TURN AUTISM AROUND
WITH DR. MARY BARBERA

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Effective Instructional Strategies for Children with Autism and Academics with Dr. Janet Twyman

Hosted by: Dr. Mary Barbera

Mary Barbera: You're listening to another episode of the Turn Autism Around podcast. I'm your host, Dr. Mary Barbera, and I'm thrilled that you tuned in today for a special interview with Dr. Janet Twyman. Dr Twyman is an education innovator, thought leader, and founder of BLAST a learning sciences company. In 2007 and 2008 she served as the president of the Association of Behavior Analysis, and she was formerly the vice president of instructional development at Head Sprout, which is a reading online learning company and Dr. Twyman has presented and worked with organizations in over 50 States and countries. So, I have met Janet a few times and this is a great interview mostly focused on good instruction, reading, math and writing for kids with autism. So, I hope you enjoy this special interview.

Welcome to the Turn Autism Around podcast for both parents and professionals in the autism world who want to turn things around, be less stressed and lead happier lives. And now your host, autism mom, behavior analyst and bestselling author, Dr. Mary Barbera.

Mary Barbera: So, I'm so excited to welcome Dr. Janet Twyman. Hi, Janet. Thanks for joining us today.

Dr. Janet Twyman: Hi Mary. Thanks for having me.

Mary Barbera: Yeah, I'm so excited. We have been talking for a couple of months about having you on and so I'm excited that we finally have a time and a date, and it's going to happen. So, thanks again for making time in your, I'm sure, very busy schedule. So, we've met in person a few times, but I actually don't know the

answer to this, but can you tell me and anyone listening about your fall into the autism and ABA world?

Dr. Janet Twyman: Wow. Well that's such a great question, and I think my answer is a little bit direct because I found ABA or I fell into the behavior analytic world way before I really even began to think about autism, or a lot of the children that many behavior analysts are working with now.

Dr. Janet Twyman: So, I started out as an educator. I always wanted to be a teacher. I grew up wanting to be a teacher, and it just so happened that growing up in Kentucky, I went to the University of Kentucky for my bachelor's degree, and it happened to be a behavioral special education department. So, I worked with folks like Mark Woolery and Dave Gas and Mike Nelson and learned all about the power of behavior analysis, and what it can do in education to improve academic performance, social skills, kids of all ages.

Dr. Janet Twyman: And I went on to pursue my doctorate at Columbia University with Doug Greer. And it was there that I was working in the Fred Keller school. Later on, I started out as a teacher assistant; moved through the ranks and through the system and later directed the Fred Keller school. And we started out as a special needs preschool. Most of our three and four, early five-year-olds were language delay behavior problem kids. And during that time, during the 80s, moving into the early nineties, our population began to serve more and more to be kids with autism. Towards the end, practically 90% of our kids had an autism spectrum disorder diagnosis. So it's more that autism and the need for behavioral analytics services for kids in special ed settings found me. It's been really interesting.

Mary Barbera: Wow. That is fascinating. And when you said you were originally mentored by Dr. Woolery? He is very big. I have an old book by Dr. Woolery. He was very big on transfer procedures. So, when I wrote my article with Dr. Rick Kubina, who's on one of my podcast episodes using transfer procedures to teach tax to a child with autism, I was directed to Woolery's book and that was really key. That's a big reference in that 2005 article. So yeah, I haven't heard his name ever in a pocket so that's exciting to hear. Yeah. Was he talking about transfer procedures back? Was it the eighties?

Dr. Janet Twyman: Yeah, so it was early eighties or the early to mid-eighties. And yes. So, he and Dave Gas did a whole series of publications on system of lease prompts and time delay procedures. That was a major line of research. Mark was great. He was the early childhood kind of specialized person back then. People had specialty areas. Dave Gas was severe and profound, but it was a phenomenal department because it really was talking about evidence-based effective procedures to change repertoires. You know, mostly in education or academic settings. So, it's phenomenal. And Mark, anybody listening look up the name Mark Woolery phenomenal stuff. Dave Gas, he wrote a book on single case design. Lots of good resources. And then Mike Nelson, the other name I mentioned did a lot with social skills. So, three great early strong behavior analysts said a lot of our felts probably don't know their work as well as as they could.

