

Dual Language Development in Children Prenatal to Three

18th Annual Birth to Three Institute

Bob Stechuk: Thank you for being here. I want to thank all of you in the room, this wonderfully rectangular room, for coming today. For those of you who are joining us via Live Stream, thank you for tuning in. My name is Bob Stechuk. I am the assistant director of the National Center on Cultural and Linguistic Responsiveness.

I love talking about infants and toddlers. I love talking about dual language development. Putting the two together is like icing on a very big cake. So hopefully, whether you've been serving dual language learners for decades or whether it's very new, hopefully there will be something of value in this session for you.

Just really briefly, just want to take one minute to tell you about myself. I've been in early childhood education my entire adult life. My wife said that that's only been about two or three years now, but... After I graduated from college, I moved right here to Washington, DC. And through a series of circumstances that I won't tell you about, I ended up becoming a substitute teacher in a dual language child care facility in northwest Washington, DC; so for whatever minimum wage was at the time, I started working with infants, toddlers, and preschoolers. After a few months, I learned that I had found my calling.

I spent seven years as a classroom teacher. So I've worked with infants and toddlers as young as 16 months of age. I've worked with children with disabilities in inclusive settings. I've worked in dual language classrooms. In Head Start, I've worked as a home visitor and education disabilities coordinator. I was a program director for six years, and I provided training and technical assistance to Migrant and Seasonal Head Start programs for eight years. Now, all of those Head Start positions, multilingual, multicultural settings. Along the way, I also got a Ph.D. in child development and early literacy. I've taught courses on cognitive development, language and literacy development, and so on and so on.

So I find dual language development in children from the prenatal stage through age 3 and beyond to be one of the most fascinating topics on the Earth. But there's one more reason why I'm interested in dual language development amongst young children, and that's because both of my children are dual language learners. So when my children were born, they grew up hearing English and Chinese every single day of their lives.

So a week before my son was born, my wife's mother and father flew over from China and lived with us, off and on, for a period of six years. This was not the best experience I ever went through, [Laughter] but it was an excellent way for my children to learn Chinese. So at 18 months of age, at 2 years of age, my children were speaking fluent Chinese. Now as 10-year-olds and 16-year-olds, they're able to read and write the language as well as speak it. So I have not only a personal and an academic interest – I love reading the research – but I also have a personal connection to the topic.

So let's talk about your personal connection to the topic. What I've got here is a basic photograph, and I would invite you to take a look at it for a moment and think about what is going on in the photo. Very simple question. What is going on? Take a minute to take a look and then turn to the person next to you, take a minute to introduce yourselves, and then share your ideas on how to answer the question,

"What's going on in the photo?" [Audience mumbling] Okay. That was a minute and a half. So there's an adult, there's a baby. We don't know if it's a family member, a parent, an Early Head Start teacher, someone else. What's going on in the photo? Who wants to go first?

Woman: They're starting to create a relationship by looking at each other, and her smiling, saying, "It's okay. I'm okay to be around." And just the eye-gazing and letting the baby look at her and letting the baby look at her and be – start being comfortable with her, creating a relationship.

Bob: Okay, so there's a specific set of behaviors that are captured in time in the photograph. There's the eye gaze. There's the holding. But there's something larger going on. That relationship piece is visible in the photograph, is it not? What else is going on? Yes.

Woman: It looks like there's communication going on between them somehow.

Bob: Say more.

Woman: It looks like the woman, whether it's his mom or a home visitor, whoever, seems to be smiling, and it looks maybe like she could have been talking to him. And it looks like he's receiving – receiving – sorry – whatever she's saying or attempting to communicate.

Bob: Okay, so we don't have a video... Whoops. We don't... We don't have a videotape of this, but what we're seeing is communication going on. There may be verbal communication. There's certainly nonverbal communication. So look at the eye gaze. Look at the directness of the eye gaze. Look at where the hands of the adult are and the hands of the baby. So through touch, through language, through facial expressions, there's that multi-level communication piece going on. What else is going on?

