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Assessing and Treating Dyslexia:  
What SLPs need to know  
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-- [Amy] And at this time it is a pleasure to introduce Heather Caska this afternoon who is presenting Assessing and Treating Dyslexia, What SLPs Need to Know. Heather is a licensed pediatric SLP and Clinical Director for Way to Grow Pediatric Therapy and Dyslexia Center. Heather graduated with a Bachelor's degree in Speech and Hearing Sciences from the University of Arizona and completed her Master's in Clinical Speech Language Pathology at Northern Arizona University. Heather has worked as an SLP for eight years and has experience working with children with various communication disorders and language learning disabilities. She is passionate about bringing more dyslexia awareness to the SLP community and increasing early identification of dyslexia. Heather has presented at local universities and school districts, as well as state conferences on the role of the SLP and language literacy disorders. She is on the Board of Directors for the Arizona Branch of the International Dyslexia Association and is the Professional Development Chair for the Arizona Speech-Language-Hearing Association. So welcome back Heather, it's great to have you with us today.

- [Heather] Welcome back to those of you that were here for part one and welcome to those of you that weren't here for part one. I'm excited to be here and share some more dyslexia knowledge with you today. So first, just to kind of get some housekeeping out of the way, my financial disclosures. I do receive, as Amy said, a salary from Way to Grow Pediatric Therapy and Dyslexia Center. I'm also being paid an honorarium by [speechpathology.com](http://speechpathology.com) for this presentation. As far as my non-financial disclosures, as Amy mentioned earlier, I am a member of the Board of Directors for the Arizona Branch of the International Dyslexia Association, as well as a Professional Development Chair of the Arizona Speech-Language-Hearing Association. And so for our learning outcomes for today, after this course hopefully you'll be able to describe assessment techniques and tools to identify individuals with dyslexia. As well as

identify any patterns of children who fit the profile of an individual with dyslexia. As well as identify the principles and key elements of evidence-based intervention techniques and approaches to manage dyslexia.

And then before we jump right into it, I just, for those of you who weren't here on Tuesday, just kind of give you a little background about myself. So Amy kind of already mentioned I attended the University of Arizona where I received my bachelor's degree and then got my master's at Northern Arizona University. It was in my pediatric disorders class at U of A with Dr. Tiffany Hogan where I was first introduced to dyslexia and kind of just never really went away. After grad school I started working in a pediatric clinic and then continued to see children and speak to parents with similar concerns and kind of knew that this was the area that I wanted to learn more about and kind of specialize in. As far as my personal attachment to dyslexia, my husband's youngest brother has severe dyslexia and has definitely struggled with that all through school and then even now as an adult, continues to struggle. As we've talked about and many of you may know, we talked about in the last presentation, that dyslexia is genetic.

So just knowing that because it does run in my husband's family that there is a chance that our children also could have dyslexia. So that was just another reason that I became really passionate about this area. And is kind of my goal to go out and speak to other families and speak to communities and other professionals about this topic and just provide more education. So real quick, before we get started on all the new information, I just kind of wanted to go back and review some of the things we talked about on Tuesday. Again, just a big thing to know or some of the things that are often said about dyslexia that are not true. So one we talked a lot about individuals with dyslexia seeing things backwards and we know that true dyslexia's not a vision thing, it's not where letters and words are moving across the page or they're seeing things backwards. We know it's a deficit in the phonological component of language. Another

common myth is that they just need to practice more. A child that hasn't been explicitly taught or is struggling is not gonna improve just by practicing reading more over the summer. Another misconception is for those early kids, which we talked about as well, I've mentioned before is that wait-and-see approach is not appropriate for them. The early identification and working on these skills early on is so important for these kids. So a lot of times what we see is when parents start to bring in concerns we just kind of, well let's just wait and see what happens, some of that is still pretty typical for their age. Which is true, but we just need to be more aware of those early risk factors and to identify those kids that truly are at risk.

Dyslexia is not something that can be cured, even with appropriate intervention. They can go on to be successful and learn how to be good readers and spellers, however, it is something that they could see, continue to occur throughout their life that they would struggle with. Also dyslexia's not related to their IQ level. Another misconception is that schools cannot recognize or use the term dyslexia. And again, this obviously varies on where you're located and state and policy for school, but there is a big grassroots movement right now, the hashtag save dyslexia to get more awareness and things in place at the school district level. And then also the biggest reason I'm here today is that SLP's cannot diagnose or treat dyslexia. We do know, hopefully after part one, how important our role is in identifying these children as well as working with them.

And so hopefully you'll walk away today having a little bit more idea of how we can do that. So what dyslexia is is we know that it's our brain is processing language for learning how to read and spell differently. Again it's that difficulty in phonological aspect of language. They say 15 to 20 percent of the population is affected. Again, it's not always just deficits in word recognition. You'll see these kids struggle in reading comprehension, spelling and writing. A lot of the simulations that we did on Tuesday demonstrated that. And so if you haven't had a chance or weren't able to attend part

one, I'd highly recommend. Because they're just really great activities to help you kind of experience all the areas that these kids may struggle in. And again, it's not related to IQ. Just a quick review on some of those early warning signs. Again, family history of speech, language or learning difficulties, delayed speech and language skills. Difficulty learning some of those early concepts, such as colors, numbers, days of the week, letters. Difficulty pronouncing words, learning new vocabulary and then those early phonological awareness skills will also be delayed.

Our older kids will see them struggling to identify their left from their right. Struggling with sight word recognition, poor spelling, difficulty memorizing number facts. Just overall frustration with school and homework as well as difficulty understanding what is read and putting ideas in writing is really difficult for them. Okay, so now we're gonna jump right into assessments for these children. So I think one thing to always keep in mind is why we're assessing a child in the first place. Most of the time it's because they're struggling academically.

And so what we need to do is really identify what difficulties are impacting them academically, but as well as what are the strengths that the child has. So knowing that assessment needs to be a team approach. So it shouldn't just be where the speech therapist or only the neuropsych or educational psych is testing. It should be lots of professionals involved in these assessments. Should include academic and language testing. Again that full and comprehensive case history is so important, including family history. And a review of all records. So any other evaluations that have been done in the past. So if you're in a school asking for any outside evaluations and vice versa, if you do work in a clinic, asking to see any testing done at the school. I often will ask to see work from their school, assignments, because that's also very telling. IEPs, anything of that sort. And then cognitive and intellectual testing should also be definitely considered, because it's just gonna give us a whole picture of the child. So I kinda wanted to just mention a little bit about a language and literacy evaluation versus

a psychoeducational evaluation. This is a question that came up after the presentation on Monday. And often times I get that question is, will the school psych eval them or they've already had a neuropsych eval, do we need a language and literacy eval? And the answer should always be yes. And the reason is, even though educational psych or a neuropsych will do some language testing, keep in mind and remember, we are the language experts. So our batteries of tests and any clinical assessments that we may do, is gonna be a much deeper analysis of learning-based, like those language-based learning difficulties.

So often times academic performance is most often affected by language-based difficulties. We do know, yes, intellectual functioning will also contribute to that, but for the most part it is gonna be a language-based. And so our assessments are typically gonna be more thorough with a better analysis of their overall language skills. Often times when I worked in a school with the school psychologists, we would collaborate. So a lot of our tests did overlap. We obviously wouldn't be giving the same assessment, but maybe sub-tests were similar, so we both would give a phonological awareness sub-test of some sort. And so just being able to look at the differences in those sub-tests and how they were presented is also very telling. So I can't stress that enough, just that interprofessional collaboration in education is really really important for these kids.

