Comprehensive Online Animated Kindergarten Screener:
Research and Clinical Implications
Recorded June 10th, 2020

Presenter: Barbara L. Ekelman, PhD, CCC-SLP
SpeechPathology.com Course #9327

[Amy] All right, hello everyone and welcome to our speechpathology.com webinar. Today, we have Doctor Barbara Ekelman who is going to be presenting on a comprehensive online animated kindergarten screener, and she will cover research and clinical implications. Doctor Barbara Ekelman is an SLP and learning specialist in private practice. She's an adjunct associate professor in the Department of Psychological Sciences and clinical associate professor in the Department of Pediatrics, School of Medicine at Case Western Reserve University. She established the school age, language and literacy course at Case Western and continues to teach this graduate level class. Doctor Ekelman has 30 years, more than 30 years of clinical and research experience in childhood, adolescent and adult language and learning disorders. She is designed research, presented papers and published articles in the areas of language learning disabilities, childhood stroke, attention deficit, hyperactivity disorder, autism, dyslexia and developmental apraxia. Since 1993, she has developed and administered kindergarten screenings, her screenings identify language and learning profiles that help guide classroom instruction and support early intervention. She serves on the advisory board for the early intervention related services training program at Case Western, which is funded by the Department of Education. So welcome, Barbara, thank you so much for joining us today.

- [Barbara] Well, I this is a topic that I absolutely love talking about. I don't like to put an age on myself. But when you see that I've been doing screenings since 1993, that gives you some sort of an idea of how much experience I have actually had in screenings of children from kindergarten through age, through with grade four. So, I wanted to get started that we will be covering a comprehensive online animated screener. But I think what's most important is to talk about why is screening important. So, just to share my financial and content disclosure page, I just like everyone to just take a peek at this. And you can go back and look at it further. Okay, so after you take this course, I am going to make sure that everybody is able to list and describe the pre-reading skills that are important to screen and monitor throughout the kindergarten

year. Also to describe the language and learning performance patterns of typically developing and atypically developing kindergarten students. And then what's really important is to look at the language learning patterns of an eighth of atypical kids, those kids that really require the immediate evaluation and intervention. So, we're trying to find those kids, all right. But we also know there're kids that come into kindergarten, who have not been exposed and there're kids who have come into kindergarten, they've been exposed to a lot and they're ready to go. So, lemme just give you an outline of the course. We're gonna review the literature. Then I am going to make everybody look at my language learning model. And then I'm going to briefly show you the well animated screener.

But I encourage you just to go to that website on your own to see what the well animated screener does. And then we did a longitudinal kindergarten study using this well animated screener. And I will discuss the findings there. And then my favorite part is to go over the case studies and how you the application of what the findings are and the clinical relevance of what you find with the kids. So, let's review the literature. And I'm telling you, I went everywhere to just get this information, not easy to find. So, what I found is that there are more than 4 million children that enter kindergarten each year in the United States. That's a lot of kids every year we're trying to deal with. And that's usually their first exposure to this to a school system where everyone comes together from different programs.

One out of the four children from moderate to high income families, and one out of two children from lower income families are not ready for kindergarten. 8% of entering kindergarteners have language disorders that adversely affect learning. And then half of those kids that have language disorders meet the criteria of a specific reading disability during the elementary school years. More stats and more numbers, 16% of school aged children have difficulty learning to read. And half of the children with language disorders meet the criteria for a specific reading disability during their elementary

school years. And then if that's not complicated enough, we find that 16 to 24% of children with language disorders, and 30% of children with reading disorders also have ADHD. So, there are all these co-occurring, overlapping issues that happen with the kids. And it's very hard to just have a pure problem, one pure underlining issue. So, you have to really look at everything. So, why do we do kindergarten screenings? Well, first of all we want and we know that children who get off to a poor start in reading they rarely catch up. So, you wanna catch those kids that are at high risk for reading as early as you can. 30 years of research has shown that early identification and intervention during early childhood achieves immediate and sustained developmental benefits.

So, we don't wanna miss the kids 'cause if they're not, we don't do early intervention, it's very hard to catch 'em up. If you're gonna identify this in third grade and a lot of language disorder kids get missed. And it's like, you don't figure it out till third grade and the reading kids. They also get messed depending on what their reading issue is. Longitudinal studies of language and pre-reading profiles of kindergarteners provide valuable information and insights to children who are typical learners, atypical learners an at risk for learning disabilities.

