Hi fellow Early Childhood Solutionaries. This is Kristie, and today's topic is one that comes up over and over again. It is related to something that I talk about often. It's about when a child (or even a small group of children) are struggling, or when their development and learning has stalled. In today's episode, we're going to play detective, and we're going to aim to solve a case where a child isn't performing in a way that we really think they should, or they've done something that has shifted and changed from maybe a few weeks ago, or they just have you a bit perplexed. This episode is for you if you've ever found yourself staring at your assessment data (we can even think of these data as our clues). The episode is also for you if you've been talking to a colleague and you've got that face that's kind of scrunched up, you're scratching your head, and you're just trying to figure out what's going on with a particular child, or even a small group of children.

In particular, we're going to use the example of a young child who struggles with counting. I've talked about (and written) before on things like what comes before counting because this issue comes up, as I said, over and over. I'll be sure to link to related blogs, and podcasts, and other solutions. However, today we're going to walk through an issue. Again, we're going to sort of play detective and I'm going to present you with three hypotheses as to why a child may be struggling with counting. Then we'll talk a little bit about what you do once you sort of uncover the hypothesis. All too often, as many of you who know me know, we jump to, "What should I do, how can I fix this?" Or even, "How can I create more embedded learning opportunities when a child is struggling?"

What we end up doing, though, is counting fewer objects louder in the hallway, and we haven't really uncovered anything- we haven't stayed in that detective mode long enough to figure out what's really going on, and then determine “What should I be putting my emphasis on from an instructional perspective?” We're going to use an example that came up the other day in professional development when we were talking about embedding and tutored instruction, and we were trying to figure out what to teach which kids (and using which activities). A fellow revolutionary brought up a scenario of a child who was “counting” (and I'm using air quotes that you can't see) before winter break, came back from break, and has now for the last several months continued to struggle with counting. They were kind of confused like, "What happened? Why could you count before winter break, and why are you now struggling?" Does this sound familiar? There's this instance of a child struggling where it is sort of in opposition to what we would expect- we continually
think of kids as being able to perform better, faster, and (more importantly) across time. We believe this to be true due to maturation and good instruction.

Why is it that after a certain point in time, a child either hits a plateau, they begin to show signs that this is something that they struggle with, or they go backwards in terms of a skill? So my first question. Say you’re asking, “Well, what happened over the winter break?” Sure, all those questions around what happened to a child during that time, or what’s going on in the environment, absolutely play a role. Even before we start trying to figure out what may have triggered this, or what variables and factors are at play, I really want to make sure the team and I have an understanding of what they mean when they say, "Counting."

The second question is, I’m going to get at a few things around this notion of counting. I’m going to peel it back. You’ll see pretty quickly that if we don’t have a common definition of counting, then when I ask my second follow up questions (right? Cause I’m playing detective) we won’t know where to go. Counting in general can be thought of, at least in a very basic sense, in two ways. One is that very rote counting, where a child has memorized number tags in a particular sequence, and just sort of says the numbers from memory. The other is what many early educators would call, "real counting," right? Where you can actually count the number of objects, count the number of friends, count the number of books, count the number of blocks. This is that one-to-one counting that's often said aloud, that might even involve touching one object as I assign a number tag.

Let's go with the second version of counting. We're not going to talk about the memory, though the memory is going to have a role in this. We're going to really think about how this child was doing one-to-one counting before break. Let's just, for the sake of argument, say that the student is a preschooler who is maybe four, and they are able to count at least five objects. Whether you think that's high, low, good, or bad, let's just go with that scenario so that we can uncover what's happening.

Before winter break you ask this little kid, "How many?" or direct the child to "Count these out". And the kid goes, "One, two, three, four, five," and counts each object only once, assigning the correct number tag in the right order. Then after winter break we get something like, "One, two, five, three"-kind of mixing up the order. Maybe we now get the kid who just jumps to a number, "There are three." And we're like, "Mmm, let's count again. Are there really three?" Or maybe a kid moves really quickly, and they touch a whole bunch of objects, actually touching five of the objects five times, but they still get to the count of three, right? You can sort of see this kid who's struggling, that they're sort of missing number tags, they're sort of going quickly, and they might be getting things out of order.

