Lauren 00:12
Welcome to our mini episode of the LDA podcast, a series dedicated to improving the lives and education of all learners. Today we sat down with Dr. Vincent Alfonso and Monica McHale-Small to talk about learning disabilities and the brain.

Kristina Scott 00:36
Hello, everyone, I'm here with Dr. Vincent Alfonso and Dr. Monica McHale-Small. Dr. Vincent Alfonso is an interim dean of the Graduate School of Psychology at Yeshiva University. He is a certified school psychologist and licensed psychologist, he has co-edited The Essentials of Specific Learning Disabilities Identification, the second edition, The Essentials of Cross Battery Assessment, the third edition, and the Essentials of the WISC-V Assessment. Monica McHale-Small is the president of LDA, she is an adjunct professor at Temple University and a school psychologist. Thank you for joining us.

Dr. Vincent Alfonso 01:10
Thank you.

Kristina Scott 01:12
So how would you define a learning disability?

Dr. Vincent Alfonso 01:15
I think the definition of learning disability has been somewhat elusive for decades, now, we tend to follow the definition of IDEA or the educational definition. And, you know, typically what it is, is a student, or it could be could be an adult, school aged person or an adult who is struggling in an academic area, not achieving as expected, given you know, adequate instruction, average or better overall intellectual functioning, cognitive functioning, and other resources, yet is still struggling in a particular area. But I think it's important to understand is there's learning difficulty, and then there's learning disability. And I think disability is a more intense, more of a perhaps deep difficulty than just a set of simple learning problems or, you know, having struggles in school.

Dr. Monica McHale-Small 02:27
Right. And one of the things that's in the definition in IDEA currently is mentioned psychological classes and deficits. And we think about those as competent processing deficits. And we believe that is a very essential component of a learning disability. So there's some neurobiological processing deficit that underlines the learning difficulties that the individuals have.

Dr. Vincent Alfonso 02:54
Absolutely.

Kristina Scott 02:55
So what does the neuroscience say about learning disabilities, because you made the difference between learning difficulties and learning disabilities? So what is the neuroscience saying about LD or learning disabilities?

Dr. Vincent Alfonso 03:07

You know, historically, many, many people believe that there's a neural substrate or neurobiological substrate, it's kind of been assumed or presumed that there's some kind of neurological basis for a learning disability, but it's only probably been in the last 20 years or so that neuroimaging and fMRI, MRIs and other, you know, advances in technology to help us understand brain functioning and to link areas of the brain with certain kinds of functioning. And we're starting to see that there are differences between folks who you know, are like, typically developing or are not having problems in a particular academic domain and those who are struggling. And so it's kind of been still in its infancy, it takes time for accumulation of evidence, but this is really helpful because it's always been presumed that there was some kind of neurobiological substrate, now we're actually seeing that it's most likely true and that will help us understand better how to help individuals, how to diagnose better, and also then how to intervene. Perhaps, you know, once we have clarity.

Dr. Monica McHale-Small 04:37
And most of that research that he is talking about has really been done on individuals with dyslexia. And we know a lot about the neural networks that are involved in reading, dyslexia, and difficulties with reading. We're just beginning to understand those neurological correlates to other types of learning disabilities. And currently our colleagues are looking at specific reading comprehension deficits. And that, as much as all of this is in its infancy, looking at other learning disabilities is very much in its infancy, and that's where we need more research.

Dr. Vincent Alfonso 05:21
Yeah, we definitely need more research on reading comprehension, but also math and writing, which really don't...writing has the least amount of research going on. And yet we have many, many students who have difficulties with written expression in some way, shape, or form. So, you know, hopefully, as the research continues, we will have greater clarity on what's happening in the brain that's associated with these different areas, and there could be overlap, you know, there could be some common areas for different kinds of disabilities. You know, we just, we just don't know at this point, but we're, we're much further along than we have been in the past.

Dr. Monica McHale-Small 06:09
Right, even in the last five years, mapping different types of processing and academic skills to areas of the brain has really advanced, in an amazingly short amount of time.

Dr. Vincent Alfonso 06:23
And there's concomitant research that is starting to come out showing that we can actually, you know, have an effect on brain development, it's always been thought that the brain has some plasticity, variability. But now we're getting to specifics. And so how we can help individuals who are struggling with some kind of academic area, through some cognitive processing, training, or some kind of rehabilitation or depending on age, the depth and breadth of the situation.

Dr. Monica McHale-Small 06:58
And then even instruction, you know, for kids with dyslexia, that they get very targeted, explicit instruction that emphasizes phonological development, and orthographic mapping that for the brain function becomes more typical and more like a typical reader.

