Hi, my name is Jacey Schumacher, and I’m a speech language pathologist here at Perkins School for the Blind in the deafblind program. I’ve been here for about 4 years, and I have several different jobs that I do as part of my work here. One of them is consulting to all of the students here to develop communication systems for them – whichever may be appropriate. I also teach them feeding and swallowing therapies and feeding recommendations as well as some language and speech goals – all depending the different levels of the education of each of the kids and the cognitive abilities of them. But today I wanted to talk a little about how we move from nonsymbolic forms of communication to more symbolic forms of communication, and really when I talk about the range, it will follow the track of education from the 0 population up to 22, which is what we educate here at Perkins. Now, I will actually include with some of the information, outlines of different protocols of how we decide when a child is actually moving onto a different area of communication.

Level 1 - Preintentional Communication
But for our intents, I’m going to talk about start with the level 1, which is preintentional communication, and that is usually what we see with infants and their crying and those nonsymbolic – what we call nonsymbolic – forms of communication, which really we do see and can understand as a symbolic communication anyway, but it has been labeled nonverbal or nonsymbolic communication. And those are like head movements, facial movements of a very early age, where it doesn’t seem that there are necessarily the intentional means to communicate at all times.

Level 2 - Intentional Communication
The next, moving to level 2, which we see as intentional behaviors by fussing and crying because they’re uncomfortable, smiling when they’re tickled, and this, again, still very early on in development.

Level 3 - Presymbolic/Nonconventional Communication
We then start to make somewhat of a progression to the presymbolic communication and nonconventional where we see like laughing, can hear belly laughs, and this is where we would start to move into try to forming some of our intentional presymbolic to symbolic communication. Some of these students that we see, we try to set up communication systems where they just begin by a calling device – being able to indicate that they want attention. And when we talk about children with multi sensory impairments – the deafblind students – it may be such a different range for them. If they have vision, then it may be something that has a visual feedback like a light to call that would show them that they’re indicating the need for attention. Or if they have some residual hearing, it may have a voice output device if they do have the ability to recognize some speech or just a buzzer that would indicate some need. And, again, it all depends on their
physical impairments. Here at Perkins, we certainly have some kids who have physical limitations to limit them from using some of the more conventional calling devices.

**Level 4 - Conventional Communication**
We then move to level 4, which is conventional—more conventional—using eye gaze to make selections in choice making to touching objects—using a physical ability to actually identify and locate things, touching a person, vocalizing, being able to say “yes” and “no,” or indicate “yes” and “no,” in some gesture—by shaking head “no” or “yes”—being able to use the sign for “yes” or “no.”

**Level 5 - Concrete Symbolic Communication**
We then start moving to real concrete symbolic communication, and that meaning things like, if it was speech, then being able to mimic sounds and imitate different sounds and words, by specific gestures, or being sad, being happy, things such as “mine” or “come here”—just the gestures, those natural gestures, that we use to sit and point to the chair—not necessarily a sign for “sit,” but more a point to a chair as a gesture for sitting. And during this very same one, we start seeing the ability to use concrete objects as a communication. So if a student wanted to indicate the choice of a certain preferred object, they may just grab an object to indicate that they are choosing that object out of a field of two or three...so understanding the use of an object—so if they wanted to eat, say maybe that student’s grabbing a spoon and showing it to you as a communication, so that you understand they would like to go eat.

**Level 6 - Abstract Symbolic Communication**
The next level is level 6: abstract communication, and this is...they’re using speech as a communication, using single words to indicate “eat” or “mine”—those actual verbal outputs. Or, if they were using signs, and that would be the single sign being used, like “eat” or “sit down,” where they’re actually using a word that is set up for it.

We then get into some of the things that we use here, like these are what we call tangible symbols. And we have really set up a nice system here at Perkins. This is a system that we use here, which is made out of just tri-wall cards, and we decided to standardize the cards, so that it’s just a three-ply cardboard, and we cut out 4”x6” squares. It’s quite a process. We actually tape up the cards and then prime them and later go on to painting them with the white paint, and then imbedding partial, or depending on what level the student’s at, that word. We’ve come up with quite a list of the standardized words, but then there’s some students that are not at that level of representation yet, and so we use different forms. But we have a list of about 150 standardized words and phrases right now that we use, most of them being for feelings and classes and routine schedules and basic needs that are actual standardized. Also for choice boards, which are presented pretty regularly. The system is actually a nice system, because it has moved from just being a schedule box system, which is how it kind of started way back in the van Dijk model of working with schedule boxes, but now lets us use them in choice boards for expressive communication. We’re really expanding, so that it’s not only just a receptive but also an expressive.
But I’m moving on a little bit, so I’m not going to get away from what I’m on here.

