going to be a slower writer? Does it cause the hand to hurt?

Michelle: Sometimes they get hand fatigue, but in my experience, not always. I always ask the kid, because that's part of the evaluation, "Does your hand hurt?" And sometimes they say yes, and sometimes they say no. If it's a child where you have the ability to put something on their desk, putting directional cues might be helpful to help them work through that planning process.

If you're thinking about sentence writing, a lot of schools will use COPS or CHOPS. If you add the H in there for handwriting, you check capitalization, handwriting, organization, punctuation, and spelling. Then maybe if they're working in the classroom, the teacher can come around and be like, "Oh, I see a handwriting error in there, can you use your cues and figure out where it is?"

Sometimes when we're working on sentences, I'll say, "You've got a letter flip-flopped in here. Can you figure out where it is?" Then again, we're working on it at the sentence level, but we're giving that handwriting cue.

And if you can put those visual questions on there so that they can think about directionality and spatial orientation... Or if you've got a kiddo who likes to write where the letters hover between two lines, or sometimes it just goes up and above the line or down and below the line, well, that's a spatial orientation question.

You can be like, "You know what? Are all those letters sitting on the line, or are they floating above it like a ghost?" You can use those cues in higher-level activities if you

establish them at a letter level first.

Anna: So the bottom line is, if teachers want to help kids with dysgraphia, there needs to be teamwork happening between the teacher and the interventionist, so they use the same language. Just as we know it's important when teaching decoding, it's also important when doing handwriting. Then the teacher in the classroom can provide the similar scaffolds and prompting as the teacher in intervention is providing, and that way the child can accomplish the writing.

Michelle: Right. We're taking what we know kids with dyslexia need at the word level, and we're applying it at that sub-word level.

Anna: Well, thank you so much for laying this out for us. Can you tell us more about other things that you do and offer? I know you have your program and you have a podcast.

Michelle: Yeah. So I have a website called Days with Dyslexia. The podcast is also called the Days with Dyslexia podcast. On there I try to talk about all things dyslexia and dysgraphia related. The audience is mostly for parents. I'm trying to give them tips and hints on what they can do at home. But I do know that a lot of professionals also listen in, because I get their emails. On the website there are lots of resources that parents and professionals can use, the Head-to-Hand Writing program being one of them.

I also have a sight word system on there, that could be a whole other podcast. It takes the 300 most common sight words that usually kids are told, "Oh, you just have to memorize these," and it teaches them how to apply sound awareness, letter awareness, and meaning awareness. That has been trialed in the classroom, and the results show it is twice as effective as an Orton-Gillingham red word type approach.

Anna: Interesting.

Michelle: Yeah. But there are several things on there to help support families and kids with dyslexia at home. I say kids with dyslexia, because that's where my heart is, but really these are things that all kids could benefit from.

Anna: For sure. Well, thank you so much. This is super interesting, and I'm excited to have a place to send people now when they ask me questions about this.

Michelle: Well, I am happy to be the one to help.