Evaluators and who can evaluate these students. Really any professionals with master's and doctorate degrees. Many tutors will offer screening assessments, I have that happen a lot in our private setting where families will come and say, "Well, I went to this clinic, like a tutoring clinic, "and they already were tested." And then when I review it there's nothing standardized and it's not very thorough, and again, looking at a whole range of skills is necessary to appropriately identify a child's areas of difficulty as well as their strengths. And then the big question is who can diagnose these kids? I have seen developmental pediatricians, neuropsychs, some SLPs will also diagnose. I

think the big takeaway from that is just to make sure that the diagnosis was provided after a thorough assessment. I have come across a couple of students where they were given the diagnosis from their pediatrician without any language assessments being administered. So I'd just be very cautious of that. Various areas to assess, so you want to look at their phonological awareness skills, speech sound productions and history of any speech sound production errors they've had. Working memory, rapid automatic naming, receptive and expressive vocabulary, expressive language and that includes narrative re-tell, recall, as well as just narrative generation, both verbally and written.

Overall reading comprehension skills, just their basic decoding and spelling real and nonsense words. Nonsense words are gonna help you to really determine if they have that strong orthographic knowledge. Just because they can't rely on memory for that, it's something that they're not familiar with. Also, oral reading is huge. You want to look at their overall reading fluency at the single-word level, sentence and paragraph level. And then as well as their overall written expression, so sentence and paragraph level. Other areas that should also be assessed that we most likely will not be assessing are overall memory, long-term, short-term memory, visual spatial skills and then also executive function. SLPs definitely can look at their executive functioning skills as well though.

And this is just kind of a brief idea of different assessments. Again, by no means is this no where near a comprehensive list of assessments to use or that can be used to assess the child, but these are just some assessments that I've used in the past or currently using or other professionals and colleagues that I have spoken to also use. So we do, so for phonological processing the CTOPP and also I really like the phonological awareness screening test by Dr. David Kilpatrick. For your oral language skills, the CELF, the CASL-2 and then the TILLS. The TILLS is one that I definitely use with all of my students for language and literacy concerns. Any academic and

educational testing, the WIAT or the KTEA. We've also, for written language can use the TOWRE, the GORT, so the Gray Oral Reading Tests, the Qualitative Reading Inventory is also a great tool. The Test of Written Language, Test of Early Written Language, Test of Written Spelling, Word Identification and Spelling Test as well as the TILLS also has a written language component. And again, by no means is this, I know there's a lot of other assessments out there.

And I don't even use all of these assessments. But again, these are just assessments that I know some of my other colleagues have used to assess these areas as well. Another thing that I really want to take time to mention is don't forget about those clinical assessments. So we know that all standardized tests have functional limitations to them. So a lot of times the best information that we can get is through quote-unquote informal testing. So giving them a writing prompt, printing out a grade level or a below grade level reading passage and having them read it and assess for reading fluency and doing comprehension. Giving them a list of words just to decode and spell, including non-words. I think all of that is really important as well. Some other factors just to consider when assessing these kids.

You always want to be really cautious of just looking at overall composite scores because a lot of times this can mask their areas of weakness. Scores in the bottom third of distribution should also be given more attention. So remember there's approximately 31 percent of fourth graders are reading below grade level. So that means on a sub-test where they received a scaled score of eight, that's the 25th percentile, so that's something that should kind of be considered. Excuse me. Phoneme manipulation tasks are also more sensitive to reading skills. So again, those are those more advanced phonemic awareness, deleting and substituting sounds within words. This weighs heavily on your working memory and requires other phonological awareness skills. So it's a good task to really look at. So if I ask a student to say stop and then say stop without ss, they're required to first segment the sound,

segment the word into sound. So they have to realize that's its ss tu aw pp and then process that information. Figure out okay now I have to take one sound away, what do I have left and then blend all of that together. So there's a lot of tasks that go in to just a manipulation task. Also having a solid knowledge base in the area of reading acquisition and reading difficulties is so important. So making sure that you know the risk factors and really be able to identify where the breakdown is. And then another area is really trying to stay away from those arbitrary cut-off scores. I know this is more of a policy per school district or the setting that you work in, but knowing that there's no standard to identify a language disorder.

So there's gonna be unique scores for each test given that are gonna identify the difference between a child that is typically developing versus a child that may have a language disorder. I know I mentioned this in part one, but there was a really really great discussion on this on the SeeHearSpeak podcast with Dr. Tiffany Hogan and Dr. Elena Plante. And so I would highly recommend checking that out and, like I said, it just really goes into depth talking about just testing in general. And then how do we classify reading impairments? This was another question that came up on Tuesday. And there really is no great answer for that to be completely honest with you. So I really like this model, so if you look and if you have, it depends, I will say too, it depends on who you talk to.

And I will, and even researchers in this area don't all agree on how to appropriately diagnose dyslexia. So it's still kind of a gray area. What we do know is just going back to the definition is that it is a phonological component. So I think the question that was asked on Tuesday was if it's not dyslexia, what other reading impairments can it be? So again, I think I'm just gonna go back and stress that a thorough assessment to just really identify where those breakdowns are occurring and what their strengths are, are just the most appropriate to make sure we have the right interventions put in place. So with this model here if you look, if you have, your language comprehension is high and

your word recognition is high, obviously you have normal and typically developing language. Whereas if you have adequate word recognition, so no difficulties with phonological awareness, decoding, anything like that, but your language comprehension is low, then you have more of a comprehension deficit. In that opposite corner there, if you have low word recognition, but high language comprehension, that's kind of considered more of that classic dyslexic student. However, I will go on to say that even if you fall in that quadrant right below where if you have low word recognition as well as language comprehension, I've heard it referred to as a garden variety disorder. However, a lot, those kinds I feel would still be classified as dyslexic because their overall word recognition, phonological awareness, is also low. But again, that's kind of where that, that there's no agreement on that. And in the research a lot of people say well if there's also a language difficulty, overall language, then that's not technically considered unexpected, which is part of the definition of dyslexia.

So unfortunately, there's no clear answer for that, but just again, kind of this, hopefully this helps you just to identify where those strengths are for a child and where they're struggling. And the last thing we talk about are goals. Just in general, something I wanted to mention about goals is again, making sure you're identifying where that breakdown is and having your goals align closely, line up with those. Be very cautious of just overall reading fluency and reading comprehension goals. And I see this a lot where I will have a student come to me or I'll see goals where they just have a general reading comprehension goal or a reading fluency goal, but they're still struggling with those basic reading skills. Phonological awareness, decoding, so segmenting, blending, manipulation. But there's no goals to explicitly target that. So yes our overall, our long-term goal is to have a fluent reader as well as a child, we know our goal going back to that simple view of reading. Our goal for reading is reading comprehension. However, if we're not addressing the underlying deficits and why they're struggling with reading comprehension or reading fluency, then we're not gonna see a lot of progress. So again, those goals should explicitly target those areas of difficulty. And you'll find

out what those are by doing a more thorough assessment. So that's kinda just a brief overview of assessments in general. So again, I do see a couple questions popping up, I'll try and answer some throughout. If not, I promise I'll leave time at the end to answer questions. And if I don't get to any questions today, my email address is available for you to email me with any questions. So now we're gonna jump into intervention. We're gonna discuss a little bit more about structured literacy. So the principles of structured literacy is that it must be systematic and cumulative, diagnostic in nature, and explicit. So everything must be explicitly taught.

The different elements are sound symbol relationships, phonology, syllables, morphology, semantics and syntax. And so I want you to really look at all of those elements of structured literacy and hopefully you recognize that all of those fall within our scope of practice under those various language domains. So a lot of times when I hear that SLPs, this isn't within our scope, it absolutely is. However I will say, I was one of those therapists as well, but I think a lot of it just comes down to education. If we're not, if this isn't something that we're taught or that we become familiar with in our programs, we just don't know about it. I always use the example of I know that administering a fees exam is within our scope of practice. However, I've not been trained on that, nor do I know a lot about it so I would never walk into a clinic or a hospital and feel confident or feel comfortable performing that assessment.