Woman: Just as you mentioned, just the positioning of where she is holding the child's head, and then as the child is grasping her fingers, is letting them... It's another way of communication. It's like, you know, "I feel safe with you." And then again, like everyone else says, the gazing of the eyes and the facial expression, the smiling. She's kind of mimicking, like, what he's – his facial expressions are.

Bob: Mmhmm. Very good. So the baby may be 2 months or 3 months old. The baby is not yet able to sit up, but that position of holding the baby outward allows for that direct eye contact to occur but it also is a very functional position for the baby to be in. The baby may not even be able to what? Control their head very much. But the positioning of the baby is part of the communication. It's a very functional way of allowing gravity and the adult's body to put the child in a position where they can both communicate and receive communication. Other observations? What's going on in the photo?

Woman: By the way she's holding the baby, it also tells him, "You're safe. This is your safe haven; you're okay."

Bob: Okay. Very good. So, communication. The very direct level – that Maslow's Hierarchy of Needs, the way that the baby is being held, the way that the baby is being looked at, the way that the baby may be talked to, the communication that's going on, the touch, all that serves to reinforce the idea that the environment that the child is in is safe and secure. Excellent observations. Can we take one more? Going once...

Woman: There's bonding.

Bob: Okay, there's bonding. Say more about bonding.

Woman: Sorry. [Laughter] There just – there's one-on-one contact, so like, the whole eye-gaze thing. And they're just building a relationship from the very beginning.

Bob: Mmhm. Again, so the bonding, the relationship piece seems to be going on. And as the interaction continues moment after moment, day after day, month after month, that bonding and relationship piece becomes stronger and deeper. So what does this have to do with dual language development in infants and toddlers? Well, this baby may be a dual language learner; we don't know. The point that I want to make before moving on, though, is that this one simple photograph, there are many good observations. You've given me many good ideas, many good answers to my question about what's going on in the photo. One more.

Woman: Well, I see... I can see also that they are trusting. Trust from the child with a new adult. It's... The child's... They are attached to the parents. And a new adult, it's a trusting, also, connection.

Bob: Okay, so let's say if this was an Early Head Start staff person and the baby was new to the setting, that as the adult holds the baby, talks to the baby, communicates on different levels, a big piece of that relationship-building involves trust. We're actually going to talk about that later on in the session.

So, we're going to talk about the importance of children's environments. We're going to talk about adults' interactions and language use. And we're going to talk about the differences between routines that are predictable and those that are less predictable, and what is the influence on children's development in general and on their language development in particular. So what's going on in the photo? Many important things are going on. We are able to observe many features that are crucial to infant/toddler development.

What I want to do now, though, is add one more piece to the long list of great observations that you provided me. So the adult is interacting with the baby. All of the observations that you shared are extremely valid. There's a lot in the photo that we can see; the eye gaze, the positioning, all of that is observable. When we're thinking about dual language development amongst children prenatal to age 3, the idea that I want to leave you – the idea that I want to bring to you is, in addition to everything that you've said, that there's a lot going on that we can't see.

So the child is growing up with one language. The child is growing up with two languages. Let's assume that the adult is talking to the infant. We can observe the eye gaze, we can observe the positioning, but in terms of language development, there's a lot of important information of what's going on inside the baby that we aren't able to observe but that we know is going on.

So the point that I want to emphasize very early on is that even the tiniest newborn babies are born with a range of capabilities for communication and language. And that Early Head Start person, that parent interacting with the baby, may not see those capacities working, but we know that they're there. We want to take them into account. So, for example, when the adult varies the pitch and tone of their voice – right? lower pitch, higher pitch – the baby's capacity for language registers that change of pitch. When the adult speaks to the baby, the baby does not simply act as a sponge and soak up language. That's not a bad observation, but it really underestimates children's capabilities.