Mary Barbera: Right, right. Yeah, that's excellent. In fact, a few weeks ago I published the podcast interview with Dr. Mark Sunberg and that's episode number 53. So, Mary barbera.com, forward slash 53 we'll put it in the show notes. And in the middle of the interview I said to Mark, I really think that a lot of the problems with instruction and kind of good ABA programming versus not so good ABA program is the analysis and the use of transfer procedures. I think it's a big and the use of errorless teaching and prompting and prompt fading. And so, I'm excited today to talk to you, Janet, about instructional control and instructional design and teaching. And it's interesting that you had all this background. And then of course working with Doug Greer at Columbia, which I didn't know, and the Fred Keller school I'm sure was awesome too. So, it helped to kind of put it all in line with how you became to be such a great behavior analyst.

Mary Barbera: You were the ABA president in 2007 and eight, I remember seeing your, your keynote presentation at the ABAI conference and I was extremely impressed. I was like, Oh my God, she's awesome. I don't even know her, but I actually came to know you. I don't know, remember the year. I'm thinking it was in Seattle. Well, it was these ABAI conference in Seattle and I had coordinated a chicken camp workshop conference. And you had come, it was in Washington state, with Terry Ryan and you had come to that chicken camp at a workshop and I randomly got assigned to be your partner. I'm like, oh my gosh, I'm meeting the president. And I was so excited. I'm actually a very lucky winner. Like I won an

Apple watch a couple of years ago. Like I, I do win. Some people say I never win. I'm like, Oh, they always were. But anyway, I was getting you to be my partner. So, can you can you tell our listeners about chicken camp? Like why did you go to chicken camp? You were, you know, really well at the top of your field and...

Dr. Janet Twyman: Sure, I'd love to, but first I want to say that I think I got the lucky draw getting you as a partner because it was great fun. And we can, we can definitely talk more about that. But gosh, I was so thrilled that you set up this opportunity as a pre-workshop kind of separate from ABAI, but taking advantage of it being in Seattle for this limited space workshop of being able to do chicken camp and what chicken camp really was, is the hands on opportunity to learn about shaping procedures with animal, with, with these chickens and these this procedure that had been used to teach. Now, you're going to have to help me fill in the details, but to teach like army intelligence or military intelligence officials, how to train their animals, how to do like rescue missions or,

Mary Barbera: Right. Yeah, yeah. Terry Ryan had done these workshops, similar for FBI agents for fishing companies to reduce like workers errors and it's like a team building thing. But the reason I started coordinating it and it sold out like three months before ABAI, I was like, I don't even know if this is going to work. We had to like fly in early to Seattle, rent a car drive two hours away to another part of Washington to do this two-day chicken camp. But the reason I coordinate it is because when I did distance learning ABA program through Penn State, I own no pets. I've had no animal training, but I'm tagged teach certified. So, the more I learned about tag teach and the more I, you know, started writing about transfer procedures and working with kids with varies, you know, moderate, severe autism, very young kids non-vocal and I was like, the only way I'm going to be get to be a better behavior analyst in my opinion is advice if I learned to work with animals.

Mary Barbera: And so, I started asking and everybody pointed me towards Terry Ryan to set up the chicken camp. So, that's why I set up chicken camp and then we went there. But it was, it was a it, it is, I don't know if she still does it. Well, I went to another chicken camp by Terry Ryan at Hershey, at the Vista school. So, I think she still does them. But it was a great experience. It was only like 20 of us. We were all behavior analysts and we worked with these chickens that were on site, like

Janet said, to work on shaping and training. And I remember I was like, because I don't own any animals. I never worked with animals. So, I'm like petrified to get the chicken out of the cage. I'm like, Janet, you have to do this one.

Dr. Janet Twyman: I know you weren't a big fan of flapping wings.

Mary Barbera: You're very patient. You were like, okay, very calm down. But we taught, you know, first like peck red versus blue, and then we taught them to do little go around the cone obstacles and

Dr. Janet Twyman: Yeah, and a maze. Yeah. I'll get back to like the question about why I signed up because it was a phenomenal experience. But it really was, when we work with organisms, people that have language or have a vocal verbal component, we rely on that vocal verbal component or we have some expectations about how people learn and chicken camp stripped all of that away. You had to really get down to what is the behavior that you're looking for, what's the smallest acceptable but largest performance, you know, increment that you can take that you can reinforce. How's the timing of your reinforcement? What happens when you are off in your timing? What type of delay? So, chicken camp is phenomenal. Not necessary and it's great. You know, for the opportunity to work for with animals, but it's really about honing your contingency analytic skills and your delivery of behavior change procedures.