So we know that our field is so broad and there's so many areas to cover that we can't be experts or know everything about it all. This is just definitely an area that you can learn more about. So again, those three principles, systematic and cumulative, that means it's gonna follow a logical order of language. Starts with easiest tasks and progresses. Each step is based on concepts previously learned. Also it needs to be very explicit. So those direct-teaching models, visual and auditory are also really important. So providing materials in all different modes would be really beneficial for these students. And also diagnostic. Needs to be individualized instruction. And we

know that as clinicians that that's so important for any student with any sort of disorder. That intervention and instruction needs to be individualized to what that child needs. And just continuously assessing and monitoring their progress, as well as these skills need to be mastered to automaticity. And again those elements. So we're familiar with all of this. Phonology, that study of sound structure. Understanding the alphabetic principle. The syllables we may not be as familiar with and we're gonna spend some time going over that today, the different syllable types and syllable division rules you can use to assist in decoding and spelling. Morphology, so we know morpheme is that smallest unit of meaning. Syntax and then semantics. For the structured literacy elements, we'll start with sound symbol tasks.

So this is just a alphabetic principle and recognizing that letters are representations of sounds. And vice versa, that sounds can be represented by letters. So your alphabet knowledge is a great predictor of later reading success, including how quickly the child is gonna learn their letter sounds. Letter names also will facilitate the learning of letter sounds and knowing the sequence of letters will increase knowledge of letter names. So difficulty in learning letter names indicate a language or learning difference. And then it's also highly correlated with name writing. There's also a great, there was a great article, it's in my references that talks about that last bullet point. So this is kinda just a quick introduction of different phonograms that you will see.

Maybe your school uses or students that you work with use these different phonograms. And there are a number, number of different curriculums and programs available and they all do phonograms and have different phonograms, kind of presented similar. But this will just give you an underlying knowledge of those phonograms. So we know we have digraphs and trigraphs and that's when the letters come together to make one sound. So you have your sh, ch, th, wh, ph, ck, dge, tch, qu. You also have vowel teams. So that first column you see there technically aren't considered vowel teams. Those are gonna be words with your silent E-syllable words.

So words like game, time, hope, cute. So that A dash E is representing like A consonant E. So it's when that E is silent and comes back and makes the vowel say its name, makes it a long vowel. The next set of vowel teams that you see that are bolded A-I, A-Y, E-E, E-A, I-G-H, O-A, O-W, U-E, E-W. Those represent the most common vowel teams for your long vowel sounds. One task that I've done with some of my students as they're learning their vowel teams, we come up with little sayings to help them. So I just did this activity with one of my students last week. And she's familiar with all of those long vowel, vowel teams, the most common ones. However, she is struggling to recall that information. So what we did is come up with little sayings and had her draw pictures. So for her A-I, A-Y, she came up with rainy day and drew a picture of a rainy day. For E-E, E-A, she came up with cheat sheet.

And so that's gonna help her remember that those two vowel teams are her most common for E. For I-G-H, she came up with bright night. O-A, O-W, I believe her little saying was a snowy oak. And then her U-E, E-W words were a rescue crew. And so again, just helping whatever is, it's very individualized, what's meaningful to the child and what's gonna help them remember it. If I tried to use those same sayings with another student, they probably wouldn't stick as well for them. All of the vowel team phonograms that you see here with stars, mean that they also have more than one sound that go to it and that's where it gets really tricky. We know that English is such a tricky language and there's so many rules and that is way beyond what we have time for today, but just so you're aware of that. Some more common phonograms that you'll see are your vowel R also can be referred to as bossy R. Sounds are our controlled vowels, so E-R, I-R, U-R, always are pronounced er. A-R, O-R, pronounced er in an unaccented syllable. Or is pronounced er after a W and then A-R is pronounced or after W. Other consonant graphemes that have more than one sound, so we all probably are familiar the soft rules, C-E, C-I, C-Y makes the see, say, ss. The G, E-I, E-I, E-Y says g. S can also say ss or zz and X can be x or zz. Here's just an example of a task that I do with my students, so as we're learning rules and we're learning sounds,

I make phonogram cards for them. Again, they're very individualized. We typically will come up with a key word, which most programs do. I know Foundations does, I don't know about Spalding, but most programs that you see is going to have key words that go with their letters to help know the sounds. I like to do them individually with the student. So they'd come up and again it's meaningful. So this is cards that we did for short vowel sounds with one of my students. He has his A apple ah. E, it's a little guy named Ed. E, Ed, eh. O is his octopus, ah, O octopus ah. I was for itchy. I itchy eh. And he told his mom and I that he drew a picture of a monkey itching its bum. So that was really clever. And then U is an arrow pointing up, for U, up.

Okay, we're jump into the next element now which is phonological awareness. This kind of hierarchy shows, goes from the least complex to more complex tasks. That whole spectrum there is our phonological awareness skills, whereas the more advanced and difficult are gonna be more phonemic awareness. And I'm not sure if you all are familiar, but ASHA did come out, within the last couple of years, with a training program for SLPs to train and educate teachers and, excuse me, other professionals on phonological awareness skills. And so these next few slides are adapted and taken from that. Again, that is also listed in my resource and my references slide. But it's a great, great tool to use with your teachers and just other colleagues and even just for ourselves. So phonological awareness, you can start with syllable segmentation.

So sentence segmentation, how many words are in I like pizza. Compound words, so identifying the different words that make up a compound work. Progressing onto just two-syllable words and then multisyllabic words. So for rhyming you can do tasks such as judging rhymes, do cat and dog rhyme, finding the one that doesn't fit, which word does not rhyme. Hot, fire, spot. And then matching, find the word that rhymes with bell, smell, hop, smile. And then the most difficult task would be rhyming generation. So tell me a word that rhymes with cop. Then you can move onto initial and final sound alliteration. So initial, one thing that the program also talked about is it's much easier to

start with initial continuants and then moving onto stops, Just because with those initial continuants you can kind of stress those sounds a little bit more as you're teaching the child. And you would do the same for final sound position as well. So do you shoe and sun, start with the same sound? Which word does not have the same sound at the end, dish, wash, bath? Which word ends with the same sound as bus? And then initial and final sound sorts. Which one starts like fish and which one starts like sun? Onset rime segmentation would be the next phonological awareness skill. So again starting with initial continuants and then you can move on to initial stops. And then final continuants and final stops.

And then you have blending and segmenting sounds, which can be targeted as reciprocal tasks. So you can start with simple, single syllable like consonant vowel vowel consonant continuants then stops. Then moving onto CVC words and then blends and then just varying shapes. And then more of the advances are those manipulation skills. So again, I use Dr. David Kilpatrick's curriculum reading, I have it, it's on a later slide, I can't recall it off the top of my head, but it is on a later slide that we can talk about. But he just talks about really using minute drills. So we do tons of drills, we teach the child the manipulation task and then we just drill them quickly throughout our sessions.

You can begin with giving them orthography clues. So if they have good sound letter correspondence and we're really working on the phonemic awareness using the written word to kind of show them, but eventually your goal is to master it to automaticity without any sort of visual cues. So that an example of an easier, sorry, an easier manipulation drill would be at like a compound word level. So, say cupcake, now say cupcake, but don't say cup. And then can move to more advanced. Like say fly, now say fly, but instead of ff say ss. So again, you're substituting and it's always helpful to start with continuants versus stops. And then our next element that we're gonna talk about are syllables. And so this is an area that we may not, as SLPs, be as familiar

with. It definitely wasn't something I was familiar with when I did my training through AOGPE. But it definitely was helpful, so we'll do a quick review. I also want to point out that the other two handouts that were given to you has some activities where you can do some of these tasks and practice. And I just realized there's no answers, but if you want an answer key, you can email me and I'll send you an answer key.