So, these studies have shown that identifying kids whether there is we know there's a problem, that it's an exposure thing, so they just need to be exposed to learn something or they just come in as normal learners. That looking at language and early reading profiles benefits everybody, because you'll know the child once they enter the kindergarten, how else is a teacher on day one gonna really know who the kids are, what they need. So again, early identification and early intervention programs generate important benefits for both young children at risk for disability and those with established difficulty. And then we all know this, that children who succeed early on receive the most positive reinforcement, which leads to a positive self image, motivation to work hard, and success in school. And too often, and I've seen this for

the last and Amy is correct, it's been more than 30 years now. Too often, parents are advised to wait and see when their child is lagging behind same age peers. I cannot tell you how often we go into schools and we'll actually identify someone and then their told we're told to wait and see it's developmental, okay? So, that's something that you really have to be careful, you need to be careful with that, you need to know what the kid can do at the time, and then work on the things that they need some help in. So now, the way I do this is I always have to have models. Okay, so I have this model of speech, language and learning.

So, the first part of the model is phonology. And phonology is the study of sound. And we know it's a study of sound production. And it's also looking at phonological processing, which is often broken into awareness, retrieval and memory. It's in this box if you have a problem that directly interferes with your development of reading decoding and spelling encoding. So, if you break down here, it directly affects how well you're gonna be able to learn to read the words, spell words, because this is a very phonologically directed skill. Down here you notice that we have other levels of language, syntax, semantics, pragmatics, discourse and metalinguistics. If you break down here that directly affects reading comprehension and written expression. So if you go up here again, I will now use the pointer, you break down here, it interferes with how well you're able to read the words and spell the words, which then indirectly interferes with reading comprehension and written expression.

In other words, if someone were reading to you, or writing for you, acting as your scribe, this would be great. Your problem is you can't read the words well enough to know what was in a paragraph you're reading to be able to get the comprehension, then the same thing for spelling, your output doesn't look right because you can't spell and you're focused on your spelling. So, you're focused on reading the words that you're having problems reading and spelling the words that you're having problems with. And that's where your focus is at the expense of reading comprehension and

written expression. So, it's over here. Let's say you can read everything and you can spell everything but this is an area of weakness that directly interferes with reading comprehension and written expression. So, a child who has language problems in this area might be able to write great, but their written piece is very superficial. They might be able to read every single word but they're not processing what they're reading, okay? So, let's just go over this quickly. So, the phonology, the sound system of language, there's production, and that's the ability to correctly produce the sounds of language. That's your speech, your speech sound production. There is awareness. That's the ability to detect and manipulate sounds and syllables and words, say train, say train without T sound, rain, it breaking word, putting words that are broken down back together. What word does this, what word these sounds make? Working memory is the ability to hold a small amount of material in memory for a short time, while simultaneously processing the same or other material, okay?

And then there's retrieval, the ability to access stored information efficiently. Now, if you look here, this is speech, the awareness affects reading. The memory, working memory is also often associated with attention. And then the retrieval is associated with expressive language and reading fluency issues. Now, reading and spelling, you need to understand the alphabetic principle and the orthographic principle. So, we have speech sounds that the child hears. And the speech sounds are associated with print symbols, sound symbol. And then there's the ability to associate the letters, the graphemes with the sounds of phonemes. And that requires this additional understanding, the alphabetical principle that written words are comprised of letters that represent sounds, the orthographic principle that patterns of letters represents syllabic and more morphemic structures, so guess who's great at alphabetical principle, me, I should have taken Spanish, it's very sound symbol. Guess who's not the greatest speller in the world and has issues with orthographic principal, me. Where you have an English and French, you have many patterns that go back to one sound like for instance the long A can be A consonant E, it can be AI, it can be AY. So, the

orthographic principle is like tion, t-i-o-n, when you think of your prefixes and suffixes. Here's the language that's related to reading comprehension and written expression, syntax, the system of grammatical sentence structure, semantics, the meaning system of language, vocabulary and word. Pragmatics, social communication, the system of appropriate language use in social contexts. So, reading comprehension, reading comprehension is the ability to understand what you read when reading, decoding is not impaired and is fluent.