Dr. Janet Twyman: And so, that I thought it was phenomenal for that. I mean we all had to step back and really think, wait, how do I really teach this? And it doesn't always have to be the same. Like Mary talked about the very first after Terry got all of our timing down cause some of us were slow and reinforcing, some of us were too quick and reinforcing. Some of us would deliver the acoustical marker but then forget to deliver the backup reinforcer. So, after she got all of our, those mechanical skills down, you know, the worst task was having the chicken peck a specific playing card. And we could all do it differently. First we could shape color versus face versus like, you know, we, but it allowed us all to think about instruction and realize it's not just one way to teach as long as it's an effective way that you're changing your procedures to always hone in on the behavior. So, it's a long answer, but that's why I did it and why I loved it so much.

Mary Barbera: Yeah. So, what do you say? Cause I actually got some backlash. I remember I posted a picture of me holding a chicken and I got some, I didn't realize that that was a problem but got some backlash that, you know, how dare I treat kids with autism like chickens and you know, just people not understanding that I wasn't, you know, harming the chickens. I, I let you get them out of the cage so they wouldn't be harmed. You don't like the fact that we compare human training to animal training?

Dr. Janet Twyman: I don't know that we are comparing humans and animals or human training to animal training. But there are principles about behavior change that are species agnostic. There are things they're principles about change that it doesn't matter if you're a PhD behavior analyst, if you're a third grader in a low performing school, whether you're a child with autism, a person with autism, or whether you're you know, a wild Mustang. There are things about behavior change that are universal. And in some ways working with animals allows us to hone those principles, understand the procedures, be able to figure out how to transfer stimulus control, how to set up discrimination, how to set up behavior change in ways that inform our instruction with humans. At the same time, I actually now have two wild Mustangs. My husband and I adopted them from the BLM. So, these were wild horses that we brought home. We were not gonna use any verses and we use a mixture of lots of positive reinforcement shaping and clicker training with them. And I've been able, it's a, it's a transfer of information. For me, there's just a beauty about these universal principles of behavior that we can learn from whomever we're working with.

Mary Barbera: Yeah. Yeah. When you said you adopted Mustangs, I'm not sure how familiar you are with Theresa McKeon, but she is the creator of tag teach and she, I did a podcast interview with her. We can link that in the show notes, but she got the whole into tag teach. Started out with gymnasts, young gymnasts with tag teach, but she started out with trying to apply clicker training by Karen Pryor to her horse that was wild. And then she started thinking I could use this clicker for my little gymnast who, you know, need to know, like when they're doing a round off or a Cartwheel or when their feet get to the right point, that's when they need to hear the click that they got it right to feel it or a stand-up when they're beat get to the exact right point because once they're down go, your feet were a little off there.

Mary Barbera: It's no help in shaping. And so I like to ask this question. I've asked it a few times about what do we say to people that don't like to hear that these are universal procedures. You know, when I'm getting back to my article that was published in 2005 with Rick Kubina, in addition to Woolery being a big reference on that paper, the rest of them were animal papers on using transfer procedures to teach pigeons or rats things. And so, we have to kind of peel back the onion, especially for our kids that don't have any language. They don't even understand, sit down or touch the banana or give me the, you know, the cup. And so, we figure out how to help them develop receptive language, develop communication skills to enable them to live their best life. And I think we're, you know, there's this catch 22 you know, if you talk too much about animal training, it tends to turn people off for some reason. But it's kind of like, we have to take shaping and chaining and all these solid behavior principles in order to teach.

Dr. Janet Twyman: Right. And, and for me it's that the principles of behavior are universal. You know, the principles underlying behavior change are universal and sometimes there are shared procedures, but even with any procedure, we're going to tweak it for the individual. We're going to make sure that the schedule is right for the individual. If you're using extra stimulus prompts, that those are right for the individual. But it's the underlying principles that are the same. And to me, it's not necessarily, you know, we rely on language a lot in our teaching and yes, some tag and Theresa and tag teachers, phenomenal and tag, you know, we can use tag teach especially for our kids that may not have strong receptive language, but on the other end of the, you know, of the continuum tag teach has been used to teach surgeons to improve their surgical skills. And so, you know, so it's, it's identifying the components of behavior and the contingencies that's going to result in the best performance possible. And so, you know, again, I think it's universal.