Abstract symbolic communication also could be things like . . . these are a system that we just use, and this is Mayor Johnson; it’s widely used. They are a set symbol for line drawing representation. And these . . . we have a computer program that can be bought – I think the company that’s doing it right now; I think Ablenet sells it – but this is the Major Johnson computer symbol program, and they also come in a book form, but the computer programs tends to be much easier to use. And you can have colors or black and white, depending on what’s better for the visual – to maximize on the visual for that student. And, really this is just a way that I’ve set up so that I can work in categories, but they really have words that represent most of our common needs to begin with the student learning words – so learning these pictures as symbols for words.

**Level 7 - Formal Symbolic Communication**

The last level is level 7, and that’s formal symbolic communication, and that’s really when they start combining things. So, if it was speech, they’re combining two to three words, and more. Or, if it was signs, then being able to combine the signs into a more language-structured area. Or using a tangible symbol, which like these, being able to maybe make them smaller, if they became so proficient, and use them as a combined language. Or, lastly, getting into some of the communication systems that are out on the market now – the real electronic communication devices that could help to combine words to make phrases.

Now I want to move on from those levels, which were adapted from Rolin and Campbell in 1987; I just want to note that. We have the tangible symbol set system from Charity and Roland, which we used to set up a lot of our tangible symbol systems, which are the imbedded cards. It’s important to note that when you’re working with deafblind students, you’re going to get such a range of impairments, that it’s sometimes hard to set up a real system dependent on what somebody else set up. So I’m just going to go over how we decide what level to start with in the communication.

**How to Decide What Level to Start With**

Usually the first area, as I talked about earlier, is being able to identify an object – being able to understand its function and being able to use that object. So, we would start with an object choice board, maybe, and I have a couple of things here . . . and presenting a child with two different things – a massager or a bumble ball, but they get to choose. And having that child understand that this is a choice. That would be the first step of trying to develop a symbolic communication system.

Then, when we move onto the tangible systems, which is a next step – and especially for a dual sensory impaired child, is a partial or an associated object. And I have, like this is a partial right here – it’s a ball, or the bumble ball, as I presented here. So this is a partial of it; it has a knob – it’s an associated part of this. And making the connection that if they choose this card out of these two, then that indicates that they actually want this ball over here, so taking it away from
the ball to being something more abstract. We like to call this a word, so this is the word that they indicate. This is a nice system, because then they don’t necessarily have to use . . . the object is taken away from it. This is not what we hope to always have; it’s just the object, we want them to be able to have a word for it. And this lets them know that this right here is a communication. This is not for playing with; this is not for fighting, which we will see sometimes, this is the actual word, so that they learn a whole system, and they’re all the same design so that they get to be able to use that in several different areas.

The next level, after they understood that this represents that object, would be a shared feature. So it’s not necessarily a partial or associated, but it’s something that’s shared. And I’m going to show . . . this is from our SMI room. We have a big bean bag chair there, and the bean bag chair is made of these same materials; it’s the same set-up. But this is a miniature of it, and it’s a shared texture. So this would be representative of it; it’s a shared texture. And this is a shared texture of a kidney bean rocker that we have in the other room, and it’s a miniature of it; it’s the same material; it’s the same color, so it’s associated in that manner, but it’s not actually a part of that – that object.