So, you're able to read the words and you're fluent in reading the words, how well do you understand what you read? Written expression is the ability to write your thoughts down on paper when spelling is not impaired and is fluent, they should say, encoding. So, that is you're able to spell everything, but you're just, your expressive language isn't great and so what you're writing is superficial. So, here's the model, again, we just kind of covered this briefly that goes here, that indirectly affects, lemme get my pointer here, oops. We have this area here, that indirectly affects the decoding and encoding that then interferes with the reading and writing and then this area that directly affects that. Okay, so now, Debbie Duck and I, who have done screenings forever, we were pulling from a million sources. And so we decided that we were gonna just try to come up with our own screener for kindergarten.

And we wanted a screener that was comprehensive, meaning it didn't just look at one aspect of the child's development, it assessed many skill areas important for school success. We wanted it to be individualized, we wanted in-depth, personalized results that pinpoint each kid's strengths and weakness. And we wanted it specialized because we didn't just want it to be from the speech arena or the education arena. We wanted to draw from the specialized fields of speech language pathology, education, psychology, and child development, we wanted to grab it all. So, we came up with a well screener and we developed subtests that would look at these domains, receptive language, expressive language, social communication, early literacy, reading, attention

and speech sound production. So, the areas that we looked at is we created subtests that would tap into these areas. So, we wanted, we have a subtest that looks at processing language, when you're it's the first well, I'm gonna, I was gonna, I'm gonna go through the screener briefly with you, but we do not have sounds, you're gonna go look yourself, but the receptive piece is, has a receptive language has a subtest called language processing, and it's the child's ability to comprehend sentence structure. So, you'd have something that says, the boy is being pushed by the girl. Then we have the expressive language domain. And here we'd have two subtests, one that looks at speed of retrieval, how rapidly you can say objects. And one that looks at formulating language, that looks at morphology, it's like close format, here the boy eats, here the boy and they have to say drinks. We have this very unique social communication subtest that we really wanted and you have contextual setting. And it will say the boys are at the ice cream store. And somebody said, I want sprinkles and gummies on my ice cream cone, point to the person who said I wanted sprinkles and ice cream on my ice cream cone.

And with that, you just you have to look at all the pictures and see what the kids are doing with each other to figure out who's doing the communicating. We have the early literacy, we have letter naming, and we also have rhyming and sound play say baseball without base and then we get say bat without ba. And then the reading component we have reading real words and reading nonsense words. And the attention is a digit span test and the speech production part is by report but then we have supplemental tests that look at that in more depth and also bolder skills. So, I am now going to share the screen here. And we will, here is the website and just the what's nice about this website is if you have the teachers, the parents go, they have different areas. These are the different areas that are looked at. If you press this, it tells you all about what receptive language is, this is what receptive language is, children with good receptive language skills can do these things, children who have problems with receptive language, this is how they look. So, you can do that for every single domain, okay. And

what I'm gonna just show you a result, a sample result before I just kind of start the test, you get a result like this. And on here again, you can click this and if there's a problem, once the child's taken the test it gives you next step suggestions for games, suggestions for professionals for if you need further testing, suggestions for websites to go to learn more about all these different areas. It helps the teachers write their report cards when they go here. And as I said, these different subtests down here, make up these domains. And so after you see what's happening here, the yellow says that the skill that the child has is on track. If it's red, it's an area to bolster. If it's green, no problem. If it's red, areas to bolster, and green, green, no problem. I peek at this and I can tell you that I think this is a child who's at risk for dyslexia. They couldn't do the early literacy, couldn't do the reading and this expressive language we know we have rapid object naming up here. My guess is that's what might be the problem, but let's go and look.

So, everything that's lower than seven we would look at. Word sound play is a problem, confrontational naming is a problem, letter recognition is a problem and reading real words. This says not applicable because when this child was tested, we didn't expect this skill. So now, I am gonna just show you quickly an example of the website without sound. So, let's see here K, okay. You go to my screening. And just so you see the characters, so the characters are giving this test, and you can't hear what the characters are saying. But you this first subtest, actually can speed through this. The first subtest is looking at receptive language, the fish are swimming and you've had tests like this where you know what that is like.

The second subtest is digit span, and we have the character is saying the numbers, saying three, eight, four, nine, so that's a digit span test. Subtest three is of the Elysian test, where you are saying, say baseball without base, subtest four, and I'm just showing you this so you can just see that you can speed through these things. This is the rapid naming of objects. We do objects for kindergarteners because they don't

know their letters well enough to rapidly say letters. So, we didn't want it to be a test of do you actually know the letter or not, these are things we wanted to be stored already and that they know and to see how quickly they can get the information out. Subtest five is the social stories and the here are some of the pictures are saying the children are looking for a toy in the toy box. Someone asked can I help you find it, point to the person who asked can I help you find it. So, you have to look at see how the eyeballs looking in different ways. And you have to figure out which one would be saying that this is the social pragmatics. Then we have math.