This starts to make teachers scratch their heads, scrunch their face, and say, "Hey, what's going on? You were able to count pretty accurately before winter break." We have the notion of “what is counting?” and in this instance, it's that one-to-one counting. Then we said, "Okay, well what's the second question?" I've sort of alluded to it already. It's like, "What's the kid doing? Describe it for me?" When I'm asking that question, I'm trying to figure out several things. One might be, is there a component of counting that the child is struggling with? That's the first hypothesis we're going to break down. Second, I might want to know what the kid is doing because I'm really trying to figure out what's happening concurrently in development.
As we all know, especially in the preschool years, development is highly related to all body parts. Fine motor, cognitive, visual, motor, language, and social and all of that are all intermixed. You can't separate them out. We can't think of this just as an academic or cognitive issue. We can't even think of it as just number sense. It's all related to other areas of development. My question of, "What does the child do around counting?" is really trying to help me think around concurrent development. We'll come back to that second hypothesis.

The third question I've alluded to as well, and it is around latency. We're going to unpack three hypotheses. One, that the child is struggling with something that is happening, something that's a component of counting. You see already that we have to know what counting is to know what the components are. Two, what's happening concurrently in development and learning. Then three, that their development in learning may have stalled because of an issue of latency. Let's take each of these hypotheses, or theories, or these wonderings as a detective, and see if we can kind of unpack or peel back why a child might be struggling with counting.

Let's look at the first one. My colleagues Jennifer Grisham-Brown and Mary Louise Hemmeter and I talk about this notion of struggling when it's a component; we understand in our book on blended practices that when children grow and learn, skills don't just sort of become one more skill, and then a second skill, and a third skill. I take three skills and I put them together, and now they become this more complex, and this more rich variety of something that's put together. Think of something like the recipes for a really complex cake, or a dinner. You have all these different ingredients. You have to look at each component. If you want to see why your cake didn't turn out well, or why the dinner doesn't taste very good, you have to really start to peel back and look at the different components. "Did I forget a component? Did I put too much of a component in? Do I not like a particular component?"

When we think about counting in particular, and we think about one-to-one counting, we're looking at several components (just a few I'll name) and these come from some work with some other colleagues on the Big Ideas for Early Learning. That will be our free download for this podcast episode. If you go to PreKTeachandPlay.com/Podcast19, you'll see that we have several different options of ... Well not options, but the freebie for this week is being able to really get at the question of, "What are the big ideas for learning?"

A few of the big ideas for early learning that are related to counting are things like recall, one-to-one correspondence, labeling using number tags, sequencing, and association of quantities. I'll say those again, let me back up just a little bit. Again, if you go to PreKTeachandPlay.com/Podcast19 you can download this episode’s freebie, which is a handout of the Big Ideas for Early Learning that are related to counting. Those could be more than the ones I'm listing, but the ones that are most obvious are recall, one-to-one correspondence, labeling using number tags, sequencing, and association- specifically the concept of quantity.

When I talk to teaching teams and they say, "A kid is struggling with counting." Remember, we start off with, "What do you mean by counting?" They define counting for me as this one-to-one counting. Then I go, "Tell me what the kid is doing." If they're telling me that the kid is going, "One, two, five, eight," or
if they say to me that the child is, "Just looking at the objects." Maybe we're assuming they're subitizing, and they just go, "There are five," or, "There are three," or, "There are eight." But they're not really doing that one-to-one counting.

Maybe the child is skipping over number tags, maybe the child's mixing up the sequence, maybe the child's just struggling with this idea of how things are related (for example, that something has more or less, so that they understand that five is more than three, so they have to keep counting). You can see this gets complex really fast and we're like, "How did anyone ever learn to actually even count?" We first play detective by defining what “it” is. Second, we understand what the child's doing. Then we start to take each of these hypotheses and go, "Okay, is the child really struggling with a component?"

Let's take something like one-to-one correspondence. Often times (and this happened in that situation with the team doing PD), when I talk about one-to-one correspondence, everyone thinks of the snack table, and whether or not the child gave one napkin to everyone. If you really look at the Big Ideas for Early Learning, and you look at the definition of one-to-one, the synonym is this word called, "pairing." You want to know, does this child know how to pair one thing with another thing?

