Lesson 6 Transcript
You're Not the Boss of Me!
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Okay let's talk about the problems of learning. Judi alluded to the problem. What does that mean to us? If that's our foundation that we want kids to be included and we believe in these techniques that produce a change and the studies have shown that it works, what do we want to do in terms of a learning opportunity? Judi talked a lot about stuff kind of above us that we have, but what does that mean to me down below here when I'm trying to actually help kids? Judi alluded to the notion that they have a demand for sameness. Okay you have a specific sensitivity to arrangements, and orders, and patterns. Part of this is that if you go down an autism checklist, you all will score on it, right? I mean why do people buy art, why do we make things that are symmetrical, why do we say that's a pretty bush, that's a pretty thing there? Why do we do landscaping, why do we worry about colors and the clothes we wear? We all are worried about how things look and patterns. The problem with the kids that we get, they will look at this line on the ground, wow that's a cool line and just want to look at it or the line on the ceiling and get really enthralled with it, the patterns of it. There are patterns everywhere that we think may be tasteful and artful, but these kids get really stuck on them. The problem is that you get high rates of imitation and matching. Matching becomes a reinforcer. They try and imitate exactly what you're doing and all of that comes out of not knowing what to do, so they create that imitation. The problem is that it creates a competing response which is hard to get through when you're trying to learn.

They also get stereotypical behavior. These are the repeating behaviors that repeat but don't seem to have a function, like chewing gum, tapping your foot, tapping a pencil or shaking your leg. Or it would be like spending fifty bucks, and going to the top of the mountain, and putting on a couple boards, and sliding down, and going back up again, and sliding down, and going back up again, and sliding down again. So we all have this. I jog. I'm still waiting for runners high. I've been jogging since I was twenty. I don't have it yet, just bad knees. It's all about just that repetitive movement. When I went to college, at the time it was the sixties, so I made a lot of bad life choices. We were into transcendental meditation. We had to enhance that with other medicinal things, but the idea was that you chanted your mantra. What it does is it relaxes you and gets rid of outside stimuli, so lots of times these kids are in situations where they do these repetitive motions because it's kind of calming, relaxing, and kind of nice. So it just becomes a reinforcer that blocks outside stimuli when they're overly aroused. We all found out that we all had to have a secret mantra and we had to pay this guy and it turned out when we broke the code that we all had the same one. Anyway we got out of that and got into human services, tried to change the world and we didn't want to work for the man. Now I am the man.

Anyway, the other thing that you get is tantrums and resistance and emotionality. Just kids out of control and it works as an escape. The kids have learned that if I'm out of control, people leave me alone. And like Judy said, we see a lot of parents who go through a lot of really crazy routines to accommodate that kid and everybody has to sit at the table, at a certain place.

All the glasses half to be half full, any music has to be on a certain channel, if one person has their shoes off, the other person has to take their shoes off. If they don't they have a huge tantrum. I don't go to bed unless I watch three different videos, go for a car ride, you know, get a piggy back ride and there's eight things you've got to do to get me to bed. So, they've learned that being nutty enough they can control what's going on.

This one I think is more important and something that has real implications for us and I'm just going to tell you, this is a dill and that's a bill. This is a dill, that's a bill. Dill. Bill. Got it. They have what's called restricted attending or over selectivity. It's a narrow or tunnel vision of sensitivity. So why can't he do things? Because he might attend to the redness. You might have thought, "Well dill is red, got it. I get it a dill is red." Or you might think, "A dill was big and a bill was little." Well I have more than one way I can be right on that. Or the dill was on top, the bill was on the bottom. Or it might have been the shape or the direction of the actual trapezoid. Typical kids would have responded to all of them. You can ask them or you and hopefully you would have all been able to say it was the redness, size, top and shape. For a kid with autism, they may only be able to attend to a portion of it.

An example of that would be, we work with a kid who we were trying to get him to match pictures. So what we did is we bought this educational kit and probably spent $800, probably about $750 too much. It had all these pictures in it, and they were fabulous photographs. So, we were going to get him to match identical photographs. We'd though that'd be cool. Get him to attend visually. So what we did is we had it like this. The pictures were like a car and a banana. They were perfect pictures. He started matching them and everyone was just so thrilled. They thought he's finally attending visually. We're getting something going. We're going somewhere with this. He's paying attention. And then someone noticed that every time he went to the card he would kind of flip the corner of it. Well, what it was, was there was these little tabs on it like this. And those little tabs were on there, so they go from here: one to one hundred. So then you as a teacher can find the number and tell what the numbers are and so forth. So what we did was we cut all these off. He couldn't match a one of them. So I strangled him, because not only did he not learn anything, he ruined our kit. But the idea was, he was paying to attention to the position of these tabs. And some of them were one and two, so they were right next to each other. He was paying attention to those little tabs. I didn't even notice them. He had very tunnel vision or very tunnel hearing, tunnel vision, tunnel something.

