Lesson 8 Transcript
The Basic Principles & Assumptions (Pt.2)
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Now we want to get down to the nuts and bolts and the practicality of what do you actually do. Our issues are motivation and discrimination. We want to use what we call the discrete trial. I suspect you've heard of it at one time. It gets kind of confused because it has come to mean sitting toe to toe with a kid doing a discrete drill all the time which isn't what it's all about. A discrete trial is that unit of learning that's responsible all the time. If you watch a regular teacher in class and she says, "Okay guys, what's the capitol of Idaho?" that's a discrete trial. She gives it to the whole class, and they respond. She goes, "You guys are all goofs. You're wrong," or she goes, "You're right. I give you a thumbs-up." They're using an Sd. There's a response, a consequence, and if the kid can't do it, they provide help or some kind of prompt. That's the basic unit of learning. You can't get any smaller than that when you're analyzing instruction. Any curriculum you look at is going to get down to that interaction. I don't care what you call it, assimilation, or whatever fancy label you give it. It's going to be about me and you. It's me saying something or doing something, you responding, and me giving you a thumb up or a thumb down.

Whatever you call it, cognitive scaffolding development, whatever words you want to use, you're going to want to keep the kid successful and present a clear instruction question or opportunity. The thing we run into is the assistants will want to explain things to kids. It's better to just say, "Show me shoe," and when he touches shoe, you say, "Way to go."

You want to wait for a response, provide immediate and clear feedback. Remember the sixty second rule. We want to correct or reinforce the behavior. By correction we can pause, back up, and repeat it with some help, then present it again without help. It's that simple. People use it everywhere in schools. What parents do naturally with their kids is what it is. The consequences need to be immediate. They need to be contingent and unambiguous. Sometimes we have a tendency to say, "Good job," or, "Not that," right? And they all sound the same. A lot of kids have discrimination problems, so being right and wrong need to sound different. You saw with Lovaas. It was "Yay," talking in a high voice and his praise was really exaggerated, so that it's unambiguous. There is a difference between asking a kid to do something and the reinforcement when he gets it right. And it needs to be consistent. Remember that the kids have trouble learning. They can learn to do all kinds of stuff, but the physical environment is consistent about. They can learn plenty if we're consistent.

The other thing we use is shaping. Sometimes we have to move the reinforcement from a poor approximation to a better approximation. This is another powerful tool - accepting attempts of poor or crude approximation and then gradually shifting your criteria so that they can do better and better.

So that is the basic instructional trial - providing that initial instruction, waiting for a response, and immediately giving feedback. We reinforce correctly, accept approximation, and then pause, and then re-present the trial again. We also mix it up so that they are doing easy and difficult stuff. That is a discrete trial.

Often you may have heard of the precision request where it starts on one request like asking, “Please would you?” He cooperates and gets reinforced. If he doesn’t cooperate, you re-present it and if he cooperates, he gets reinforced, and if not, you follow some kind of a correction procedure. The more precise you are about that precision request, the more effective you’re going to be.

Group activity: “Partners take turns teaching terms to each other.”

So you got a little experience being the instructor and the learner and what it’s like. You probably had to think about how you’re going to prompt the person because right off they don’t know the word. So you say, “What’s shaping?” and they don’t know, so you tell them the whole thing and go kind of long, and they can’t remember it. Or you break it down to steps and somehow get that information across. Or you can use the visual prompt, let them read it, and then tell it to you. You had to break it into segments to make it easier or something. When they made an error you corrected them, then told them what to do, and had them restate it with it corrected. I don’t know how you did it. There were all kinds of ways to do it, but you had to figure out how to add a prompt to help, either physical or a positional prompt or a gestural or changing the word. You had to figure out some way to fade the prompt which means that you gradually remove it. So you had to actually delay the prompt so you would tell them the answer and then you would wait to see if they got it and if they didn’t get it you’d prompt it. Or you’d have to say it more softly and they would imitate you and you’d say it more softly. Or if it was a visual thing you’d gradually move the proximity away. So you had to figure out how to help them and how to get rid of that help.