For you just to kind of practice recognizing different syllable shapes, syllable division rules and things like that. And then the other one is gonna have, the other handout is just the most common spelling patterns that you'll see, which we'll go over in just a minute as well. So when we talk about closed syllables, closed syllables end in at least one consonant and the vowel's always gonna be short. You're L, consonant L-E, you have a open syllable, which ends in a vowel and your vowel is always long. Vowel teams and again, vowel teams can be long or they have other vowel sounds. You have your silent-E syllable, which your vowel is always gonna be long and then your bossy R. So what syllable types is gonna help the child do is recognize what their vowel is saying because that's typically where children struggle the most.

So these next few slides are gonna just give you examples of different syllable types. So your first one here are closed syllables, consonant L-E syllables. Open syllables, so again, it ends in a vowel and your vowel is long. Vowel team syllables. And then you have your silent-E syllables and your controlled R. So this is where we're gonna kind of talk about that a little more and we will do a couple practice words so you can practice dividing syllables as well as identifying syllable types. And again that other handout does provide some sample practice for you too. For the sake of time, we won't have time to go over that, but like I said, if you want to practice or just email me, I can send you the answer sheet for it. So depending on the program and the training that's provided, these syllable division rules could be have different names, but they will always be divided up this way. So for my training and we always provided animal names and that always seems to be really fun for the kids. Sometimes we find other

words that follow that rule and that becomes the name of our rule. And again, it's just very individualized, and whatever clicks for the child. So for compound words, we often call it a catfish. And that's just when your word is divided between the two words. And then you have where your words are divided between two consonants or if there's a blend or a digraph. And so we call that the rabbit rule. And then if there is a blend or a digraph we call that a monster rabbit rule. So example words would be plenty, magnet, dandruff. And again, we'll practice a few of these. Your consonant L-E. The rule for that is consonant L-E count back three. So you find your consonant L-E and then you count back three spaces and that's where you divide it.

So little and jumble. The tiger rule is where you have one consonant between two vowels and you divide after that first vowel. So that turns that first syllable into an open syllable so it's a long vowel sound. Whereas number five is gonna be divided after that first consonant. So now your first syllable is a closed syllable and that's gonna be a short vowel sound. And then you also have where you have two vowels together and you would divide between the two vowels. And again, this is just a very brief overview to go into this in more detail. It's beyond what we have time for today, but I'm happy to answer any questions that you have.

Okay, so when we do syllable division rules the first thing that you want to do is mark your vowels. And so what that means is I'm gonna give you a word, so I'm gonna give you several words. Think we have four or five that we're gonna try today. And I'm gonna walk you through the first one and then I'll show you the slide for the answers and how to do it. So your first word, let's start with dandruff. So if you have a piece of paper, write down dandruff on your sheet. And then what you're gonna do is mark your vowels. And how I have my students mark their vowels is just to write a little V above the vowel letter. Once you have that, you're gonna mark whatever is in between those two vowels. So in between the two vowels in dandruff you should have three consonants. So you would have three little Cs above those letters. So it should be a

pattern of V, C, C, C, V. I'll come back to this slide which you'll recognize is a syllable division rule number two, what we refer to as a monster rabbit rule. So in that rule you're gonna keep your blends or your digraphs together. So in dandruff you would separate it between the N and the D. So I don't want to show you the slide yet. I will, but I'm gonna give you five more words to write down and I'm gonna give you about two minutes to try and do some syllable division and then we'll go through it on our slides. So your first word is rainbow. Your next word is giggle, frozen, clever, diet. So I'll give you about two minutes to try and work through those and then we'll go through them together. Kay, I'll give you about one more minute. Okay, so let's go over them. So our first one here, our first word was rainbow. And it's our compound word, so this would be our catfish rule or that first rule that we looked over. And you would just divide it between your two compound words. Your next word was giggle and so you'll recognize here that you have a consonant L-E at the end of the word. So it's your consonant L-E syllable division rule.

Oh well hold on, sorry, I'm gonna go back to the rainbow really quick. And then often times what I'm gonna have the child do is identify the different types of syllables as well. So your first syllable is rain and that would be a vowel team syllable. Second one is bow, same thing, it's a vowel team syllable. And then for your second word it was giggle. So you have you consonant L-E and then you just think to yourself, okay, I need to count back three. So you have consonant L-E, G-L-E, count back three spaces, one, two, three and that would make you divide it between those two, the two Gs. Sorry, that other Gs not in there. So it would be a G-I-G and then G-L-E would be your second syllable. So your first syllable type for gig would be a closed syllable, it's a short vowel sound. And then your G-L-E is a consonant L-E syllable. And then dandruff. So this is the one that we talked about first that I kinda tried to walk you through. So you mark you vowels, you put your Vs above your vowels and then mark what's in between the vowels. So you had three Cs, so you can recognize that as a monster rule or that first rule type. And you'd keep your blends together and divide it.

So dan-druff, your first syllable is closed as well as your second syllable is also closed. For diet, this is the lion rule where you have two vowels and you divide between the two vowels. So in this, your first syllable is open, D-I, di and then E-T is closed, et, di-et. And then frozen, so again mark your vowels. You have your two vowels and then in between is a close, so this could either be a camel rule or a tiger rule. Tiger is the most common, so you always want to try your tiger rule first. So that means to divide it after that first vowel to make that first syllable open to make sure that it sounds right. So fro would be your first syllable, it's open so the O is long.

Zen is a closed syllable so your E is short, fro-zen. And then clever. So clever is, again, you'll see the pattern, it's two vowels with the one consonant in between. So if the child was unfamiliar with the word you would teach them, try tiger first because that's the most common. So they could do cle-ver which we do know, yes, cleaver is a true word, but that's not how we spell it so then that's where it gets a little bit tricky. And then have them try the second way, clev-er. So that first syllable is closed, the second one is an R-controlled syllable. Okay, so again, I know that was just, it's kind of a lot and it's just a quick overview of syllable types and syllable division rules, but I'd encourage you to practice just on that handout that I provided, as well as there is tons of information that you can find about different rules. And we'll talk about some of that a little bit as well.

So the next thing I wanted to just touch base on are just common spelling patterns. And this just really helped me as well, because all of these spelling patterns are common and they're being taught to the students, but it just depends how it's presented as well as how they call it. But that way you just have an idea of what is going on as well. So your first one is the FLOSS rule. And I'll go into these in more detail. I'll just, gonna move onto the next slide. So your first one is the FLOSS rule. So this is when an F, L, S, or a Z follows a short vowel in a one-syllable word, you would double it. And so there's a few examples there. Pass, smell, fizz, off, bluff. Another rule

is a long spelling right after a short vowel and so your sounds, your phonemes for your long spelling rule are ck, tch, and dge, okay? So if we know if we hear a ck sound right after a short vowel, you have back, duck, sick, lock. For tch, pitch, hutch, fetch, match. And dge you have dodge, badge, edge, fudge. Also, you have the two sounds of Y. And so we refer to here, my students, we like to refer to it as the cry baby sound. Y is one of those letters where it just wants to say everything, it wants to be part of everything, so we call it a big cry baby. So Y at the end of a one-syllable word is gonna say I and Y at the end of a two-syllable word is gonna say E as in baby, body, sunny. And then going back to those closed syllables that we talked about. Unfortunately, why English is so tricky to learn and to teach kids how to read and spell is because there's always gonna be exceptions, and exceptions to exceptions.

Which is just really difficult for anyone to keep track of all of those. But one comment is your closed syllable rule breakers, which are gonna be your units of ost, old, oll, olt, ind, ild. So typically, that would be considered a closed syllable, so you would expect those vowel sounds to be short, but they're not. So I use this phrase to help teach the children that I work with. And again, this was something that I learned in my training through AOGPE. You also have all and alk. And so one of my kids came up with walk tall, and so that's the picture that she drew to help her remember those rule breakers. And then your N-G, N-K units, you I-N-G, I-N-K and A-N-G, A-N-K are not true closed syllables because the vowel sounds are not short.