The next level would be moving it even more abstract, and these are the ones that we have more difficulty getting students to learn, and sometimes it tends to be after drilling. And I’m going to just show you and emotion board or some of the words from an emotion board. Happy – we have actually the Mayor Johnson picture of “happy” here. We have the bubble wrap, which we have decided will represent being happy. And, again, it really has no associated matter whatsoever; we have just decided that this would be the word “happy,” because there’s not something that necessarily means “happy” that you can think of. Tired – we tried to make somewhat of an associated idea of a blanket; this is a partial of a blanket. Or sad is Kleenex, and hurt is a band-aid, but, again, when you look at feelings, this one is just something that we’re making as an association. It’s totally artificial, but we’ve come up to have that represent the word “happy.” Now if that student was totally deafblind, or totally blind, this may be where you want to go, depending on the cognitive abilities of the student, this may be as far as you go with the tangible. But if they did have some vision, then you would move on to, hopefully they would understand some photographs. And this is a choice board of just some photographs that I have for different activities, and here’s the potato head – that would be the next step. Certainly, if they didn’t have vision, then that wouldn’t be your next step. But if they did have vision, you would want them to be able to use photographs. Now if they became proficient at photographs, you would hope that they could use that knowledge and begin to understand the Mayor Johnson pictures, which are one step further in the abstract – so the line drawing. And some of them are certainly much more concrete than others. The animals are pretty easy to understand, but others are not so easy. Let me see if I can find one . . . maybe “school.” It’s not always going to be concrete for our kids, because our kids don’t really arrive to school like that, but because some of them have had to be more abstract, you certainly might have to adjust what you use with that student depending on their ability to understand more abstract concepts.
So, if they had vision, or if they did not have vision, your next step would either be from the line drawings, or from the tactile artificial, would be a sign or a spoken word. Now, again, that depends on what is involved in their hearing – if they would be able to use spoken words. So there are signs. You may want to start teaching “ball.” You know, this is “ball” – teaching the word for “ball” or teaching the spoken word for “ball.”

And then, the last, always the end result goal would be to have a language – either a spoken language or a signed language. And that would be your end result. Now I was going to talk briefly about how we begin to introduce sign language to students for the first time. And, without being immersed in a language, it’s very difficult for students to learn a language, so obviously some of our kids may not get to a level of language competence that we have. But we need to start somewhere, and we have to give them good models. And we believe here – we’re a total communication program – that you give them and immerse them in as much information as you can, while not going over their head, obviously. I believe, personally, that a whole language approach works best – so giving them a good level, but, again, not going too far. Now put this in understandable terms – to be able to sign about an object, that this is a ball; it’s round – to talk about it. Use your voice; use all the information you can without overwhelming. I wouldn’t use a five-word sentence with student who’s functioning under, maybe the 2-year level. That’s a lot of information, but I would try to present it and feel it and talk about it with our hands. I would also, if that student is going to be using tactile sign, I would start introducing my hands – letting them understand that my hands are going to be under theirs, or signing information, and that that information is represented in my signs as a communication. Without using their hands, they won’t have the ability to learn the vocabulary of information. And it may be that I’m going to talk about this ball; I’m going to sign the word “ball”; I’m going to show them this symbol for “ball”; I’m going to show them the object for “ball”; maybe I’ll even show them the picture for “ball” if they have some vision – presenting them with all of those bits of information and signing it, and whatever that student begins to have a tendency for in communication, since this does seem to be a very motivating object for many kids, then we would work toward that. But we would never take away and use those bits of information that would be helpful.

Now we use hand-under-hand sign language. And, again, we may not use a full language with some kids, but just learning that their hands are holding onto your hands for communication will help them in the long run not to have as much sensitivity, because, certainly many of our children have many impairments and deficits and hypersensitivity. But you want them to feel comfortable and not be afraid of holding onto someone’s hand for information. You want them to learn that if they hold onto your hand, and you sign “ball,” that that is a word and that they can also make that word in their hands, but you have to teach them what it feels like in your hands for them to be able to understand the signed representation of it. When you’re teaching a sign, that’s when we take the hands, and we actually help them to mold the sign and then, again, showing it, repeating it, showing it – what it feels like in your hands for them to understand it, so letting them feel what it feels like in your hands.
I’m going to also include some nonsymbolic communication – how we develop some of those areas of communication in a nonsymbolic way that I think are important in developing the ability to use facial expressions and be able to use vocalizations. But, again, those are in the earlier communication – and to always use those as a bridge to other communication, but we always try to have the end result be a language and some kids may not get to that level but will be able to get them as far as we can in the continuum of presentation – using the actual objects, moving onto tangible symbols or photographs, Mayor Johnson pictures, and then on to sign and sign language or spoken language.

But, I think that’s been a very quick representation of some of the communication methods that we use here at Perkins. I hope that you can find this helpful and useful with your students or your children.