Oh, excuse me, we have the close format tests where it says here the boy eats, here the boy and they have to fill in drinks. And then this is a math subtest that I'm not gonna I won't show because you can't hear it but it starts out very, very easy, then it gets extremely hard. And this is because we're trying to catch the kids that are very good in math, or they just are very good readers that they're great in math and they might have Asperger's and they're not as good in some of the language skills. And then we have a subtest of reading the words. We have just reading real words, and we have reading nonsense words, okay.

So, then I'm gonna stop sharing here. But if you go to the website and play around with it, or if you like a number to go in and log in, you can send us a request for that and we'll give you a login number to look at it. But it's comprehensive. It just it looks at everything that I have on that model. So, what we did is we gave 311 kindergarteners in regular suburban classroom setting, the well screening and we gave this screener to them in the fall, in the winter and in the spring. So, we followed them throughout the school year. By the way, I wanna mention this is a suburban classroom room. It's the Cleveland suburbs. We're now doing the inner city of DC with some lovely speech language pathologists in DC, we're gonna collect 200 kindergarteners. So, in this group 56% were female, 44% male, 69% white, 11% were African American, 3% Hispanic and 17% other. So, I call in all my buddies and I have all my friends come help me do

this. And we so the testing was carried out by master levels, speech language pathologists or learning specialists in the areas suburban schools and the participants were tested at their school, in a quiet setting at three time periods, at the beginning of kindergarten and we refer to that as kindergarten fall, in the middle of kindergarten, we say that's kindergarten winter. And at the end of kindergarten, which is kindergarten spring, and the data were collected over a period of five years. So, what we ended up doing is we assigned subjects to one to four groups based on the well performance at the end of the kindergarten year. We wanted to know, okay, we've been following throughout the year, how do they look at the end of kindergarten, how are they grouping? So, we have a language risk group.

And the language risk group was based on the subtest one of the well screening which was the language processing, that's when it says the boys pushed by the girl, which of the three pictures is that? And it was also the an expressive language subtest, the language formulation, which was the closed format, here the boy eats, here the boy drinks. So if you were bad and if you think you were bad, oh my God, if you had an issue on one or both of those subtests, you were assigned to this language risk group.

The reading risk group was that if you had an issue with reading any of the real or nonsense words at the end of the school year, you were assigned to this group. If you had problems in the language processing, and the language formulation, and you also have problems in reading real words or reading nonsense words, you were assigned to this group. All other kids were assigned to the no risk group. So, we refer to the languages group as just L. The reading risk group is R, the language and reading risk group is LR and the no risk group which has the typical where the high score is actually as no risk and R, so again the language risk, the L group, low on language processing and or the language formulation subtests on the well screener at the end of kindergarten. The reading risk group, low on real word reading, and or the nonsense word reading subtests on the well screener at spring. The language risk group, low on

both of them, and the no risk group are the typical kids or the high scoring students. So, we did ANOVAs and the ANOVAs were run between the at risk and no risk group. Bonferroni was used to correct for the multiple ANOVAs. And then we did two key post Tukey's to see where the differences existed between the groups where there were significant differences. And here are our dependent variables. So, we looked at those four groups and we wanted to know how did they do on number sequencing subtests, which looks at working memory, which goes with attention, how did they do on the word sound play which is the phonological, which would goes with early literacy? How did they do with confrontational naming, which is the rapid naming of objects, which also goes with which goes with the expressive language. And how did they do with social communication, which is the stories where you have to use the context and look at the pictures and see what the kids are doing, to make before you make your selection.