Sometimes you find kids who can say a lot, but it has no meaning to them. They can recite videos, they can sing songs, but it's like nada when it comes to meaning. We have other kids who will talk in monotones and meaning is everything, but they have no inflection. And why that is, is because there are two features there. When you say, "mom," that is different than "mom" "MOM." There's the word and the way it's said, right? For the kids who have tunnel vision or tunnel hearing all they hear is the meaning or all they hear is the inflection. It is hard for them to hear both. So, that's an example of over selectivity.

Okay, here we go, I've got a little test for you. I want you to find: paint brush, a cat, a hat, a snake, a dropper and a walnut. Now just take a couple seconds on this. Alright, I'll help you out. You see them? Find them? You guys probably found some of them. What you had to do was move your attention around. You had to ignore the background and you were really shifting your attention. For kids with autism their attention doesn't shift very well. They maybe captured by the noise in the background. They have trouble focusing their attention.

And now that you look at this, you probably see them more readily, they stand out to you. Rather than see them like this. You don't need that. You can see them really readily because they look like that. You can shift from the foreground to the back ground and move stuff around. You can pay attention to me or think of something else. You can be in another world.

The problem is they have to sort out relevant stimuli that have to be attended to and irrelevant, things that need to be ignored. The overhead showed you that you have to ignore some things and attend to certain things like the shape of the walnut, or paint brush, whatever the items were. Kids with autism have difficulty responding to multiple cues. Ignoring irrelevant things and sometimes they will get really prompt dependant. We got a kid to wash his hands in the way of hand over hand, and you'd help him and it got to the point where if you stood behind him he would have to reach for the hot or cold water. You had to sway back and forth and he would get dependant on that movement, and not pay any attention to what he was doing. Or you would tell the kid to stand up, and he won't do anything, and you will find yourself moving forward, just a little movement before you tell the kid to stand up, and he'll pay attention to that instead of listening to what you're saying. So they can get prompt dependant or attend to the wrong cue no matter the relevancy.

Some kids are really visual. They're really good at matching stuff. That's probably the majority. Some kids are good at the auditory stuff. I want to show you a little girl we worked with that showed us how systematic we have to be sometimes. She was unable to hear, look, and respond. She could hear and respond, you could say stand up, turn around, touch your head, wave by. Any instructions she was pretty good at. So she could listen to you and then do something. She could then imitate and match, so if you told her to match an item with the same item she could do it. So she could look at items and group them together. She could see it and respond, or she could hear it and respond, but you couldn't say show me the cat. So that's just a simple discrimination, you tell her to clap hands, she claps hands and that's what gets reinforced. What she couldn't do is that she couldn't hear something like show me the cat, or show me the whatever, with a group of pictures out there and select it from out there. So she couldn't hear you say something, then look through an array of things and respond. That's called a conditional discrimination. A lot of kids have problems with that. If you say touch cat, they have to look for the picture of the cat touch it and then they get a reinforcer. It's a lot harder. So we developed an instructional plan where we hid the objects behind a screen. Initially we had all the objects visual and they all made sounds, a squeaky toy, a musical instrument, and something else. We would ring the bell and then she would pick it up. So we would make the music sound. The object was visible so she could see us do it, as well as hear it, and then she'd hand it to us. So then what we'd do is that we started to present the object's sound and then we would hide it behind a screen. We did that gradually, eventually to where we just made the noise behind the screen. So we rang the bell initially and then brought the screen down, brought it down sooner and sooner until finally we just rang it behind the screen. So we'd squeak the toy, the squeaky toy – each object had its own special sound – and then we would lift the screen and she would find it. Then the next thing we did was we said the name of it behind the screen. We did the same thing, squeal the toy or rang the bell and said bell behind the screen and we used an exaggerated voice, and gradually we got rid of the bell sound to where just the voice is being said.

So you'd say bell and ring the bell and eventually we dropped the bell out. Then she hands the bell to the teacher when the screen is removed. Then what we did is we partially exposed the object and said the name. So we'd say bear and then the bear is there, so we don't have to squeak the bear and make the noise, whatever it was, then we'd lift the screen and she'd hand you the bear. Then she got to the point where the objects could just be put out and be visible, and you'd say bear and she'd hand you the bear. Remember, she couldn't do that initially, she could touch her head and do all of that stuff. She could put a bear with a bear and all of that stuff, but if you said hand me a bear she was confused. What we found was don't think the kids learn gradually. The real learning curve is like this. You probably all have experienced a moment when you go, "oh I get it." When you really break learning curves apart they go really fast like this. The problem is that with the typical learner, the time at the bottom of the curve is really short. But the atypical learner or kid with autism, they're at the bottom of the curve wandering around, screwing around, confused, acting out, being drifty, whatever, they don't know how to get on the plateau of the curve. So the question is, how do you shorten the time at the bottom?