The doubling rule, also known as the one-one-one rule. If your suffix starts with a vowel and the base word is one syllable, has one short vowel and ends in one consonant, you must double that final consonant. So as in hopped. You have your suffix is E-D, which it begins with a vowel suffix. So if we know the suffix starts with a vowel, then we need to check for the one-one-one rule. So hop is one syllable, there's a short vowel and it ends in one consonant, so then we double that final P. Same with stopping. You also have a sneaky-E rule. So if your vowel, if you have a suffix that

starts with a vowel you need to drop the E at the end of that sneaky-E base word. If it's a consonant suffix, you can keep it. So you have hoped. Your suffix here is E-D, so you would drop it. And hopeless, your suffix starts with a consonant so you would keep that E. Final Y rule, again this applies to suffixes. If a Y is preceded by a vowel you would keep it, because typically that Y is part of that vowel team. So they're glued together. If Y's preceded by a consonant, most of the time you're gonna change that Y to an I, unless your suffix starts with an I. So here's some examples down here. So your first one is cried, you can see that your Y is preceded by an R in cry and your suffix starts with a vowel, so you're gonna change that Y to an I. In crying, your suffix is preceded by an R, however your suffix starts with an I, so we can't have C-R and two Is together, so you keep you Y.

And then in played, your Y is preceded by a vowel because that A-Y is the vowel team for A and you just add your E-D. And then again your three, and last but not least is your three sounds of E-D. Three sounds of E-D are t, d, and ed. And this is where we can really come into play because it's based on voice and voiceless phonemes at the end of your base word. So if your base word ends in a voiceless phoneme, your E-D sound is gonna be t. If your base word ends in a voiced phoneme, your E-D is gonna say d. And if your base word ends in t or d, then that's when it says ed. This is where I've, even just doing other trainings with teachers and well especially teachers, you see them when you teach them those voice and voiceless phonemes, they get that light bulb. "Oh, I get it." And so that really helps them understand. So again, this is you'll kind of see throughout all of this where our background and our knowledge in phonology and just language structure overall really comes into play. Real quick on morphology, another element of that structured literacy that we need to be looking at and making sure that we're providing appropriate intervention for. Morphology, so it does help improve decoding spelling and just overall vocabulary development. So we have inflectional morphemes and derivational morphemes. So inflectional, those are those grammatical markers. It's not changing the meaning of the word. Whereas your

derivational changes the part of speech and the meaning of it. To work on this, a lot of times you can do like word sorts and word building. Some good resources I like for this is the William Van Cleave website. I really like the tools and tasks that he has. And then I'll kind of show you what I do with some of my kids. So we have sheets for every individual, like suffix or prefix that we're learning about. So what I have on there already is the suffix itself and then the part of speech and then we discuss the meaning. And we talk about different words with the suffix and then they come up with their own target word.

So in their notebook that they have for speech, for services is they have different sections and so this would go in their morphology section. So for one of our students for full, full of, the word we came up with was colorful and so we made our paper very colorful. Whereas less is without and so we just chose to use colorless and we did no color. And then for L-Y we came up with slowly. So in what way or manner the turtle walked slowly. And then for ness we came up with silliness and then just drew our silly emoji face. So again, keeping in mind that it needs to be very individualized, so not all of my students have the same key word.

And I also have created a notebook as I've gone through, so my notebook kind of mirrors what I'm creating for them as we go through intervention. However, our key words and things aren't always gonna be the same. It's whatever is meaningful and sticks for them. Just real quick, so this kinda is gonna cover syntax and semantics more, so working on written expression, reading comprehension and executive functioning skills. So working on overall sentence structures and writing processes is gonna be really helpful. And going back to part one, if you were here for that, and doing those writing simulations. It kind of helped you see that why a lot of these kids really struggle with getting their thoughts on paper and formulating appropriate sentences and narratives and paragraphs, just in general. So explicitly teaching them different strategies for that, as well as reading comprehension strategies and cognitive

strategies. So helping them to identify their errors and recall information. So putting those strategies in place and explicitly teaching them how to use those strategies within the classroom or at home and things like that. So I'm gonna talk a little bit more about syntax and semantics and so when we talk about syntax you can work on grammar, markers and then just overall word order and sentence structure. Sentence combining tasks are really helpful and working on the parts of speech. So two resources that I really like to target this again, the William Van Cleave website. He has a lot of great resources as well as the book, and it's on one of my slides later too, "From Talking to Writing." And I don't remember, it's by Dr. Charles Haynes and Terrill Jennings is who it is. And they just came out with a second edition. So I really like their curriculum and how they work on syntax and semantics. And so that's just a really great resource for you to kind of have in your arsenal.

And so, what I've really started working on with my students is taking away all of those labels of nouns, verbs, adjectives, adverbs, because that's a lot for these kids to remember. But what we've been working on is just who phrases, what phrases, where phrases, when phrases and putting those together and showing them how your sentences can be flexible and you can move those phrases around to make them sentences more complex. So for example, our who phrases, the bright funny child. And so we'd work on adding different adjectives to our noun as well. And what did the bright funny child do? He jumped. Where did he jump? Into the water. When did he jump? After lunch. And so you put it together, so there's your who phrase, the bright funny child, what phrase is jumped, where phrase is into the water, when phrase after lunch and then you put it together in a structure of who, what, where, when. The bright funny child jumped into the water after lunch. You can be flexible with your where phrase and move it to the beginning of your sentence. Into the water, the bright funny child jumped after lunch. Same with your when phrase, after lunch, the bright funny child jumped into the water. And again, that book that I was telling you about by Charles Haynes and Terrill Jennings is a great curriculum that utilizes, that's where this

came from. But just the way they line it out and kind of go through scaffolding that, all of these areas is really helpful and I've seen a lot of success with my students. So I'm gonna go through a couple quick case studies for you. So the first one is just a testing profile, just to kind of give you an idea of what this may look like. And again, every child we know as clinicians gonna look very very different across test scores and just their performance in general. So, this was a student, we'll call them Sam. A sophomore in high school, 15 years, eight months. He's homeschooled and was described as bright and athletic. They were brought in due to concerns with dyslexia. There was a family history of dyslexia, he currently is receiving tutoring with a Barton tutor. There were no concerns with his oral language abilities and he has no current diagnoses of any sorts.

So I administered the TILLS and so this is his TILLS profile. So his overall total, he had a standard score of 41, a percentile rank of zero on the Sound Word Composite Score, standard score of 40, percentile rank of zero. Sentence Discourse Composite was a standard score of 63 with a percentile of, second percentile. And Oral Language Composite with standard score 50 with a percentile of zero. And then his Written Language Composite was standard score of 41 in the first percentile. So you can see overall very low. And so this more so outlines his scores on each sub-test. Again, we don't have time to go through this test specifically, if you're not familiar with it, but it's such a great tool and a really great resource.

But just for you to kind of see, he really struggle, I'll go, I'll kind of summarize all of the information. So I also administered the CTOPP. Again, overall, he really struggled with rapid automatic naming and his phonological memory. Again, phonological awareness, that's a good example of where that Phonological Awareness Composite Score can mask his weaknesses. If you look below at the sub-test, you can see that that Elision sub-test, those manipulation tasks are where they're more sensitive to reading and writing difficulties or reading and spelling. You can see there that his scaled score was a four compared to his blending and his phoneme isolation which were 11 and eight.