You might look across the daily routine and say, "How often does the child have an opportunity to pair?" Well, just the idea of hanging up their backpack on a hook is a pairing, right? You pair your backpack onto one hook. If you notice a child kind of struggles with that, kind of throws it there, kind of pushes it up against the hooks but it doesn't land on just one, you might start to go, "Hmm, maybe it's one-to-one." If their first thing is they're supposed to come in and sign-in, and they're supposed to trace the letters of their name, or even write the letters of their name, there's another pairing, right? One letter for each letter in their name.

Then you might say, "Okay, find a buddy, and find a book, and a quiet area to read for a few minutes." There's another pairing, right? We've got to find one friend, one book, one situation. I could go throughout the entire day, and you could see there's so many opportunities for a child to pair. Not just that notion of counting, or assigning one napkin to each of their friends at snack. If I'd stay on each of these components of counting, which again I'll recall, one-to-one, labeling, sequencing, and association, I've got to stay there long enough to figure out if it is one or more of these components that is really why the child is struggling (not the idea of counting in it's wholeness).

That brings us to our second component. Now, don't get me wrong, that first component, that first hypothesis rather, could take quite a while- digging through our data, and making sure that we have the right data to help us make a good decision. But, for the sake of time, let's go to our second hypothesis and say, "Hmm, nope. I looked at my data and I don't really think it's a component. But, I think something else is going on concurrently." Again, we know that the early years are highly variable, but we also know they're interrelated, they're interdependent, that we need to think about the whole child, and think about the complexities.

The child may be struggling because there's something else going on concurrently. That said, as soon as we get to this idea of concurrent, we're sort of right back to components as well, because you could also look at these as quite like synonyms- that even though counting is one skill, something like
sequencing is a concurrent skill. Sequencing is a component of counting, it's also happening concurrently. If that's sort of too mushy in your mind because you're like, "Wait, I just got that there were pieces, and parts, and ingredients to counting. Give me a different idea of what's happening concurrently". That might be something like self-regulation. Something that doesn't even look like on the face of it like it has to do with math, but for any of us that are true brain architects, we know that self-regulation absolutely has to do with learning math.

In particular, something like the part of self-regulation that we think of often- attention and focus. If a child doesn't know what objects they're supposed to be counting, if they can't sort of inhibit the distractors around them to focus long enough on the things to be counted. If they get distracted, and then forget where they left off, and which things they've already counted. Then you can see that this is a concurrent skill, that if the child is struggling with self-regulation, and in particular attention and focus, that's going to have an impact on their counting.

Instead of thinking, "Well, you're struggling with counting to five, let's just work on three." While having three may help you focus and attend a little more easily because there's fewer things to kind of hold in your working memory, it's still going to be an issue of self-regulation, or some might think of, "executive functioning," that's really the issue not the counting as we defined it at the very beginning of our detective work.

Then that brings us to our third hypothesis, and that's this issue that the child's development may have stalled, or their learning may have stalled due to an issue of latency. Again, in our Blended Practices work, we talk about latency. And we talk about how this is this “time period between” when you gave the directive, "Count these", or you proposed the question, "How many are there?", and this child may either act too quickly so there's not a very big time lag, or the child may take too long. The “time period between” I asked the question or gave the directive, to when the child actually counts, that time period is what we call, "latency."

That latency period can be too long, or too short. When we go, "Mmm, that might be what this kid is doing." That could suggest maybe a sensory issue, a processing issue, an impulse control issue, it could even be something that the child's body is responding to such as stress. And just being asked, "How many are there?" or just having used up all their energy to get off of this really noisy bus, come into this really noisy building, be able to process all the demands to take off all of their gear, get transitioned into the classroom, find a friend, get settled- all these things, that by the time we reach them and ask them this very simple question in our mind, of, "How may are there?" or, "Count the number of blocks", the child's body is already at an escalated level of stress.