Mary Barbera: Yes. Okay. So, let's move into teaching academics and pre academics. And I know you are one of the, I wouldn't say creators or own or co-creators and you used to own or have some kind of ownership of Headsprout. And do you want to tell our listeners about Headsprout?

Dr. Janet Twyman: I would love to. So, Joe Layng, Greg Stikeleather and Kent Johnson were the original founders of this company called Headsprout. And folks may know that Joe Layng and Kent Johnson started with like generative instruction and Kent, of course, has the Morningside Academy, but they started on kind of traveling the country, trying to teach teachers these generative instruction strategies, teaching fluency component, composite repertories, all of these things. And they would have great success wherever they were, but if they left or if the administration left or the teachers left, those procedures as effective procedures might've fallen by the wayside. So, that was the start. The Dawn of the internet of people can think way back then. And they thought, wow, what if there's a way that we could deliver online instruction or instruction via the internet that could still be supported by the individual, the teacher, classroom personnel, but offer these evidence-based effective procedures.

Dr. Janet Twyman: So, that was the impetus of Headsprout and Headsprout had the, you know, the big hairy audacious goal of teaching reading. You know, 60% of our kids don't read at basically an independent comprehension level that allows them to function successfully, highly successfully as an adult. And so, reading is a real problem and any major problem, it's maybe it's better to start at the beginning to kind of prevent the problem. So, reading was identified is the thing that we're going to teach. But here's the problem. How do you teach kids a reading repertoire - both the reading comprehension, oral reading, silent reading - how do you teach them a reading repertoire when they could be 2000 miles away and you can't hear them and you can't see them? How do you teach someone to read if you can't hear or see them?

Dr. Janet Twyman: Right? And that is where the science of behavior came in. And that is where behavior analytic teaching procedures came in. Everything that we talked about, about shaping an initial response, teaching discrimination, pairing letters with letters out. So, Headsprout basically was founded to use behavior analysis to use evidence-based behavior analytic and other procedures and other procedures from other science, other evidence-based procedures to teach a non-reader struggling reader how to read and decode. It's like the mid second grade level. It's within 30 hours of instruction. And so, we actually took a long time to figure it all out. It took a lot of research and a lot of testing, but ultimately Headsprout's been used with hundreds of thousands of kids all over

the world, tens of thousands of schools and ultimately was bought out by a major publishing, a major education company. So, it's no longer owned by behavior analysts, but it's still out there helping thousands upon thousands of kids learn to read.

Mary Barbera: Yeah.

Dr. Janet Twyman: Some behavior analysis.

Mary Barbera: Yeah. And Headsprout, I'm very familiar with Headsprout actually. And it is similar to there's a really good book before Headsprout called Teach Your Child to Read in a Hundred Easy Lessons.

Dr. Janet Twyman: Hundred Easy Lessons.

Mary Barbera: Yeah. That book is still available for like 15 bucks and it is great, especially if you have a wellbeing kit. And then Headsprout is also great, especially for typically developing kids. Now, you do have research though because I became involved or heard about Headsprout when you were doing some research on kids with autism in Pennsylvania using Headsprout. Can you tell us about that?

Dr. Janet Twyman: Sure. So Headsprout was developed really for any learner. And so, has been used primarily like we said, with typically developing kids but also adult high school kids and even kids with special needs including autism. The patent network, I never say that correctly.

Mary Barbera: Yeah. Wow. Brand the verbal behavior project which I was involved with, I was the lead behavior analysts for the Pennsylvania verbal behavior project through Patton from 2003 to 2010. So, that's when I learned about you. So the patent special ed arm of the department of education in Pennsylvania ran, you worked with them to run some research, right?