Kristina Scott 07:18
So that neural network mapping that you've just talked about in the intervention, are we seeing that in the field of education, that there's that connection between neuroscience and I guess, practice in the field by teachers

Dr. Monica McHale-Small 07:32
It's beginning, but it's only just beginning. And really, I would say in this last year, there's been more focus on the science of reading. And a lot of that's due to Emily Hanford who is an investigative reporter with American Public Media. And she has really opened the eyes of a lot of people I've met, people in mainstream education are beginning to talk about it. But we have a long way to go.

Dr. Vincent Alfonso 08:01
I would say I'd probably be a little more pessimistic about what's going on just that there's just huge disconnects between or among education, the practice of psychology, neuropsychology, and hardcore research that's taking place in some centers around the country with the neuroimaging, and until we can get all groups together at the table, speaking a common language, it's going to continue to be difficult for us to really help people and individuals with some kind of disability. But, you know, progress. This does happen. It's just a little slow. But hopefully, LDA can be a leader in bringing together different groups that are working on the same areas, so that we can be around the table together. That would be really, very good.

Kristina Scott 09:01
So it sounds like it's very disjointed right now. And what we're learning in neuroscience necessarily isn't making it to teacher preparation programs, which isn't necessarily making it to our classrooms today. So how do we get everyone on that same page? What are the first steps?

Dr. Monica McHale-Small 09:19
Well, I think that as Vinny just said, that we LDA can be a catalyst. Now that the neuroscience is giving us a path to where we need to be focusing, we know where we need more money for research, and LDA is in the process of making connections with, I had a recent conversation with folks at IES about how we can collaborate, make sure we get some of the top researchers at a our conferences, things like that.

Dr. Vincent Alfonso 09:50
Yes, by convening people from different areas who are interested in the same topic, and having just good conversation and discussion on how we can work together. So LDA can be the convener of these people from these different groups and be at the table. And I think that would be a very, very healthy way to see.

Kristina Scott 10:16
This kind of stemmed off of your last answer, how would you like to see the field of learning disabilities continue to evolve by bringing everybody to the table? Having that common language sounds like a first step. But where do you see us? Or where would you hope to see us in 5, 10 years?

Dr. Monica McHale-Small 10:34
Well, like I said earlier, I think what we need is more funding for research that will help us understand the other learning disabilities the way we understand dyslexia. Dyslexia is certainly the most common learning disability, but it's not the only one. And we need that funding. Unfortunately, a lot of the federal funding for learning disabilities research has dropped off. And I think that we, as an organization, LDA can really help to use what we know from neuroscience to start that conversation again. And we have a really strong policy presence in Washington. And I think we have to use that to be a catalyst for getting more funding for these other learning disabilities. So where I would like us to be is I would like to just have a whole lot more insight into how we diagnose with reading and writing and math so that all individuals with learning disabilities can have more successful educational outcomes.

Dr. Vincent Alfonso 11:45
Yeah, I think that we need advocacy, we need to advocate for persons with disabilities, we need to effect or have an effect on policy, nationally and locally. And then we also need to improve the precision or accuracy in diagnosis, and also in evidence based interventions so that we can apply the appropriate intervention for the individual and have a good match, tailor the intervention towards the person who's having a learning difference.

Kristina Scott 12:24
We're gonna leave the listeners with one last call to action, what would your call to action be for them? How could they help progress the field or knowledge of learning disabilities?

Dr. Vincent Alfonso 12:38
That's a good question.

Dr. Monica McHale-Small 12:39
Well, what I learned, what I think a call to action is, is that all of our affiliates, and the members, and there's different affiliates, we need to make sure that folks know that we're out here. And so just having that voice of, if there's an issue that comes up around policy, or about, for example, there's a sign-on letter around IES funding for research, right? We need our affiliates to be very active in letting their state legislators know that LDA is supporting this, and that they are supporting this, and as constituents of that particular legislator, and that we're a force to be reckoned with.

Dr. Vincent Alfonso 13:29
Yeah. That we're here. And we need support too and we'll work with people and that, you know, every individual who speaks up, that voice goes a long way. And I really need as many people as possible to be lobbying, to be writing, telling their stories. Yeah, absolutely. That's how it gets done.

Kristina Scott 13:56
Thank you, Monica and Vinnie, and thank you for your last call to action. I think that's something we can all make progress on and actually fulfill and do. So I know you're very busy people. I thank you for taking the time to sit and chat with me and hopefully we get to chat again in the future.

Dr. Vincent Alfonso 14:12
Thank you.

Lauren 14:19
Thanks for tuning in to our mini episode of the LDA podcast which is made possible by The Learning Disabilities Foundation of America. Our theme music is little idea by Scott Holmes. In our next episode, we'll sit down with Toby Baker, the winner of the 2020 Harrison Sylvester award to discuss how to self advocate. For more resources from LDA visit ldaamerica.org