So definitely something I wanted to point out. I also administered the Gray Oral Reading Test, so looking at his overall rate and accuracy and fluency. And again, overall, all of that was poor. One thing I want to mention too is I don't always like to include grade and age equivalents because then parents will get really stuck on that. And I've had parents come back and be like, "So they're reading at a third grade level?" Like a third grade reading level, and that's not always necessarily the case. And then the TOWRE was administered as well, just his overall reading efficiency and again, both scores fell very poor and poor. So overall, this child had great strengths in his oral language expression, so his overall sentence structure, his grammar and his syntax, his narrative, knowledge of narrative structures, narrative formulation and recall was good. Or not recall, but just generation of it.

His pragmatic language skills, no concerns there. His writing fluency and then blending and phoneme isolation in the area of phonological awareness were also good. The areas of difficulty he had, he really struggled with that non-word repetition. So that's really indicative of that short-term phonological memory that we talked about in part one. As well as phonemic awareness, those manipulation tasks were really difficult for him.

Any non-word spelling and decoding that he had to do, so which shows that he's still not aware of all of that sound-letter correspondence and the rules that apply. Reading fluency, spelling, spelling and writing is what that's supposed to say. His reading comprehension, following verbal directives, rapid automatic naming and phonological memory, those were all areas of difficulty. So again, this is just kind of overall his performance, his scores were really low, which you're not gonna see all the time in these students. But this was just a good example for you to kind of see those patterns of difficulties that are really common in these students. Our next case study's just gonna be a quick treatment profile to give you an idea of what my treatment session looks like with another student. So, Jen is 10 years, six months in fifth grade. And

we've been targeting orthographic knowledge, so that sound-letter correspondence and applying it into her decoding and spelling. Phonemic awareness, overall written expression, specifically we're just working with basic sentence structure right now, and then monitoring errors in her work. So some things, just so you know in terms of those common spelling patterns and phonograms that I mentioned earlier. These are things that we've already worked on that she, her and I have targeted together within our session. So she's familiar with closed syllables, including blends and digraphs, those rule breakers, the FLOSS rule, the long spelling rule. She's familiar with the five long vowel, those most common vowel teams for her five long vowels. Silent-E syllables. We're currently working on phonemic awareness at the phoneme level and then we've introduced 14 of the most common suffixes and those spelling patterns that go along with it. So what our sessions typically look like, we'll do our phonemic awareness drill. I believe right now we're on, where we're working on substituting, so if you have a word like blend.

And if you say blend, now take away n, so you're taking away that initial sound in the final blend. And that's the level we're on, so a more complex level of phonemic awareness. A visual drill that I do is any phonogram that I've explicitly taught to her, I show her the card and I ask her to say the sound for me. An auditory drill is where, and so that's working on that orthographic recognition that we talked about in part one. The auditory drill is more of that recall that we talked about as well, orthographic recall. So I'm gonna tell her one sound and then she has to write the phonograms that correspond with that one sound that we've worked on. A morpheme drill, so those 14 morphemes that we've worked on, I'll show her the cards and ask her to give me the definition or I'll present them at the word level and have her identify. Or I'll say the word to her and ask her to identify what her base word and her suffix is. And then we work on the different syllable division identification, any decoding and spelling, the word level, but also paragraph level. And then we work on her written expressions. So depending where we are in her sentence structure. One thing I did kinda want to note

really quick, going back to the visual drill and phonograms, I don't think I mentioned this earlier. Is a lot of times what I see in certain programs is they are, the phonograms are front-loaded. So what happens is, by the end of kindergarten they have 50-some phonograms and you show it to them and they can tell you all of the sounds. Which is great for recognition, but they can't recall and they're not quite sure how to apply it. We have a little boy right now that we're working with and that's what's happening. He's in kindergarten and so we are just working on some of those basic phonological awareness skills. He's really struggling with just decoding CVC words. And so when we presented, if we present a phonogram card he can see the letter A and tell us ah, a, aw, which are all three sounds.

But now what we're finding is happening is when he sees that in a word, so like can, he segments it as c, ah, a, aw, n. And so that's where it gets a little bit tricky. So I've found that's really, especially for our kids with dyslexia and that are struggling with decoding and spelling, those front-loaded phonograms are really confusing to them. So in my kids that I know, when I do my visual drill, I know that they can tell me three or four different sounds for that specific phonogram, but if we've only targeted one of those sounds, then that's all I want from them.

So this is just an example of what her auditory drill may look like. So, like I said, we've worked on those vowel teams, silent-E syllables, open syllables and closed syllables. As well as those, like the FLOSS rule, long spelling rule, and we've also done like soft C and G rule. So if I were to give this student the, I would say A, then she would be expected to write A for her open syllable, A consonant E, A-I, A-Y. And again, this is just helping with that recall of those phonograms of that orthographic knowledge. There's so many different activities that you can do. One thing I would just really encourage you to is you have to get so creative with these students. One thing that's difficult for us here, I work in, I work with a ton of OTs, we're a century-based clinic. We have an amazing gym and all of this fun equipment and for a lot of these kids we have

to sit at the table. And a lot of these kids do also receive OT as well as speech services for literacy and language. So coming to speech isn't always as fun, because we're not in a gym, on the swings or the monkey bars or anything like that. So making sure that whatever is engaging for these children, because a lot of them are already so frustrated with school and any academics, so finding things that are gonna make it fun and engaging for them is important. Examples we use, we use lots of manipulatives and blocks for our phonological awareness tasks, creating just different bingo games. We have a game here we call Bing Bang Boom, so I just write, I have laminated cards and I'll write our target words on cards and we play a game that way. War is another game I use with those cards. Go Fish, Matching, Uno, shaving cream. So for our writing tasks, if I'm working on spelling or even our auditory drill, we'll put shaving cream on the window or something like that and they can write in shaving cream. Rice, any sort of sensory bins and Play-doh.

Different resources for you to kind of reach out to. There's the Florida Center for Reading Research online which is a great tool. The William Van Cleave website that I've talked about. The International Dyslexia Association has a ton of handouts. I don't know if anybody's been to the IDA conference, it's in a couple weeks in November, it's like the first weekend in November in Portland this year. I went last year in Connecticut and it was phenomenal, it was great. The downfall is it's typically either the same weekend or right before or after ASHA's convention, so that makes it a little bit tricky. But if you ever have a chance to go to do their annual conference, it's such a, it's really really great. I think next year it's in Denver. Also, ASHA has a lot of great resources on our role in literacy. I mentioned this on Tuesday that there's a couple clinical forums on dyslexia and working memory that came out within the last year. And those are great tools for you to look at as well. The SLP's Role in Language and Literacy, it's a Facebook Group. And I can't tell you how great it is, just the discussions that are had in there, resources shared, it's just an invaluable tool. And then your state Decoding Dyslexia as well as your state branches for your Speech and Hearing Associations and

your Dyslexia Associations are a great tool for you. And then Reading Universe is another website. I think I also mentioned this already, but the SeeHearSpeak podcast is also another really great resource. These are my, just a few of my favorite books that I use for treatment and assessment. So the "Essentials of Assessing, Preventing and Overcoming Reading Difficulties" by David Kilpatrick. "Equipped for Reading Success." That's the book that has the minute drills and goes more into the phonemic manipulation tasks. "Overcoming Dyslexia" people refer to that as like the dyslexia bible by Sally Shaywitz. And it's a really great tool to have. "The Dyslexia Advocate" is also a great tool just to kind of help you understand the process in the school system. I've also used it or recommended it to families as well. "From Talking to Writing Strategies." That's the written expression that I was talking about, and this is the second edition, I believe just came out within the last year and I love it. "Multisensory Teaching of Basic Language Skills" is another really great tool. It has a textbook and a work book. It is kind of pricey, I think I got mine on Amazon, but it's also a really great tool to have.