Dr. Janet Twyman: Correct. And so we just looked at how effective Headsprout was with ASD learners and found that the program actually was pretty robust. Teachers still deliver it as a little bit one-to-one. A child had a computer with perhaps an aid or someone checking in time to time, but we found that it was effective with non-typically developing learners in terms of reading repertoires. But then a lot

of the real research, I have to give credit to the folks at the university at Bangor University in Wales. And so, they took Headsprout, demonstrated its effectiveness across all sorts of special needs populations. I will say that, and then identify the key components that Headsprout where kids with autism might need special help. And so, one of them in the program, we rely on the concept of not, so here, this is something, and this is not something or the concept of exclusion, it's actually a critical piece of learning and found that a lot of our kids with autism don't easily, we've not taught them that concept of not, which is a critical building block for all learning. And so, they did some standalone procedures for teaching the concept of not. There was a little bit of our fluency procedures that maybe the fluency algorithms went a little bit too fast for some of those learners. So, we figured out how to adjust some of that. So, they were really helpful. So, there's a lot of research from Bangor University, Carl Hughes and his colleagues.

Mary Barbera: Yeah, yeah, I think and I have worked with Headsprout even with my son Lucas. I think I tried it, definitely the direct instruction kind of reading and I think it was Headsprout. But I do think the concept of not and also maybe even before that, the concepts of same and different and the concepts of yes and no. Those are critical and it's, and it's not necessarily lack of trying to teach it. I know for years I was trying to teach Lucas same different years and I was even a behavior analyst and I just could not figure it out. And then I went up to the Carbone clinic with a verbal behavior training and it was probably my third time at the Carbone clinic for training. And he wasn't even talking same and different, but he was talking about three different procedures for three different kids. And I came back and I taught Lucas same and different in 16 trials. Like yeah, years.

Mary Barbera: I'm trying to remember what did I do? Okay. So, one of the problems with same and different is too many exemplars. Like, just picking up a pen and the phone and going say, you know, it's to actually thought we taught Lucas same and different back when he was four. It was so funny cause we were using a low voc approach at the time or we had, you know, maybe we were transitioning to a baby, but anyway, we had all this data and we would move things to a maintenance binder. And so, once a month we would check it and somebody, one of the three therapists in our group meeting said, I think Lucas, I think he

lost same different. And one of our therapists called him over and he goes, Lucas, these two are the any. And Lucas said same.

Mary Barbera: And then this one is, and he said different. I'm like, well there you go. What, what do you have over there? He's like, I have nothing. We taught it as an intraverbal and I was like, Oh my God. And so, he was probably 12 when I came home and taught him in 16 trials. So, like I have to get my head around what I did. But basically, I think I can explain this quickly without messing up, but I haven't thought about it for a while. So, I took two red cups, identical like silo cups. Okay. So, two cups identical. And then I had two identical, let's just say forks just cause their paper products and the child, Lucas in this case needs to know the name of it, the tact of it, you know, like he knows this a cup and he knows this is a fork and say I had two identical forks, right?

Mary Barbera: So, I honed down on my my materials. So, it wasn't just like randomly grabbing stuff. And then I would say I would hold up to red cups and he'd say cup cup, same. So he would echo, he would self-tap and then you say cup cup same. And then I pull up cup fork and I might have to prompt different cup fork different so he could hear it, he could see it, he could say it and then put it together. And I took from my trial data, 16 trials and then, you know, then I, after we did it with two cups, forks and cars, then I was able to grab random stuff and generalize it right away. So, it was the - not teaching as an intraverbal - having it trial by trial data and I'm, yeah, I can pull up, I'm sure I have the file somewhere with the date what I did, but I'm sure it was just something like that. It was like making the materials more stable, teaching him to say it and then prompting and transferring and yeah, it was amazing. But yeah.

Dr. Janet Twyman: Yeah. So, kudos, kudos to you and Lucas and, but you said a couple of things - many things - but a couple of things that were especially crucial or significant to me. And the very first thing that you said is you thought carefully about what stimuli you were using. So, you thought carefully like, okay, I'm going to do the red solo cup and the red solo cup or whatever. And that the second point, so you thought carefully about the stimuli they're using. And the flip side of that is you weren't randomly gathering but grabbing materials and it's that not thinking carefully about your stimuli and randomly grabbing materials out of your material box that don't really go out on a limb and say just this made up thing.

But that's responsible for a tremendous amount of the learning difficulties that our kids have that any kids have is that we're not thinking about the critical and variable attributes of the stimuli that you're presenting.