So when you think about how kids come to school, we present them as a 'b' and a 'd'. Now all their lives these kids have trouble learning and we've shown them a pen and said it's a pen, it's still a pen, it's always a pen no matter what you do or how you look at it. We bring them to school and say "that's a 'b', but if I flip it over, now it's a 'd'." The kid thinks oh my god, now when things change in space their names change. It seems so obvious to us, but for the kid with autism it's a huge jump. Sometimes we have irrelevant cues build in like color, where we write in strange colors or font and they can't understand. Or we have complex discriminations, like 'I have read the book' or 'I will read the book', oh good lord, that's hard stuff for them. So we want to find out how we can accomplish errorless learning, or limit the errors kids make so that they're successful in ways and make progress without a lot of errors and mistakes. What happens when you make a lot of mistakes? They bite me, the kick me, spit me, kill me, they want to take me out. You're the same way, if you go to a class. You probably had a college class where you can't figure out what's going on. You get mad at the teacher right? So we have to figure out some way to build easy to hard, like that little girl where we moved very systematically from easy to hard in a program to get her to where she could overcome that over-selectivity.

This is an example of using errorless learning. What we do is use the shape of a ball, and then it moves into the ball gradually successive steps until finally the shape fades out and just the word is there. So we start of which she can do, which is she can recognize the ball and gradually over time we change the ball to look like a ball. That's all pretty labor intensive, but it gives you an example of errorless learning.

This is a situation where what we did, we had the kid match, or categorize, all of these together and we started with this one and all of these, then we put this one and all of these, until finally, the kid was non-verbal, you could give him all these balls and he could group them together as balls. You have another set of things, maybe cars or vehicles. He would put all the cars together and all of the balls together, and one of the items in it was actually the word ball, and he thought "Hmm, that means the same thing," so he's reading.

Another way to use errorless learning is to add extra stimulus prompts. If we want him to read the word ball we could make a little puzzle and shapes and over time he would put those together and we fade that to where we could cut it down and gradually remove that extra help to where there is no help at all. So we try to vanish and get rid of those prompts, but we are working errorlessly and we can get kids to do this in a snap and gradually over time we trick them into actually learning.

So in your book there you have a little page about Easy to Hard Sequencing. I want you just to try to think about easy to hard and if you had to teach this the same, just trying to get a kid to match this visually, you have 1, 2, 3, 4, 5 sets. I want you to number them from 1 being the easiest you would start with to 5 being the last one you'd introduce being the hardest. So look at those 5 sets and number them from 1-5 and figure out which thing you would start with, which would be the easiest for the kid, because he doesn't match things visually so you would want to start with something that's maximally different and then move to something that's maximally similar. So just take a minute and try that. Do you understand the task? Okay, good luck. No looking at your neighbor. Did everybody get it? Is everybody close? That's what I got. I thought that the rectangle and circle would be maximally different. Then I thought that the oval and the circle would be maximally hard. Then we might argue about the middle. I thought that triangle and circle, then circle and diamond, and then circle and hexagon. We might argue about that. We might not all agree. Some people might have started with the triangle and the circle, but all of that become empirical. In other words, when you work with a kid he'll let you know. The kids always know best. The kids will always tell you what they're doing. If they are making a lot of mistakes and not going through it right it's because you haven't sequenced it right.

Let's try another one. Let's say you want to teach the kid to point to the word the fruit "orange." We have some cards, and these are all about 5"x7" cards. All the objects are about the same size. They aren't real objects. They are just pictures from that $800 kit that you got, and these are the objects you have and you want him to point to an orange. So you have to figure out what is going to be the distracter. So you are going to have the orange and one other thing out there as a distracter. Which are you going to use first, 1 being the easiest and 6 being the hardest? So which one would you put out first and what would be the last one? In what order would you present them as distracters? Does that make sense? We have to get them to discriminate an orange from all of these things. Alright, I put the shoe first. How many put the shoe first? Good job. I put the banana second. No? (Woman in group) We put soccer ball. That's a decision we make because it's not in the same group, it's not food, but it's a different shape a different color. Again that's just something you would have to try. With a soccer ball it might be round like an orange is round on the picture. But you could fuss with that, we could argue the things in the middle. A lot of people have said that. For 3 I put the soccer ball. 4 the lemon, different shape, different color. 5 the pumpkin, similar shape, similar color. 6 you have to put the tangerine, right? Okay good. I have trouble with that when I go shopping.