Then the other thing we did was intermixed trials of new and review to increase motivation. This is a huge technique. We should do this with all kids. You give the kid the math sheet, and he’s got 150 problems on it, and they’re all the same level of difficulty, and they think, “Oh lord how am I going to get through all that?” A really powerful strategy is to mix up stuff they already know with stuff that they’re learning. So on a math sheet (and I’ll show you some stuff that uses this technique) you might have 50 percent of the problems be difficult or learning level and the other 50 percent be easy, independent level. You might have some that are easy to do which keeps the kid working. He’s not always doing the same hard thing. On this if you have a person who’s having difficulty and getting frustrated, you’d throw in some things that are easy to do so that they can earn reinforcement and still participate. What we see is people present things to kids that they keep making mistakes on over and over again.

Once they learned it, you did a repeated practice and then the distributed practice where the trials are embedded throughout the day. You might come up throughout the day and say, “What’s shaping?” You might embed it in some other experience. Or you might just present a lot of trials that are mixed up like that one where you embedded other instructions like asking them to touch the table. Go from easy to harder questions. Kind of mix it in or integrate it.

It’s really that discrete trial or learning unit, whatever you want to call it, then by any other name you can use it throughout the day and it’s called: distributed practice, natural environmental teaching, incidental teaching, teachable moment, natural language, paradigm or pivotal response training.

I don't care what you call it. It's still just asking them "What's this?" and they say "bowl" and then you say "good." Weather I do it at breakfast or whenever, it's that natural occurring learning unit discrete trial and it's one of these things. It's all the same thing. If I want to do a workshop and make a lot of money, I'll come up with a new name, and tell you the same thing with a different name, and everyone will go, "Wow, that's a new thing."

To get those incidental trials (Judi will talk about this later when she talks about pivotal response training tomorrow) you can entice the kid; you can block it as he reaches for something; you can put things out of reach and he has to ask for it; you can have something missing like his snow boots and one of them are missing; or you can have him cut something and the scissors are missing. Basically you have something missing out of his routine so that he can't complete it. You can give him the wrong item so he has to say, "No I need the right item." You can expand it. Ask him to tell you more. Those are all incidental strategies. In your handout you have a list of the common mistakes, I'm not going to go over them but you're welcome to read them.

I want to talk about, now that we know that basic learning unit, what we should be teaching. So that's how we're going to teach and that's how we're going to analyze teaching. What should we actually teach? Remember our pivotal skills. There are six of them. We want them to be responsive to adults, follow directions, and imitate or initiate communication. So the first level we get those little guys in or it might be a big guy who's come to school and hasn't had much prior training. You want to just get cooperation and instructional control. You can't get anywhere if the kid won't sit down, get ready, look at you, pay attention, respond when you ask him to respond, and accept reinforcement. If you don't have that, you can't even present that basic learning unit.

So we want to take control of the reinforcers. We want to be the boss of the reinforcers, so when he wants something he has to come to us and we become reinforcing. We want to pair those reinforcers. Like I told you, we with new staff say, "Go give this all this stuff away." So the person becomes the reinforcer to the kid because he's got all the goods. When the kids are in the regular classes, you've got that aid who is the interpreter, is sitting next to the kid, and the teacher says something, and she says what the teacher said. It's kind of like you're speaking in Chinese or something. It's like having an interpreter for the deaf with the kid. Well what we do is we say the aid can only prompt and reinforce periodically. They give out the tokens. The tokens are traded in with the general education teacher. The general education teacher has to deliver some reinforcement. Otherwise the kid doesn't care about them. They're just that big shadowy figure looming up there. "What do I care? I don't get anything from her. I don't get any instruction from her. I don't get nothing from her. Nada. It's this clown next to me that's important to me." So we want to try to shift some of that to the regular education teacher. We'll talk about that later.