And then how what was letter recognition like, how did they know their letters. And we looked over the entire school year, so these are our results. So, we found that the language group had the most difficulty with social communication. And I was very thrilled to find this, 'cause I kept thinking, these kids that have attention problems who can't do the working memory test, can't do the digits, they're not gonna be paying any attention to this. So, it was the language group that had the most difficulty with social communication, which makes sense to us. All of these groups, all these atypical groups, the language, they really we don't know, if they're atypical or not, but they're lower on this. The language group, the reading group, and if you had language and reading group, language and reading problems, those groups all performed significantly lower than the no risk group, and word sound play throughout the school year. But I have to say, by the end of the school year, the reading group also scored significantly lower on the word sound play than the language group. So, even though the language groups scored lower on this skill than on word sound play, then the kids that were no risk, they scored significantly better at the end of the year than the kids

that were at risk for reading disorders. All groups again performed significantly lower than the no risk group and number sequences until the end of the school year, when the reading group no longer scored significantly lower than the no risk group. At the beginning and end of kindergarten, the reading group and the language reading group score significantly lower on letter knowledge than the language group in the no risk group. So, that makes sense because our language group is not including the finale at the phonological awareness kids even though phonological awareness is a language level. We're looking at the bottom half on the language side of my model. The syntax, the semantics, etcetera, okay?

Confrontational naming was not significantly different, it was not significant at any time period, but approach significance level by the end of kindergarten with mean trend showing that the reading group scored lower than the no risk group. So, this confrontational naming did not come out as significant. So, this is a variable that's really important as the kids continue through school and develop mentally mature. And, but and it shows that the kids that are risk for reading, it's starting to come out as being higher with them. I mean, the means are higher, but it's not significantly higher. So, here's the clinical relevance.

The clinical relevance is that children at risk for reading disorders perform poorly on phonological awareness tests throughout the kindergarten year. And then we learned speed of retrieving alone. Speed of retrieval alone is not a reliable predictor of reading risk in kindergarten. But remember, if they have a phonological awareness problem, and they have a problem with speed of retrieval, you gotta pay attention. That's what we termed the double deficit at risk for double deficit dyslexia down the line. Children at risk for language disorder struggle most with social communication. So, I feel that the study that we did really emphasizes the need for screeners to directly measure the multidimensional skills, essential for speech, language and literacy growth. And it's so important to integrate all the information you get to be able to interpret this student's

learning profiles. So, we're looking at a lot of different levels of skills that have been shown in research to predict school success. So, you need to integrate that information. And it's essential to get a baseline measure at the beginning of kindergarten, so you know where the kids are starting. And then you can track them, you can group them in groups to work on areas that are weaker. And then you just follow 'em throughout the school year. And also you wanna provide the teachers with language learning knowledge to help them guide instruction to meet the student's needs. The teachers when they go to the website, it's really helpful for them, they don't, a lot of people really don't know what language is still when I'm out there talking about this child has a language problem, they think that English is their second language. So, it's really important to explain all these different levels of language to teachers, to parents, and to our fellow professionals, to psychologists and educate all educators.

So now, I wanted to go over some case studies with you. And here is Andrew, Andrew's kindergarten teacher comments at the beginning of kindergarten that he's starting to read, he listens in class, he gets along well with his classmates. And she has no concerns about him. So, what we did is we have all the domains and colors here. And then we have the subtests over here to try to interpret. So, this is putting everything together for this student.

So, when you look at receptive language, we see at the beginning of the school year, he had an eight. And I think a lot of the kids were really finding that the kids are not exactly listening at the beginning of kindergarten when they're entering kindergarten. And my DC group found the same thing. They said what's the deal, our kids are doing worse on our listing measure. So, I don't know what you all are finding out there. But at the beginning of kindergarten, he had a scaled score of eight, which that's on track. Anything that seven and below is what we're concerned about. Then as he goes through the school year, look at that, he learns to listen, he's doing great. Then we look

at expressive language, which is made up of the confrontational naming, rapidly naming the objects and also language formulation. Here the boy eats, here the boy drinks, those morphological pieces. And we see that his confrontational naming was slower in fall, slower in winter and then it picks up, right. And his language formulation is fine. Then you look at social communication, his pragmatics looks fine at the beginning, maybe he wasn't paying as much attention. See, I keep telling you I think sometimes these attention kids aren't paying attention to the subtest, which could be true which has been coming out significant.

Then the early literacy, he was on track, and then he looks great for both words sound play, letter recognition. And you look at reading, he's doing okay, he's developing reading, his digit span, which is holding information in memory and short term memory while processing it, that looks very good. His math calculation looks fine. And he had no problems with articulation. So, we look up here and I'd say a lot of the kids don't listen these days.