And then that "Phonological Awareness Training Program" that I was telling you about that ASHA came out with. So just to kind of wrap everything up and then we do have some time for questions. Just remember overall, I think the biggest takeaway is that I want everyone to realize how much of a vital role we play in identifying students with dyslexia, especially early on. I kind of hit this hard a little bit more on Tuesday, but just really knowing that we typically are the first professionals that come into contact with these kids because of those early warning signs. So we are key to identifying these kids early on, which is what we really need to be doing. And then again, that reading comprehension and reading fluency. Yes we know that that's where they're struggling, but why? So you go back to that reading comprehension, the simple view of reading and it's rope, we know that it's really not that simple. It's not just reading comprehension. Where is the breakdown occurring? Is it language comprehension or is it in word recognition. And if it is in word recognition, at what aspect of word

recognition? And if it is language comprehension, what aspect of language comprehension? And that's where we come in because that's where we are thorough evaluations and analysis of their language skills are very very important. And don't forget about phonemic awareness. So research has shown, no matter how old a student or a child or an adult is, if they're still struggling with reading and spelling, most likely it's at that phonemic awareness point. And there has been research that has shown that even still as an adult, addressing and working on that, you see great benefits in their overall reading and spelling. Something I will say too in my assessments is I typically, whatever I'm working on in their phonemic awareness drills, that's where I am with their phonics. So right now I have a student where just still at that closed syllable level because that phonemic awareness for his blends just to segment sounds and blends, is so difficult for him. So I haven't even really moved on in terms of the phonics and teaching him other rules and syllable shapes because he's still stuck at that level. And last but not least, talk about it. Talk about dyslexia. And I've talked about this again on Tuesday, spread the word, don't be afraid to use the word. And ask questions, so hopefully today you can identify a couple things that you learned and share this with a colleague or someone else that you work with and continue to just read and identify resources. I think that's all I have, so I can turn it over to Amy and we can answer some questions.

- [Amy] All right, that sounds great. Thank you so much. So we do have quite a few questions coming in, so let's just go ahead and get to those. Lacey is asking, "What about, who can administer the." Excuse me, "The evaluations? "For instance other professionals that are not as?"

- [Heather] Typically, the only other professionals that I've seen is like an educational psychologist or like a neuropsych, SLPs. I've seen others, again, this goes back to where I've seen some tutors who are certified. I don't even know how, I don't really know how this all works, but they're certified and they administer the CTOPP, but they

don't have a degree in speech or language or anything like that. And even just their experience in interpreting. So I'm not super comfortable with that, but again, other professionals that I've seen like other tutors and professionals with their master's degrees in language or not language, but literacy or reading. They administer some tests, but again, I always will go back to our training and our expertise on assessing children as well as psychologists, educational psychs, neuropsychs, that sort of thing.

- [Amy] Okay great, thank you. And then can you please tell us the name of the book again by Charles?

- [Heather] Yes, it is, and there's a slide with the name of it, but it's called, "From Talking to Writing." I'm trying to find it in my slide, hang on one sec. "From Talking to Writing Strategies "for Supporting Narrative and Expository Writing." It's the second edition. And that one I believe is on Amazon as well.

- [Amy] Okay great, thank you. Jonah's asking, "You said L consonant is a long sound, "but isn't it a short sound?"

- [Heather] Yeah, so consonant L-E, I think is what you might be referring to. So that, the vowel shape is always going to be, it depends on what that first syllable is. So consonant L-E is always just gonna be that the consonant with the l sound at the end. So that doesn't necessarily have a vowel sound, if that makes sense. But the first part of the word depends on the type of syllable of that first syllable. So if you talk about giggle. G-I-G-G-L-E, count back three, you would divide it between the two Gs, so your first syllable is short, gig, and then your second one is gle, G-L-E. Whereas cable, C-A-B-L-E, you would divide it between the A and the B, so your vowel sound in that first syllable is long because it's an open syllable. So there is that consonant L-E syllable shape that doesn't necessarily have a vowel sound. It's not short or long, it's just the l sound with the consonant. Hopefully that clears that up.

- [Amy] Okay great, and do you have a program you suggest for spelling, for teaching spelling, sorry?

- [Heather] I don't, and again, this kinda goes back to my soapbox about box programs. I know there's a ton out there and they are really great and beneficial, but it's more so finding and identifying why they're struggling with spelling and addressing it that way. My training and background is just on the traditional Orton-Gillingham approach, so it's not a program, it's just the overall approach. So the way I do it is whatever I'm teaching in decoding, I'm also teaching in spelling and I just do it reciprocally. But I don't.

- Okay thank you.

- [Heather] I can't necessarily recommend a specific program for spelling.

- [Amy] Okay, thanks. And Lacey is asking, "If it is typical "to give this many tests, "the ones that you went through earlier on?"

- [Heather] No, that again, that's just a kind of examples of different tests that assess all those different areas. But you want to look for is if you go back to that slide that talks about the different areas to assess and then identifying the most appropriate assessment tool to address that area. So with my assessments, what mine typically look like is I'll do the TILLS, not all of the TILLS, but portions of the TILLS, the CTOPP, like a writing prompt, an informal writing prompt. I'll find a, typically, a below grade level article for them to read to assess reading comprehension, fluency, accuracy. I'll do an oral language assessment. I use some of the TILLS for that and then sometimes I'll use the CELF or the CASL. I often will administer the GORT or the TOWRE. So that list early on in the presentation, that's not something that you would see someone give

all of those tests, no. Again, it just goes back to making sure you're assessing all of those areas that need to be assessed.

- [Amy] Okay, and that makes sense. So then what activities do you like to use to work on auditory short-term memory?

- [Heather] So with that, what I've really, I do use portions of the LiPS program to at least for the phonological awareness. I've found it to be a really useful tool to help our children really recall those sounds and words and adds that multisensory piece to it. So I do use elements of that. We do know, just in terms of general working memory, there's no tasks or specific things out there that have been proven to increase working memory abilities or memory abilities, so just those compensatory strategies. But when we talk about for decoding and spelling and that phonological awareness, I do utilize the LiPS program.

- [Amy] Do you utilize phonemic awareness training interventions with all?

- [Heather] I do, most of my kids yes. Just because what we find in our assessments is that's where the breakdown is still occurring, even if it's at a more advanced level. To be honest, I can't think of one student that I work with right now where we're not also addressing phonemic awareness.

- [Amy] Do you address the articulation impairment in addition to their low reading skill?

- [Heather] We do, yes. And also, we have a couple of students that we're working with, younger kids where we're using elements and introducing those basic sounds with the LiPS program, and so we're also using that to address their articulation as well. But we do, absolutely, especially depending on the severity of articulation, we do.

If it's a child where they're just struggling with Rs, if that's gonna be part of their treatment plan, then obviously yes, we're working on it. But sometimes that's something they're getting that addressed in school. And so that's not part of our treatment plan here. We focus more on the literacy whereas their articulation is being addressed in the school setting.

- [Amy] Okay, and Brianna is asking, "How do you balance your caseload "or determine which specific students to work with? "When I was working in the middle schools "there were so many students who had reading difficulties "and they were in RSP. "My CF supervisor said that if we were "to work with everyone who had reading difficulties "our caseload would be over 200 students."

- [Heather] And that is absolutely true. So I think, so I'm in a private clinic base setting so it's a little bit different for myself. However, I did have the opportunity to work at a school last year for awhile and I had such a great team that I worked with. And the way we kind of worked it out is, we, the SLP, we addressed more kids with phonemic or phonological awareness skills if they were on our caseload. But again, this really just goes back to where a lot of it may just be educating the resource teachers, the school psych or whoever it may be. Whereas so they may not directly be on our caseload, but that interprofessional collaboration and education. So we as SLPs need to take our expertise and our knowledge in this area and in language and speech disorders to help educate them. And encouraging and helping them make sure that they have the appropriate interventions in place. So you're absolutely right and I understand and know that you can't possibly be also serving every kid with a reading impairment. But, another thing to keep in mind, which we talked about in part one, is a lot of these kids, despite their language abilities at diagnosis of an SLD or dyslexia are at a great risk of later language difficulties. So just kind of something to keep in mind.