So let's assume that this adult is talking to the baby. "How are you, baby? How are you doing? You just woke up from your nap. Are you ready to eat?" How many words did I just say? We could count it if we transcribed it, but it's not readily apparent how many words. How many sounds – how many basic sounds did I use in that speech example? Who knows?

So, children are born with amazing capabilities for processing language. Adults speak to the baby using words and phrases. "Hello." "Good morning." "I love you." "It's time to eat." The baby experiences spoken language as what? As a stream of sounds coming to them. But something in the baby's brain does more than simply absorb the language that comes in. The baby's brain is capable of taking the language that they hear and isolating the smallest units of sound of a language. The baby's brain is capable of taking, identifying, and storing in memory the smallest units of sound of a language. So the "buh" in bottle, the "mm" in milk, the "guh" in go.

When the child hears spoken language, one of the capacities that the baby is born with is to take that spoken language, to isolate the individual speech sounds of the language, and to store it in memory. So typically developing children, before their first birthday, have stored in memory all of the specific individual sounds of the language that they are hearing. Why would that be important? Feel free to shout it out. Why would that be important? The child has a template of all of the individual sounds of a language. How does the baby get to be a fluent speaker of the language? How do they get to pronounce the language fluently? They've got the sounds stored in memory.

Woman: There's someone over here.

Woman: When the baby keeps hearing those sounds and those words, they start by repetition. He will be able – his brain is able to memorize them and then he's able to vocalize after so many repetitions. So it's important for him to keep hearing those sounds and words.

Bob: Exactly; so children store individual sounds in memory. We as adults don't try to teach individual phonemes. We don't say, "Now we're going to teach – now we're going to learn the 'buh' sound." But as we speak to infants, children's brains are actively processing the language, storing the individual sounds in memory.

So by the child's first birthday, there is a complete set of sounds stored in memory. Between the child's first birthday and second birthday, now the child is able to use those stored memories to further explore language. The child is able to actively process the language that they continue to hear. And now between the first and second birthday, the baby is noticing speech patterns.

So, step one is to store the sounds. Step two is to use that knowledge to analyze the spoken language that the child continues to hear. So somewhere around 18 months, 2 years of age, children are able to recognize rhymes. So, the cat sat on the mat – the cat sat on the mat. There's a pattern there. Long before the child turns 3, they're recognizing and producing rhymes, because (a) they've stored their sounds in memory and (b) they're using those memories as a tool for analyzing the language that continues to come in.

So how many of you have heard of the term "phonological awareness?" Okay, how many of you know that phonological awareness is predictive of later reading ability? So that ability to analyze and manipulate the speech sounds of language is a stepping stone for learning to read. The process begins

even before the baby is born. So think about a prenatal infant. Think about a third-semester child. The baby's capability with language is so powerful that that unborn third-trimester child is actively processing the speech sounds of language, even before the baby is born.

Even before the baby is born, they're beginning the process of storing sounds in memory. What happens if the child is hearing two languages while Mom is pregnant? What do you think? They're storing both sets of languages. All of the evidence that we have from the neuroscience people, particularly over the last five years, is that children are processing the sounds of two languages. After the babies are born, they show a distinct preference and recognition for the both languages that they heard in utero, but they respond differently to languages that they've never heard before.

The neuroscience evidence, particularly within the last five years, is showing us that even prenatal infants are actively processing language. And when children are exposed to two languages, they're actively processing both of them. So evidence of confusion, evidence of being mixed up, is not what we're seeing. What the neuroscience people are reporting is that children are actively processing both sets of languages and are able to keep the two separate even before they're born.

Yes, question in the back? Oh, you need my mic. There's a question from Live Stream, but I'm not skilled enough to...

Woman: Thanks, Bob. The question is: So is teaching or using phonics curriculums helpful for young children?

Bob: That would depend on what it means by "teaching" and "phonics curriculum." What's most valuable for children is to receive lots of language. So the question essentially is, "Is a phonics curriculum better than good, strong adult language models?" For infants and toddlers, I would say not. So, my understanding of a phonics curriculum is that we're teaching letter – we're systematically teaching letter/sound correspondences. That may be valuable for the kindergarten child who is on the verge of reading; but for the very young infant, what we want is daily exposure to strong language models.