Okay, so that's one of the problems, you wonder why these kids are goofy and it's because their over selectivity is huge. You are presented with it only when they are in an instructional setting and they're not learning and it's pertaining to the wrong things, but think about 6 months of age, 9 months of age, a year.

Think about when language is developing, social relationships are developing. You're learning to be reinforced by your mother; you're staring when you look at your mother, that's important. You're learning who your mother and father are, your emotions, all that stuff is pretty out of whack if you are learning in a goofy kind of way. All of this really effects emotional and social development. It's huge.

Okay, the other problems we get are problems with motivation. We had a kid and his teacher said "You know, I'm going to give you a really hard question." The kid said "Aww…give me a soft one." I mean, that just shows you how they can have trouble with language and get over selective on meanings or don't understand meanings of things, because that had contextually a different meaning. Okay, they have limited sets of reinforcers. A lot of the kids you come into work with, there isn't much that reinforces them, or very limited reinforcers. One of the markers for kids who are successful, are the kids who are the most tantrumous. Interesting, the kids that are the most tantrumous, the most upset, are usually the best because they are motivated. It's the kid, who has his favorite thing, and you take it away and he goes, "Whatever." You know, it's the whatever kid. That was all my teenagers. "Whatever." Those kinds of kids are hard to motivate, so you aren't going to have as good as luck with those kids. They are harder. So we get limited sets of reinforcers, they lack social reinforcers, and they satiate quickly.

So a lot of the kids don't respond to typical social reinforcers. They are not that important to them. You take a little kindergartener, and you look at them cross-eyed, man, they'll salute and say, "What did you want me to do?" When they get to be teenagers, that's a whole other deal. Take that little kindergartener and he'll do anything for a smile from a teacher. These kids we work with, they could care less. That social stuff isn't there. It has to be exaggerated praising. Or they have things you found they like, but they like them just a little bit at a time and they satiate quickly, so you can't keep them motivated.

They have interfering obsessions. I work with a little kid that has a shoestring. He's always swinging that shoestring, and if you take it away from him, you better be on your feet, he's going to go for you. Sometimes their obsessions are so powerful they interfere with any learning and override any reinforcers. One little girl I worked with was really fascinated with sewing machines. Being very clever I thought "You can earn some time on the sewing machine." She was always gravitated to it, always going to it. It was in a life skills class and always wanted to play with it and goof with it. And then I thought, "Okay got her. I'm going to hook her on this." Once I made it contingent she didn't want to have anything to do with it. So that's another thing, they get to be kind of control freaks. You know, even to the point where they are thinking, "I'm going to give up whatever I want just so you don't get control."

The other one is passivity. Sometimes you get the kids that are passive and along with that they have learned helplessness. They don't do much. They have had so many years, they are 6, 7, 8, and they have had a lot of failure, lack of success, haven't done stuff so parents have had to do for them, or the parents have done for them because if the parents don't do for them then the kid would go ballistic. His head would spin around and he would spit out green stuff, and they think "I'm going to do it for him because I don't want that to happen." So they get this sort of learned helplessness to avoid any kind of errors or they become really passive and just have it done to them because they aren't very successful at activating their environment.

And they have limited responsiveness to the "natural community of reinforcers." We're all living in this pool of reinforcers. Social, the dollar bills, you know all of this stuff that reinforces us, these kids don't really participate well in.

So, here's my suggestion. A typical behavior is really the result of stimulus control and discriminations problems. Why are they weird? And I can do something about that. I can design my teaching program and pay attention to how I set that up. I'm going to show you how to do that. They respond to irrelevant cues and have restricted attention. That's got to be huge. They have motivational problems. They won't respond to the typical reinforcers. If they have behavior problems they are resistant to extinction, they will go on forever. They don't learn as quickly. They don't learn as quickly to undo as much as you do to learn what to do, you don't learn as quickly what to undo, so extinction takes longer and we're less tolerant of it.
We have ineffective natural environment. The amount of reinforcers in the typical environments aren't responsive to the kids, we have to add in extra reinforcers, extra prompts, extra help, bigger cues. We have to make the bigger vanishing puzzle cards. The typical kid will look at something and you say "That says ball" and he'll say "Gotcha." These kids need big cues and complicated programs. The natural environment really isn't effective. When they interact with it, it doesn't work very well. Or, they just learn the problems through direct contingencies. Alright? I learned to act out because it gets me what I want. So that's what I think kids have problems with because they have motivational issues, stimulus control problems, and an ineffective natural environment, and we are going to try to look at how we might remediate some of those strategies to try and get that done.