- [Amy] Okay, great. So with that being said, this next question might kind of relate. "So how do you explain to parents "why they should be paying money to receive therapy "with an SLP versus just hiring a tutor? "When do you refer to just see a tutor?"

- [Heather] That's a really great question and we've had that question a lot. I'm gonna just kind of go back again and talk about how important our background and our knowledge and expertise in overall language is and making sure that we're addressing the child as a whole. So a lot of times the tutors, they're just trained on one specific program. That they have a script and they are trained, you do not go off this script at all. No matter what, this is how you present this information, this is how you do it. We as clinicians know that that's not best for all children. Although that yes, that does benefit a child, that program may be very helpful, it's not gonna be for everyone else. So I have a student that I also work with that's getting outside tutoring. So we're working more on syntax, writing, semantics and not directly addressing the decoding and the spelling, but just kind of overlapping with what they're doing. And I'm not seeing carryover to what we're doing and I've discussed it with mom several times who's discussed it with the tutor. And the tutor's comment was, "She's passing the end of the chapter exams "and so we just, we have to move on." And so they're not necessarily trained to identify why they're not generalizing those skills and why they're not progressing. So they're just progressing through the program, but not overall progressing. And I see that a lot with tutors. So that's kind of what I explain. And again, that's nothing against tutors. I mean there are great tutoring resources available out there, but with our background and just our clinical expertise in being clinicians, I think we kind of have a higher up in that area.

- [Amy] Great, so this may also be similar. Ginger is asking, "So how would a treatment program "that you're completing with a child "differ from instruction a reading specialist "would complete with a child with dyslexia?"

- [Heather] That's a good question and to be honest, I haven't worked as closely with a reading specialist so I don't know the answer to that. I don't know what their treatment plan would look like. I have talked to several people who are also reading specialists that say they have very, even being a reading specialist, very minimal knowledge on dyslexia in general. So I think it just depends on their experience. But again, it just goes back to our background and our knowledge in language overall and where the child's difficulties and their strengths are. So just a lot of collaboration between the two of you would be best.

- [Amy] Okay, moving along. Sharon is asking, "Doesn't OT evaluate handwriting, "wouldn't they be on the evaluation?"

- [Heather] Yes, absolutely. And I should have mentioned that, because that is one that I always am recommending to as well, especially because I work in a clinic with OTs. So yes, OT absolutely would be part of that training, or that evaluation team.

- [Amy] Okay great, thank you. "How do you incorporate working with a child "who has been identified with dyslexia "from an outside source, such as a clinic, "when he has only been articulation for your caseload "and he is close to mastering his final sounds R and T-H? "He is in the fourth grade. "The intervention specialist is now working with him "on writing and reading as well. "Does the SLP typically address the same goals "with the intervention specialist "or stick with our articulation goals? "Any thoughts and suggestions are appreciated "as I have not had a student with dyslexia before."

- [Heather] That's a great question and I think that kinda just goes back to your collaboration within your team that you're working with. Like I said, just communication and talking about that. Hopefully after this presentation you realize that there could be other areas going on. So one thing that I would recommend is even if you're like okay, articulation, they're done, if they haven't had any recent assessments done in terms of

overall phonological processing and other language skills, I would definitely look at that. Because we know that children with a developmental language disorders and dyslexia, about 50 percent comorbidity rate with those two. So even though articulation is quote-unquote either almost done or graduated, I would definitely recommend taking a look at other areas of language as well as just communicating with the other interventionists to see, to make sure that you guys have all of the appropriate intervention pieces put in place for that child. Including phonological awareness.

- [Amy] Okay, great. And then along the same lines with that, "Are there things in our younger language artic kids, "before that they are even beginning to read "that we can look at, that we can look for or test "to determine if they are already "having difficulties with dyslexia?" And I think you're kind of talking about that.

- [Heather] Absolutely, so those early identifying indicators that we had on the slide earlier today. Any speech language difficulties, a lot of times, there's another study and whoever asked the question wants to email me I can try and locate that and email it to you. But there's a study that shows that non-word repetition tasks are highly correlated with later difficulties in children four years of age and older. So definitely just looking at those early speech and language skills. Like we said, and this was in part one, speech-sound disorders and language impairments in general are huge indicators for later reading difficulties.

- [Amy] And we are, we have just a few more questions, if you guys can all hang in there. Jonah's asking if you can talk about the differences between Orton-Gillingham and Lindamood-Bell. She's very familiar with LB, but was not trained in the Orton-Gillingham.

- [Heather] So the Orton-Gillingham is more of a traditional approach where you're teaching the sound-symbol relationships as well as the rules and the patterns, syllable types. That's more of the Orton-Gillingham. So my training was through the Academy of Orton-Gillingham Practitioners and Educators. And so that's where I learned all the rules for the phonograms, syllable types, and not even all of them. So there's like three or four different levels of training and I did the first one. So and it was a nine-day course, it was a 63-hour course. And so, obviously I walked away and gained so much knowledge from it, but I know it was just kind of scratching the surface of what really Orton-Gillingham represents. Because it does go more into detail in terms of morphology and but a lot of what they do talk about are things that we have knowledge already just in our background as speech and language with the morphology and the syntax and the semantics. But my concern was I had no idea the first thing about teaching a child how to read, sound-letter correspondence, like the different rules, syllable shapes, syllable types, syllable division, anything like that. So that's kind of the big difference. I know Lindamood-Bell has difference programs out there that facilitate decoding and spelling, I'm not as familiar. And even with the LiPS program, I'm familiar with it, but I'm not trained or certified and I don't use the program in it's entirety. But I really like how it introduces that sound-letter correspondence to children. I also know that the majority of programs on the market will claim that they're Orton-Gillingham-based. And most of them are to a certain extent. So that's kind of the difference there. I don't really know any other specific differences, just because I'm not as familiar with all of the Lindamood-Bell programs out there.

- [Amy] Okay great, thank you. And here's just one last question. Lacey is asking, "If there is a correlation "between apraxia of speech and dyslexia?"

- [Heather] That's a really great question. I have heard it from both sides and I don't have an exact answer for you. I do have, if you go to, oh I have it, I think I have it right here. So there was a article in I believe it was the Dyslexia Clinical Forum. Let's see if I

can pull it up. And it's called "Exploring the Overlap "Between Dyslexia and Speech Sound Production Deficits." It does talk a little bit about that. And that's through the "Language, Speech "and Hearing Services and Schools Journal" through ASHA and it was part of the Dyslexia Forum, Clinical Forum. And it did, I believe, briefly talk about apraxia. Again, we know if apraxia, it's a motor planning, but they believe there is an underlying phonological component to it as well. And we know that that's our main deficit in kids with dyslexia. So there is some overlap with it.

- [Amy] Oh let's see. Amber is saying that she's still confused about the word giggle in the syllable breakdown. Seems like G and I'll just say it. G-I and G-L-E versus G-I-G and G-L-E.

- [Heather] So the slide has an error on it. I don't know if that's maybe why it's confusing. The slide on there, I didn't include that final G in the G-L-E in the second syllable. That was just a mistake on the slide. I don't know if that's where the confusions coming from. It is, sorry Amber. That was a typo.

- [Amy] No problem. All right, so let's go ahead and wrap it up there. Thank you so much Heather, this has just been really fantastic information. So needed as we all try to wrap our heads around what our kiddos need who are diagnosed with dyslexia and other reading disorders. So thank you so much for joining us, we really appreciate you sharing your expertise today.

- [Heather] Yeah, thank you.

- [Amy] Thank you also to our participants for joining us today and asking some really great questions. We look forward to seeing everybody again soon and hope you have a great rest of the day. Take care.