We want children to hear language frequently and for a variety of purposes. And that as children hear lots of language, their active processing abilities are going to kick in. So from birth, children are actively processing the sounds of their language. There are other biological capabilities that I want to share with you, but I'll get to those in a minute.

So, for those of you who have smartphones or Android devices, our National Center has created an app. So if you go to the iTunes store, if you have an iPhone, you can download it. It's also available if you search online. It allows you to take notes, to send email alerts, and to do other cool stuff. So some of you are using the traditional method of note-taking on paper, which is fine, but we also have an app available for taking notes as well.

So what I want to do in the time that we have is look at the knowledge base that we have on first and second language development in children prenatal to age 3. The good news is that many of you know much of this information. But what we want to do is organize it into a comprehensible package so that whether your children are growing up with one language, two languages, or three languages, we really want to organize that information so that it's clear, so that we can be intentional in our decision-making and clear in our practices.

Second, I want to focus in on the specific role of environments and thinking about environments in first and second language acquisition, and then look at some specific research-to-practice implications that the research bears out. Most of you may know this already, but for those of you who don't, there is an official definition of "dual language learners" that the office of Head Start has adopted; it is on ECLKC.

Just really briefly, this is a departure from talking about children as "limited English proficient" or "English language learners." Do I need to go into the advantages of using the one term over the others? Probably not. So when we say a child is "limited English proficient," are we identifying their strengths? Not really. Not at all.

So the term "dual language learner" has been used amongst researchers for decades. It's meant to acknowledge that children are developing in two languages. And the definition points out the simple reality that dual language learners can develop in many different ways. So some children acquire two or more languages from the day that they are born. These are known as "simultaneous dual language learners." Both of my children fall into this category. From the day that they're born, children are hearing two languages on a regular basis; obviously has an important shaping influence on their development.

Some children come to a second language after their first language is already in place. So the child grows up in a family where one language is spoken. It might be Spanish; it might be Somali; It might be Serbo-Croatian. And then they come to your Early Head Start program as a 2-year-old, and now they experience English for the first time. So some dual language learners become dual language learners because they're exposed to a second language later on in life.

Just real quickly, children don't stop becoming dual language learners when they learn English. Occasionally we hear people say, "Oh, they were with us for two years, now they're speaking English." If they are continuing to develop their home language, they're still dual language learners. So how do we understand first language development? The fascinating, huge body of research evidence is that children become intentional in their communication very early on in life. So we don't need to wait until the child is 4 years old for them to become intentional communicators.

So within a few months of being born, children are intentionally communicating. For example, the child may move in a particular way in order to communicate a particular interest. So my in-laws would say – when my son was 3 and 4 months old they would say, "He tells us when he wants to go outside," okay? Three months, four months. Well, what is he doing? We were gone at work all day. "Well, he taps us on our shoulder. When he taps us on our shoulder, we know he wants to go outside."

So the neat thing about intentional communication is that when adults treat children's behaviors as examples of intentional communication that allows for the relationship to build and for more specific communication skills to develop. So the possibility exists that he was banging on their shoulders at first and he didn't really mean to go outside at all. But over the next few months, he learned that that's how they were interpreting his behaviors. So as a 5-month-old, as a 6-month-old, long before he was speaking, he would tap them on the shoulder to let them know that he wanted to go outside.

So there are many, many examples of intentional communication. And children's environments are crucial in that when children's environments respond to that intentionality, then the child what? Observes that, processes that information. When the child's environment is responsive to their

intentional communication, then children form a mental template of that and are able to use that knowledge to develop their communication skills further.

So, first language development. There are a variety of research-based milestones that have been identified over the decades. So who can tell me what babbling is? Anybody brave enough to do it for the group?

Woman: I'd say "ma ma ma ma."