Teach the kids that we're reliable, we're trustworthy. There is a relationship between their behavior and the reinforcers. If you behave, we consistently will reinforce that behavior. We won't be inconsistent and forgetful. We'll be very mindful, and trustworthy, and reliable. Then we want to get him to follow directions and cooperate. So we start with stuff by just handing out reinforcers. Just teach the kid, I've got the reinforcers, you got something because of me. "Good Job. I'm important." We teach each instruction following.

Start with simple instructions. “Stand up.” All these are simple, single step instructions. All become really important to getting control of the kid.

The other one here I want to talk about now is developing a communication response. What we want to do is create opportunity through the imbedded trials and try to create opportunities for the kids to initiate communication and to follow requests. But one thing I want to talk about is, what kind of system do they have for communication. You have to think about, is it going to be verbal, signing, symbols, or a communication device. What are they going to use to communicate? And we have got to find something they can communicate quickly with and efficiently. We have signing. That’s pretty simple. Signing candy. Or we have PECS. “What do you want?” And he says, “Hold on. I’m thinking.” He builds a sentence, “I want airplane.” And there you go, “I want airplane.”

Now have you all had the PECS workshops? Because they parade through town and drag people along. We’ve found that PECS breaks down at those higher level skills. We get basic requesting but we really have a hard time moving beyond that with PECS for a lot of the kids we work with. So that’s the Picture Exchange Communication System. But what’s nice about it, is it’s shown that it’s effective in getting communication started and also will promote verbal instruction, verbal language for young kids.

Now this one is more interesting to me. We actually teach kids to read. Remember we told you that some kids are visual, and some kids are auditory. The kids that are auditory tend to be talkers. The kids that are visual tend to be nonverbal and tend to develop these other systems. So we can teach reading. The reason we like it is because signing, and other augmentative communicative device is cumbersome because it requires you to carry around a board, or it’s cumbersome because nobody understands it. Like when he’s signing and someone goes, “Well, what’s he signing?” We actually had to teach a kid when he signs, we have to teach him to be able to use some other device to communicate because the sign - nobody knows what he means.

So what we do, is we just start out by teaching an action - putting a puzzle together, building with blocks, or looking at a book. So we take that word, we just match the sample. They put the word with the word and they carry out the action. So it says “draw”. And the word would have been next to that paper. She would then carry out the action to draw. We didn’t go through a lot of phonemic awareness. We didn’t go through a lot of scaffold building about reading, or whatever you want to call it. We just put the picture and said, “When you see this, do this.” So now she knows that text or reading can control her behavior, and she can do something when she sees it. So now we test for comprehension, and we’re getting her to do an action. Then we build a sentence, “What do you see?” And she spells, “I see a crayon.” See there’s a crayon and a fork, so she writes, “I see a crayon and a fork.” She selects those words. And this one, she has a sentence strip, “What do you see?” “I see Daddy and a car.” So she’ll put that on the strip, and then she’ll type it up there. So now we’re getting into the idea that she can communicate using typing.

And then there’s an older kid. We started with when he was nine, and he went through all these sequences and steps. It was kind of laborious. But it really took off for him. He’s telling me about the picture and he has a dictionary. So he goes to that dictionary. So he doesn’t have to remember everything. He looks it up on the dictionary, finds the correct word, and then types it in.