Dr. Janet Twyman: And so, we could make learning so much more efficient if we really thought very specifically what are the critical features of this item, what are the variables, what are the things that make it a cup? And then what are the variable things, the color, the size, the material. Like we have to think about all of those pieces of our stimuli and that we vary them logically or sequentially. So, just to go back and give you a very specific example, what I might have done with Lucas and going into same and different is holding up the red fellow, the plastic red solo cup, red outside, white inside and held up it. And another one just like it, like you said, and said same. And it's great to have them tax it or not same and then held up a white solo cup so that there was only one variable that was different.

Dr. Janet Twyman: The color of the cup. And then taught different and then maybe hold up a red cup. But this time it's not that they make red foam, but now it's the material that's different. So, you're varying one attribute at a time. Honing in on the critical discrimination. So, this is a whole big topic, which could be a workshop and a lecture or a podcast all in itself. But I think I love that you're bringing to your audience, really got to think carefully about the stimuli that you use, right? It really impacts instruction and ways that we never even think about.

Mary Barbera: Right? And I have similar procedures for teaching yes and no, which is a whole other really important skill. Huge. I mean, that's how you get to not it's also really functional for daily life. Do you want, you know, catch up on your prize or do you want, you know, things out of sight. It's also very important for, you know, like do you want to go on the roller coaster? I mean there's so many kids that answer yes when they mean no and then they have problem behavior. So, to teach yes and no and again, four or five years of trying to teach yes-no until I figured out a procedure which is, you know, all these procedures are all in my online courses and I do video blogs. And so I have a video blog on yes-no for instance, and with all the procedures.

Mary Barbera: But like I said, a lot of times- I'm glad you pointed that out - involves careful selection of the materials and like having them in a bag for the next day. So,

you're not using these materials. Like it's a program if you're going to, and what my first low voc consultant said, you want to get into a program and out of a program, you don't want to be months and years into trying to drill yes-no or say no. And yes-no and same-different are, it should be 50-50. So, a lot of times people get, you know, they get stuck or there'll be like 70% accurate on same and different. It's like, yeah, you know, how about goals and like 80% accuracy with, you know, over three days or something. I mean those kinds of goals could be a problem too with instruction on academics.

Dr. Janet Twyman: Well, absolutely. And it's no surprise to you, I'm sure that I am a proponent of fluency and allowing the behavior that occurs or free offer ends. And I also know that percentages can be manipulated. So, 80% of what, 80% of 10, 80% of, you know, a hundred. And so, you know, I completely agree that sometimes some of our arbitrary mastery criteria or arbitrary goals, 80% across three consecutive days, don't really indicate that they know the behavior. And so I think that we, what we really, ultimately in the perfect world, our goals are, okay, I taught this school, this skill because it's a useful component at play time or it's a useful component when we're going to the doctors or it's a useful component for something that we're going to teach later. Does it actually function in those real world or next world application?

Dr. Janet Twyman: And so, and I know we try to do that when we've been checked for generalization or check for maintenance. But ultimately, if we're teaching a skill, we're teaching it because it has a function, a real-world function, right? That somebody, we're teaching it because it's important either to do or it's important so that you can learn something else. So, the real test is it, does it help you learn that next thing? Are you doing it in the real world? And again, percents are a weird way of looking at behavior. Real behavior and time.

Mary Barbera: Yeah. So, Headsprout does, I know it works. I teach about it in my online course. And I know that for some kids with moderate, severe autism, you know, Headsprout alone, like just as is language for learning as is, is it, you know, because there are going to be concepts like, not like you mentioned with the, with the researchers, there are gonna be concepts that need to be pulled out, taught, made to get to fluency and pushed back in, in a careful way. And how do

we teach teachers and other behavior analysts how to do that, how to do that dance with great materials that you know, could work under the best situation?