Bob: Okay; so, that was great. Thank you very much. So very young infants begin forming a few basic syllables. So, "Bah Bah Bah Bah," "ma ma ma ma," "pah pah pah pah." A long time ago, the world's most prominent linguist said, "Yes, children babble; however, babbling is not connected to the development of language or speech. There's babbling, there's speech, but they're not connected." And so for an entire generation, linguists were trained that there was a disconnect between the baby's babbling and the child's language development. Agree or disagree?

Audience: Disagree.

Bob: Say it with feeling.

Audience: Disagree!

Bob: Thank you! It seems pretty silly to think about babbling being disconnected from language development, doesn't it? But many – several decades ago, someone decided that. Now, there was, as I said, a generation of scholars who were taught that there was no relationship between the two. A particular individual decided that that was not the case. They did study after study to find evidence for the connection. And the way that they found evidence was to look at different babies growing up in different languages.

So in study after study, researchers looked at the babbling of Japanese – of babies growing up in Japanese-speaking families and they looked at the babbling of babies growing up in German-speaking families. At the very youngest ages, the babbling was pretty much similar. So all of the babies seemed to be making the same kinds of sounds as 3-month-olds, 4-month-olds. But as the children got older, 5-, 6-, 7-months of age, what happened to the babbling? Became longer strings; more complicated. So what used to be "ba ba ba" now becomes "ba be boo ba." "Ba be boo ba." Why is this important?

As the children got older, the children growing up in German-speaking families, the babbling reflected a higher proportion of consonant sounds. So "guh" and "kuh." There's a higher proportion of consonants in their babbling. The babies growing up in Japanese-speaking families were producing a higher proportion of vowels. Why? The Japanese language, more vowel sounds. So as the children continued to develop their language skills, their babbling reflected what? The specific characteristics of the home language. The specific characteristics of the home language.

So I'm going to ask you to hold that idea in memory and we're going to come back to this idea when we start talking more about the importance of a child's home language. So here's a list of milestones. Many of you are familiar with these. Many of you could add to the list. Why are these language – why are these oral language milestones important? How do we understand a child's language development from

a long-term perspective? It's progressive. So is there a connection between language development prenatal to age 3 and the child's school readiness? Okay?

So in developmentally appropriate ways, we know that there's a connection between the child's oral language development and their ability to learn to read and write. So the child goes to kindergarten, first grade, second grade, third grade; what is the focus of the curriculum? Learning to read. In a nutshell, we can develop a developmentally appropriate understanding of school readiness for infants and toddlers by understanding that reading is a substantial developmental challenge. You came in here, you already knew that.

So the beginning reader – the first grader, the second grader, the third grader – has got to look at the written words on the page. They've got to be able to decode those words. They've got to be able to translate the written symbol into speech. They have got to be able to say the words out loud that are written on the page, but they're not done yet. In addition to opening the book and reading the words out loud, what does the young reader have to do? They have to achieve the monumental task of comprehension.

So in addition to the decoding task, the child has got to mentally process what is the meaning of the story. So first grade, second grade, third grade, the child will read the text, and then what does the teacher do? They will assess comprehension. So who was the main character? Who were the secondary characters? What was the problem? What was the resolution? What was the sequence of action? What was the setting that the story took place in? Reading represents a monumental processing task. There are many skills that have to come together and be sustained. The child has got to sustain their focus both on the decoding part and on the comprehension part.

And they have got to do that with what? Progressively more difficult texts. So the early reader is reading "run" and "fun" and "bus." The fourth grader is reading words like what? What are some fourth grade words? "Incumbent," "oblate spheroid," "metacognition." My daughter was a fourth grader last year. These were her spelling vocabulary words. So the first grader, three-letter words. The fourth grader has got to read and comprehend complex vocabulary, multiple meanings, multiple ideas. They've got to process multiple characters, multiple ideas, multiple story lines to be successful readers.