So now we've created a communication device and a communication system and he's reading. He's nonverbal but he'll type this in, whatever the answer is to that particular picture. And he can use it for a shopping list. He looks in the fridge to find out what's missing, and then he types it on this thing and makes his shopping list. This thing prints out a little. Actually what this was – do you remember facilitated communication? This is one of those devices, only he's not facilitated. He just types on it. So then he can communicate at a distance. He can type something out. He wants to initiate an activity and he can play checkers. So he can type, "I want to play checkers." He can take that tape to somebody, initiate the request, and communicate and get access to reinforcers. He then had a handheld device. This is our next step, and see, now his dictionary is this big. He looks it up in the dictionary and then he types on this thing. It was like fifty bucks at radio shack and it prints out a screen of whatever he wants. There he is typing. Then he went to a PDA which is this thing, and he has that same little dictionary, pretty inconspicuous. He uses a stylus, and he types out what he wants. He has a little schedule he follows now, so he can communicate with the written word and he also can follow a schedule. His behavior is controlled or directed by a list. Aren't we all that way? So he has a list and these are the things to do, and he checks them off, and he gets them done. He listens to music, he has to chop an apple for dinner, he's dusting, playing a game, doing something with a pickle, doing his laundry, has the candy as a treat, and takes the trash out. He checks it off after he does each one. So the reading to me is a pretty cool. It's fun to teach because a lot of kids really take off with it and they go a lot of directions in terms of scheduling and building independence. So our pivotal skills are getting to be responsive and to initiate some kind of communication system.

The next thing we have to do is some kind of matching. We got about ten more minutes and we'll take a break. So we work on motor imitation. Do this. With the young kids. Do this. Put his hand on his head. We use repeated trials of it. Do this. To fine Motor. Where she would do this and she copies and draws with her drawing. Maybe verbal imitation to try to get her to talk. And we also try to build on this sequence of visual matching. And this will become later important for adaptations. We've matched 3d to 3d. Object to object. We then go to 2 dimensional, just shape to shape. And we sort of gradually build this sequence, color to color and so forth. Now this is a little harder. You have to put the red square with the red square. You can't put the red square on the yellow square and you can't put the red square on the red triangle. You have to pay attention to two features. That's pretty tough. Then we got to matching a picture to an object. And then we go to matching pictures to pictures.

So we go through this sequence until they get generalized matching skills, and usually they go through it very quickly, most kids we work with. And it looks like this, "put with same" and she puts it with the same. It's just using that discrete trial format and using easy to hard sequencing. Then we got to matching word to word. Doesn't have any idea what they mean. But we just match the word to the word. Ok so now we're making discriminations that are pretty fine. And then that builds eventually into the reading.

So now we're on to Language Development. The next kit is Expanded Language: Naming, Categorizing, Describing, That feature/function/class I talked about, Statement to Statements, and preacademic skills, and now we get into categories. So now we're matching things that are sort of the same, slightly different, not exactly the same. They're not identical. Everything so far has been identical.

To where they're a little more different. Not quite the same. There's still more variation, until eventually you're matching like this, so a belt goes with underwear or shoes and they look at all alike. They're completely nonidentical but they're in the same category. So we've moved from really easy matching to very difficult discriminations and eventually this gets us in to – This is non identical matching, horse goes with horse. There we are. Now we're reading. We didn't do a lot of what sound does this letter make or what letter does this sound make and all that stuff. None of that. We're just doing sight reading by using this sequence.

OK then we get into Advanced Language Skills and I won't go through it, but it just kind of moves the kids into more advanced skills. This is one of nine grids of things we go through. Of sequences. A flowchart. And like Judi talked about, we actually teach theory of the mind up here. How do I feel? That's what Judi is showing. Empathy is theory of the mind. You empathize or try to figure out what the other person is feeling or thinking. And so we actually get into really complicated sorts of discriminations like that. This was the ABBLS skill assessment I was talking about earlier. And this is one you can purchase for $49.95. And it has a lot of skills in it. Very detailed. Almost to the point where you get overwhelmed by it. But it gives you all the skills: receptive language, imitation, vocal imitation, requesting, labeling, conversations, social interactions, play, and leisure. It's really a good curriculum for people if you want some pinpoints.

The next thing we want to do which we'll talk about tomorrow is how to get sustained engagement. How to get the kids to the next levels, to work more independently, and so forth and looking at how do we adapt and engage in a regular curriculum. How do we engage in social skills in the regular curriculum and so forth?