Dr. Janet Twyman: Right. Well, of course, you always have a watchful analytic eye. So, if you're using a predetermined program you know, Headsprout language for learning any of the direct instruction materials that have a very, very particular sequence to them. And at the first signs of trouble, do that careful observation and analysis of what the trouble is. And so, maybe it's that a critical discrimination, a letter sound combination wasn't learned earlier. And so, then you can identify, okay, they actually are still mixing up the, this is a common one, the letter B, making the 'B' sound and the letter D making the 'D' sound. And so, you identify through careful observation. As soon as you start to see the problem, you know, identify, okay, so I think it might be a BD discrimination, pull it out and test it. And if it is, that's what you want to work on. And if that wasn't it, then continue your careful observation and analysis. Okay, what might it be? You know, maybe it's the schedule of reinforcement for that particular pace as part of the program is too thin. Right? So that you're getting lags and delays and responses, not errors, but maybe the motivation level is dropped again or something. So maybe you need to add in supplemental reinforcers, supplemental, you know, tangible reinforcers, more praise, you know, whatever it may be. So, to me it's observe and test.

Mary Barbera: Okay. And what about math and writing? I know, you know, I have found that writing is particularly problematic because it involves so many different components, skills and that those that don't read great really don't write great.

Dr. Janet Twyman: Right, right, right. They are definitely independent yet linked skills, linked repertoires. So, just a couple things and I'm sure everybody listening has already heard of this program, but the Handwriting Without Tears is a phenomenal program. And in fact, now with the advent of tablets and styluses there are some digital versions of, of Handwriting Without Tears and similar programs to give immediate feedback to the kids, like if they're starting to shape letters when they go outside the line or make it too long. So, there's some nice immediate feedback. But I think that there are some commercial programs out there that help with, if you're talking about the mechanics of actually writing, but then also a lot of Elizabeth Halton's materials are great. And when you're

talking about components, skills, you know, maybe handwriting's problematic because children aren't gripping the pencil in a comfortable way that allows them to make the motor movement required to make the letters. And so, there's a lot of component composite analysis about pencil grip, making particular strokes, practicing just vertical strokes, horizontal strokes, the whole component composite. This breaking down of the skills and making sure all the pieces are there.

Mary Barbera: Yeah, have you heard of a program called Sensible Pencil?

Dr. Janet Twyman: No. Tell us about it.

Mary Barbera: I heard about Sensible Pencil, Oh God. Probably 15 years ago. And it's a curriculum like Handwriting Without Tears. I find Sensible Pencil to be a ton more behavioral though and a ton more into fluency and their philosophy, unlike Handwriting Without Tears, which is upper case letters. Sensible Pencil is very big on teaching lowercase letters first because you don't have to lift your pencil so much. And so, they have like the a, the small a would be around, up and down or some kind of language that you use all the time. There's pretest, there's, you know, the sizing. You always use a pencil, not chalk. I just find Sensible Pencil to be a really good curriculum. So, I'm not Sensible Pencil. I just was curious if you were aware of that.

Dr. Janet Twyman: No, but I'm going to check it out.

Mary Barbera: Yeah. Yeah, you definitely should. I think you'd like it. And then, you know, we have, so I'm glad you brought up like the mechanics of writing. So, the mechanics of writing are different than writing like sentences that makes sense and grammar and you know, there's, it's such a complex skill that, you know, and I think it's important for teachers and parents to think about the mechanics of writing versus writing, you know, writing sentences because a writing paragraphs eventually, and were most of the clients and the kids that my listeners have more significant autism, which the goal may not be that they write paragraphs. So, I mean, I'm sure we have people here that have kids who can write paragraphs and can go to college. And you know, the range of autism is so huge.

Mary Barbera: And I'm not trying to, you know, pigeon hole anybody into any box because the sky's the limit, you know, and good for anyone who can write paragraphs. But I know, for Lucas for instance, we just had a meeting for him. He's 23 now and yesterday in a meeting and I'm his guardian and you know; I make the decisions for him and all that stuff. But you know, he attends these little meetings and he signs his name and he went from, you know, Lucas Barbera, you know, printing it to like, what's his signature going to be? And we were like, Oh, do we do all this cursive and all that stuff. So, we just decided after we tried different things, he has a behavior analyst who's awesome on his case for over a decade. And we just decided that we would teach him L squiggle, squiggle, be squiggle, squiggle. That's his signature. And so yesterday I'm like, sign your name L. And he's like, L squiggle squiggle B and he even did it on somebody's computer yesterday for the first time with his finger. I'm like, okay, do your L squiggle.