But look at his attention, it's fine. And his listening is fine. So, I look at this and I say, wow, we just learned from our study, that rapid naming, retrieval cannot, does not really predict anything, you have to be careful with using it alone. And that's all that we see here is that he had some retrieval issues. So I see two reds here, but I'm not worried about this kid at all. Not worried one bit. But this was done in fall. And if you follow the kids through the year you will. It really helps to see that it just develops. See. Our next kid is Max, all these are real people. So, I know all these kids, which is fun. So Max, his kindergarten teacher comments in the fall that he loves story time. He has a fantastic attention span. He has a marvelous imagination. He gets along great with his classmates, his classmates love him. And she really has no concerns about Max. So, we look at his kindergarten screening. And we see again, look at this receptive language how just kind of gets better over the year. He's fine. He has the gift of gab, no problems with count. He can get things out quickly. And he had no problems with

15

morphology or syntax. It didn't look like remember, this is a screener. So, I'm talking in broad terms here. His social communication was fine. His attention, fine. Math calculation look good. He didn't have any articulation errors. Then you look at fall and you say, okay, his early literacy in fall was on track. And I look here and I say, okay, he had a nine on word sound play and letter recognition was a 10. That looks okay, so we're not worried in the fall. And then we see this gray, it says not applicable. So, they're not reading real or nonsense words in the fall. We're not concerned because a lot of kids just they're not reading when they enter kindergarten. So, we're not concerned at this time. But now we're testing him in January or February and we're seeing this word sound play is not developing. So, remember we have different norms. So, it's all the same kids. So, we take all the kids in fall and we do the norms for fall for them with how they're all performing. We do norms for winter and other norms for spring based on the same kid. So, this is we call these repeated measures, which is really neat.

So, you're really seeing the growth within this normative sample. So we see okay, well, he's okay with recognizing his letters. Most kids when they enter kindergarten, they know a lot of, they know many of their letters by the end of kindergarten, they usually know all of their letters. But the piece that's our worry is this word sound play. Then I look we look at the reading. And we see not applicable, not applicable because it's the beginning of the school year. We also make word sound play not applicable in the middle of the school year because not all school systems are really teaching this skill yet. And a lot of kids just don't know this yet. But we do see if they could read some simple words. And he falls down on this. And then by the end of the year, his reading is going up because I might my thought is he's memorizing the words. But he's now at this point, he's had a lot of exposure to breaking words down and sounding some things out, and it's less than a seven. So for me, I would go and I would ask the parents, if the teacher is able to do this, if there's any family history of reading problems, and get more information, and I would say we better watch Max because he

16

may be at risk for dyslexia. He's looking that way, okay. So, that would be of concern for me. Now, we have Cindy and Cindy's teacher reports in the fall that Cindy does not get to the point when talking. She uses filler words like um, the thingy, you know, etcetera. All those things, just talking around, circumlocuting. She does not know the names of her letters or her numbers. She can't access the names. She has trouble communicating with her peers telling them what she wants and doesn't want. And she does not always pay attention.

So, we let take a peek at her all through the school year. And we see that her receptive language was on track and then falls off in spring. So, I guess her I would say her receptive language, it's looking like it's a bit of an issue. Her expressive language was a problem throughout, she had problems retrieving, see the confrontational naming is all less than seven. And she looked okay on language formulation at the beginning but as the stakes get higher and you have to know more as the year goes on. She's on track, not a huge worry, I'm more worried about confrontational naming. Her social communication is okay.

This is below the mean remember, 10 for the scaled scores, 10 is a mean with a standard deviation of three. Her early literacy. She's great with the sounds, not so great at the end of the year though, but she can't name her letters, she's having problems learning her letters. She is not recognizing real words but doing a little bit better with sounding out. Almost as if this word sound play is she's stronger at word sound play where she can sound out, but she's not developing her reading vocabulary and her attention was terrible at the beginning, getting a little bit better. Math calculation isn't great, she can't remember the names of her numbers. She's having problems remembering numbers. So we're with Cindy, we are concerned that she's at risk for a language based learning disorder. Meaning we're more concerned with the bottom part of the speech language and learning model looking at syntax, semantics, pragmatics and all of that. And I say pragmatics even though the social communication is okay, but

if she continues to have language issues, she may be, she may develop some problems with social communication, right. So, we are going to just watch her for language learning issues. I would again ask the parents if there's any family history. Now, we have Anita, Anita's kindergarten teacher reports that she uses immature speech. She's quiet. She does not contribute during class discussion. In fact she hides. She mispronounces words with the, with R sound. Let's see how she does through the year. So, we have this receptive language, that's the one that the boys pushed by the girl remember, that's an eight on track. This is an area that needs bolstering in the middle of the year and then she's on track in the spring. So her receptive language, those are the scores we get, expressive language problems, pretty much across the board but language formulation is getting a little bit better. Social communication was not very good at the beginning of the year, then on track and then she became a superstar.