We might get some sort of response- that is, the child doing something very quickly, or the child not even seemingly understanding that they even heard that we asked a question. Or they may even push things away, or yell at us, and we're like, "Hey, we were just counting blocks, what's the problem?" If we can start to go, "Wow, look at my data," and it shows me that this has nothing to do with a concurrent scale, nothing to do yet with a component, but we really have to recognize that this little kid “Spotty” is responding to stress. My job at this point is to reduce the stressors, and bring this child from an escalated state, to a more neutral state, so that they can then demonstrate impulse control, that they
can actually process the information coming in, and then proceed with counting—when counting wasn't even the issue.

Many of you know that I've talked before about using things like the zigzag process, and other ways that you can reduce, well, recognize and then reduce stress. Certainly for any of you that are interested, you might want to check out our ECE Solutionary membership option. That's where I've got lots and lots of solutions about how to recognize and reduce these stressors that children may be exposed to. Things that you actually have control over in a Pre-K classroom. Not just these big things like stress or poverty and how can you solve that, but this notion of the number of transitions, the amount of wait time, the predictability of the environment, the clarity with which you give information so that the child can respond to your queues. There are things that we can do in the classroom that can help a child not only reduce those exposures to stress, but when they are being exposed, we can bring them a way out of that escalation so that we can then begin to think about counting once again.

Again, I'll put links to the membership, and links to the zigzag process, which are really practical ways that will help you walk through these hypotheses, in particular this one around latency, to figure out why is a child responding too quickly, or why is a child talking so long to respond. If we're trying to uncover if this is a sensory, or processing, or impulse control issue, we might really look to whether this child is responding to stress. Again, I've got clear solutions around using the zigzag, and other things in the ECE Solutionary Membership, for looking at this kind of issue. Many of us, we're kind of hanging on with the conversation back at, "Oh, a child is struggling with one-to-one, or sequencing, or labeling." I have something in my toolkit, or I understand that development is highly interrelated, and highly interdependent. I understand that I might need to work on self-regulation while I'm also working on association of quantities.

That felt okay, but when I started getting into the idea that the child's development and learning may be stalled because of latency, and started talking about processing issues, and impulse control, and stress, then we might, ourselves, start getting stressed, right? We might start hearing those infamous sharks arrive. That shark music gets so loud that we're like, "What can I do? I've got 24 kids. How am I supposed to work with this one kid on impulse control? Aren't they four and going to struggle anyway with impulse control?" Again, I'll link to some resources to help you with that third hypothesis.

That is how we sort of play detective when we have a kid who is struggling. We could use any example—today we just used counting. The idea is— if we want to solve the case when we're trying to figure out why a child's development or learning has stalled— we need to do two things right out of the bat. We need to a), define what it is that we want the child to be able to do so that we, as an individual, and we as a team have a clear understanding of what the it is. The second (or b) is we want to think about what is the child currently doing, and do we have the right assessment data to help us really unpack all the clues that we’re going to need.

Then we start thinking through. Again, you can refer to our resources in Blended Practices around the different reasons that kids struggle, or why development has stalled. But today we talked about three. These are three big ones that come up over and over. If you look at the “it”, was it complex? If it is, like
counting, or problem solving, or participation, then you might know that you're going to spend some time playing detective, and breaking down the components or ingredients of that complex skill.

The second hypothesis was well, "Hmm, development is highly interrelated, and highly interdependent. Have I looked sideways? Have I looked at what's going on “along with”?” Often times, the thing that pops up is self-regulation. Then the third hypothesis was, "Is it an issue of latency?" Where a child acts too quickly, or doesn't respond in a time that seems appropriate or reasonable for the task at hand. That often suggests that there's an underlying issue in terms of the number and types of stressors that a child is experiencing, and then our job becomes focused on removing (or reducing at least) those stressors so that we can then get back to a neutral state where the child's able to benefit from our instruction.

I hope that was helpful. As always, I'd love to come to your district to connect with, train, and encourage other inspired educators. Contact me anytime at KristiePF.com to speak at your next conference or professional development event. Don't forget to go to PreKTeachandPlay.com/Podcast19 to get today's freebie, which are those big ideas that are the components of counting. Thank you Solutionaries, for all you do to help children thrive in school and in life!