Mary Barbera: It doesn't have to be perfect. And you know, it's just a matter of where the child or adult is at and where they could go. And so whether that's, you know, figuring out how to put sentences together into paragraphs and papers, but we just have to take each child where they're at. You know, a big goal for many kids is just to print their name, which I think is a reasonable goal. And I think reading their name is a very functional goal so that they can say, Oh, this is where I sit and this is the slot and print your name on worksheets. Like, I do think that that's a good skill, but you know, it, anytime you're having a child do something that they're problem behaviors

Mary Barbera: Or they're not able to do it, or you're weeks or months into a program and it's not going well, then something's wrong. And there needs to be analysis. And that's where I can't give like every how to get academics going. But really just looking at the child's, you know, abilities and trying to get them to be as safe and independent and as happy as possible. And so maybe signing her name or writing a paragraph isn't gonna be a goal. I mean certainly writing a paragraph ever going to be a goal for me for Lucas. Like it's not going to be a goal.

Dr. Janet Twyman: Unless he decides that he wants it to be a goal, you know? Right. You know?

Mary Barbera: Yeah. I mean he just doesn't have that language or that ability level to decide that that's going to be a goal. But I guess, you know, I mean you know, that you

have to think about what's important for his life and like signing his name. That was, that was a good goal. Okay. So, what are you doing now professionally and where do you see yourself going in the next few years?

Dr. Janet Twyman: So, I am still deeply involved in education and instructional design. And so, recently I have started my own little company called Blast. It's a learning sciences company that basically based on our Headsprout experience we're still building based on behavior analysis. We're building new products. So, these are all, again based on behavior analysis, but we taught a little, we built a little it's a continuing ed course, but it's an online game teaching first responder, how to rescue people with disabilities. So, basically, it's like a first-person role-playing game. You're a first responder, you have to evacuate a high-rise apartment building and there's a 20 something year old with autism alone and you know it happens to be in an apartment. How do you work with kids with disabilities in a rescue situation?

Dr. Janet Twyman: We're doing, we're working with augmented and virtual reality, thinking about how to improve teach to people how to do discrete trial training. So, how to improve direct practice before you actually work with real learners. So, that's another thing. We're using behavior analysis to teach medical personnel, how to recognize signs of prenatal depression. So, we're just using behavior analysis all across the board infusing with technology, trying to teach people how to do things better. So, it's really fun. It's really neat. And then separately, I still consult with data departments all around the country, just helping them think about evidence-based instruction, how to improve practice, those kinds of things. So, it's all fun and it's a great opportunity, again, to use the science of behavior and everything I do. That's great.

Mary Barbera: Nice. So, we can put your URL for your website within the show notes and all your work and I'm sure you're going to be doing, continuing to do great things along the way. So, part of my podcast goals is for parents and professionals to be less stressed and lead happier lives. So, I'm wondering if you have any self-care tips or any activities you do to, or you would recommend to control stress.

Dr. Janet Twyman: Ooh, that's a good one. I will say there's something that I'm starting to do that I thought was going to make me more stressful because I thought it was going to

be less productive, but I'm trying to actively not multitask anymore. I'm actually trying to be in the moment to be present for what it is that I'm doing, not be talking to someone and thinking about the next thing that I have to do on my agenda or try to do two things at once. And you know, I was really fearful that I wasn't going to get as much done and it's actually not the case or hasn't been as much. And I think I enjoy the time that I'm doing things a little bit more. So, it's that being in the present I think if there was a global kind of thing to think about.

Mary Barbera: Yeah, I love it.

Dr. Janet Twyman: That I tried.

Mary Barbera: Yeah. Yeah. I'm guilty of doing a lot of multitasking and it's probably a good thing to stop doing that. I love that. Okay, well thanks so much for joining and if you are listening and you've never attended a free online workshop of mine, you could go to marybarbera.com forward slash workshops. A lot of things you said Janet today really made me think of this one workshop which I offer, which is free: Three Mistakes Professionals Make with Intermediate Learners. I tend to be, because Lucas has been intermediate learner his entire life almost. I tend to really you know, really love that part of my work. So, you want to check that out at during the free workshop and consider joining my online courses and community. I love talking to you today. Janet. Thanks so much for your time. I'm going to follow all your work in the future.

Dr. Janet Twyman: Excellent. Thank you so much, Mary. It's just been a pleasure speaking with you. Thanks for everything you're doing.

Thanks for listening to the Turn Autism Around podcast with Dr. Mary Barbera. For more information, visit marybarbera.com.