This is how you know these are real kids, you obviously the teacher is helping her here. Her early literacy skills are okay for like learning to decode words. Her reading skills are okay. Her attention is okay. Her math is just okay below the mean board, okay, which is a speech sound disorder.

So, we're worried for Anita that she just had, she seems like she has the run of the mill speech, maybe at risk for a speech and a language disorder. So, this is a kid, this is a child who is probably gonna learn to read fine and spell fine, but you're really worried about how is she gonna learn, how is she gonna do with comprehend listening comprehension, reading comprehension, speaking and writing. Here's Evie. Evie does not pay attention. She does not seem to understand class directions or rules. She interferes with her classmates' play. She does not use speech to communicate wants or needs. She has trouble with group activities. And she uses immature speech when she's talking. Now, when you see this, you know you really wanna refer for further testing. So, she in fall and winter had a lot of problems with the language processing.

And then she did better at the end of the year, she actually did quite well. And then with expressive language, she's a terrible time marking morphemes and following and here this elephant is big This one is bigger and this one is the biggest. So, she has problems with language formulation, horrible problems with pragmatics, not doing well with word sound play. So, we're very worried about her phonological awareness skills. Right now she's reading real words. And I'm concerned, it's like she's memorizing this and she's got some decent nonsense word reading, but look at her words sound play. So, we're really gonna have to watch her. Her attention is horrendous. Her math ends up being okay. She has no speech issues. So, here we're worried, we feel she's at risk for language. She's at risk for learning. She's at risk for attention and social communication issues. I would send her for more testing, the well screening is a 20 minute screener.

So it's very brief, just trying to get information in these areas. Here's Christopher, Christopher's kindergarten teacher comments at the beginning of kindergarten. His speech is unintelligible. He has difficulty rhyming. He doesn't know his letter sounds. He's below his classmates in all skills, but get this. He gets along great with his peers. He uses lots of nonverbal gesturing. His classmates help him with classroom activities, and even though they can't understand him. And by the way, I wanna throw this in 'cause I know these kids, he's also a fabulous athlete. So, he's great on the playground with games and he just uses lots of nonverbal cueing. And here's Christopher's language processing. He has problems on all of the throughout the school year, fall, winter and spring. He has problems with language formulation, fall and winter, but not spring. He's fabulous with reading nonverbal cues. So, he did great on the pragmatics test. His early literacy with words sound play is he's not picking up the with, he's not able to do say, train, say bat without the bus on. He's not getting the phonological awareness. He knows all his letter names. He is starting to pick up reading but we are concerned because of this. He had his attention wasn't great at the beginning, but probably 'cause he wasn't understanding, right. 'Cause he had a language problem.

19

But this gets better. He learns more about nonverbal cueing through the school year. And as his math is an issue and he has multiple multiple speech sound production errors. So, we are worried about his speech. We are worried about his language, and we are worried about his learning. We're worried about his learning and having the phonological awareness and retrieval skills to access. We're, learning to read and learning to spell. And that's gonna indirectly affect reading comprehension but he also has the language issues that are gonna directly interfere with his reading comprehension and expressive language as he continues in school. So, this is another child that I would absolutely refer for further evaluation and really get a great eval on him, cognitive, speech, language, motor, everything and get him get based on what those results, what they think, but I would expect that he would be someone that you would put into immediate remediation, intervention.

Okay, so those are the references. What I would like to do is go back to the learning model to just, let's see, do I have to go. I don't know how we get to the beginning here. Let's see. Okay, let's take that off here. I wanna go back to the model here. So, we just get this cemented in our memories. So, with every time you're testing someone, you need to think about this. You have to think about phonology, is it just a speech production problem, and the phonological processing, the awareness, retrieval and memory error, okay? Is it just an articulation issue? If it's just an articulation issue and these things, these areas are fine and these areas are fine. You can be pretty sure that this whole learning section here is going to be fine. Is that phonological awareness that it's just phonological awareness that is an issue. But retrieval and memory are okay. Well, that could be, that could lead to a sound based dyslexia. But the retrieval is okay. So, if you teach the child using multisensory reading, they get that instruction, they shouldn't have problems retrieving the words once they know the words. Is that phonological processing that it includes awareness and retrieval. That's what our learning friends called the double deficit, where they're teaching 'em through multisensory reading Orton based programs, how to do the sound and the symbol and

20

their orthography. But when they see a word and they know they know the word they might have problems accessing, it's a slower remediation. And how about if it's just a phonological memory issue? Well, then here we're concerned about some attention. And that's why we do this memory piece. But if this fault if they break down the phonological awareness and retrieval, it will break, it'll cause this problem that then indirectly causes this issue here, right. So you get that, where this affects this directly and closes that causes a problem here. And now, if you go down here, and you look at this, and you have, let's say you just have a pragmatic social communication problem. You're fine with everything else. This is great. In fact, you are very early reader. You do great in math, and some of this language stuff might be a little bit behind but not totally behind. However, your pragmatics is low.

Your metalinguistics if you did some higher level things for kindergartener, which is hard to do, but if you're thinking of an older child, this will be lower if you have a social if you have like a an Asperger's, which they don't use that term anymore, but high functioning autism, a lot of times we'll find that on the kids. And if you have problems and all this area, and this is great, then you have problems here. So, now I wanna go back to the website.

So, I have to go to the sharing of the screen. I would like to share the screen, if possible. Thank you very much. And these are I wanna go to the actual website. So, those are the 10 subtests. So, let's look at some more of this just so where the teachers can find information. Remember, if you push these extra, I'm gonna go to the sample. So, you'll get your sample with the kids and you will push this and it will tell you about receptive language as I said, expressive language, social communication. And actually what I wanna do is I am going to put a different number in so you see the back end of this. This is somebody who has already taken this test. And you so now you put in a number that was already used, and you view the results. And you get this nice piece here that tells you about this child. And you hit down here and it tells you

what all the subtests are testing, okay. And you will see for us, we're like, oh my gosh, this person, this child had problems with expressive language. So, I'm gonna now push that. And the teachers can read this, they can send the parents here, you just give them a number. And it says expressive language, and it's a simple definition. Expressive language is what we do when we share our ideas through speaking. As we get older, we use more complex sentences and vocabulary, especially when writing. Children with good expressive language skills use a variety of vocabulary. Use simple and complex sentences. Use age appropriate grammatical forms, tell story sequentially, with detail and ease.

Characteristic of an expressive language disorder may include grammatical errors, poor sentence structure, word finding difficulties, limited vocabulary, overuse of filler words, like all things, stuff, overuse of gesturing and difficulty coming to the point, children with language disorders are frequently found to have word retrieval difficulties which makes them slower to rapidly name objects and that is for reading difficulties. When children are having difficulty retrieving a word their expressive language is inhibited and they often will have this sense that it is on the tip of their tongue. Further though use indirect manner speaking circumlocution describe an object or an event when the name cannot be recalled that for instance, they say things like the thing you pound with, okay?

So, I think it's very helpful to go to this website for just to get the information that you need on these different areas. And it's informative. Okay, so just to I'm gonna sign out here and put in one more number because I wanna show you the thing that works nicely with this is hang on a minute here. This one. When you go here, you there are instructions here. But the thing that's nice is that you have this whole screen that's animated with a fun characters talking. But you also are scoring this as the child, you sign in with the same login number as the child, and you're following the child along and anyone can do this. They follow the child along and they just say what numbers

they get, what they get right, what they get wrong. And there's some things that are scored automatically. But the thing that's nice is that it's the it this, the characters are administering the tests. So the same person, or the same characters, the kids are being administered the test the exact same way. And so it's just comprehensive, it's consistent and it covers all kinds of fields. And it follows a model. So, we need to follow models. You can't just go out there and test this or that, you have to be constructive and know what you're doing. Thank you so much for listening to this conversation. And you can see the screener if you go to wellscreening.com.

- [Amy] Thank you, Barb. That's excellent. It's always fun to see how some new screeners work and that idea of it being animated as always, I'm sure great for holding attention and making it kind of fun for the kids. So, thank you so much for sharing that with us.

- [Barbara] Well, thank you, it's a lot of fun doing this.

- [Amy] All right, so we can go ahead and wrap it up there for today. Thank you to everyone for joining us, and we look forward to seeing everyone again soon. Take care.