So what does that have to do with people working with infants and toddlers? Are strong language models important for our babies? So infants and toddlers who have lots of access to strong language models, what does that do? If I can get my clicker to work backwards, I will amaze myself. Strong language models coming to the baby, day after day, month after month, how does that build the child's school readiness? [Indistinct response]

Okay. So all of the skills that children need to take on the task of reading, learning vocabulary, learning word meanings, dealing with grammar, processing the sounds, they all have their origins in the first year of life. So do you see how important you are? When you woke up this morning, did you say to yourself, "My work is important because the experiences that the child has as an infant and toddler, even if they are only 2 months old, are connected developmentally to the child's school readiness?" Do you see how important you are? Do you see how important your work is?

Woman: I believe that we're important not just to prepare them for the school; it's to make a child happy and healthy.

Bob: Yes, so school readiness, life success, pro-social collaborative adults, living in a multilingual, multicultural world. My colleague is taking a very broad view of the situation, which I would agree with. So school readiness is not an end in itself, but it's a means to preparing a citizenry that is all the desirable characteristics that we can think of. So, do you see how important your work is? And if you're working with families, do you see how important it is?

So what is the role of the child's environment from this long-term perspective? Where we're at now is this idea that understanding the child's development, whether we're talking about development in general, first language development or second language development, any one of those or all three, we're talking about two radically different scales of time that in reality are connected. And the more that we can see the connection between the two, the more readily able we will be to think through the issue of practices.

So on one hand, we have a very minute scale of time. We have a second-by-second, moment-by-moment interaction between adult and a baby. The adult may shift their hand so slightly. It only takes a few seconds. The adult may say something to the child. It only takes half a minute. Those moment-by-moment interactions. What does the baby's brain do with those interactions? Stores them in memory. There's some very powerful biological capability in the baby's brain for organizing experience. So day after day, month after month, eye gaze, touch, communication, language, the baby's brain is organizing and integrating that experience.

By developing strong language skills, the baby is then better able to take on the developmental challenge of reading, the other developmental challenges of school, and the even broader set of developmental challenges that life poses. So thinking about first and second language development, we want to help everyone in our agency, as well as families, to recognize that those moment-by-moment, very brief interactions are valuable in the short term, but because of the baby's capability for processing experience, those strong language models have a cumulative effect.

So children who go to school with strong foundations in language, less likely to experience reading difficulties. Why? Because they have such a strong oral language foundation. Infants and toddlers with lower levels of experience with language, more likely to experience reading difficulties because they have less of a skill set to bring to the challenge of reading.

Woman: I'm just curious about children that grow up in a home that uses only sign language. For a typically developing child, does that affect their language development once they enter school?

Bob: Okay, so, 1) sign language is a language. It meets all of the criteria for being a language. If their only experience is with sign, then when they go to your Early Head Start program – and this is a hearing child, right? So they go to your program, how much experience does the child have with hearing spoken English? They may be at the very beginning stages. They may have heard some English. They may have heard a lot of English. So it's very difficult for a research study to answer your questions because the researcher can't deliberately manipulate the variables. They can't say, "We're going to withhold English spoken language from these children and see what happens."

But ideally, the child would come into an environment, we would welcome the child, we would recognize their ability to communicate using signs. We would do the same things that we would do with infants and toddlers or with children who are dual language learners, but appropriate for the age and stage of the child. So we would want to welcome the child into the classroom. We would want to invite

them to review the choices that are there. We would want to encourage the child to get involved in activities. And then... So the one child may be interested in painting above all else. Somebody else might love the sand table. Other children are tactily defensive. They don't want to go near the sand table, but the blocks hold their interest.

We would want to give the child a choice of the full range of options in the classroom. When the child is involved in an activity that they choose, when there's an ongoing activity, the child's attention is focused on doing what they like doing, now is the time to model spoken English. So trying to do language development during circle time, I'm not saying never try it, but I would minimize that as a strategy. I would look to build the child's receptive skills. If they're coming from a background where they've not heard spoken language before, build their receptive abilities, get them involved in activities, model language while they're involved. Excellent question.

Woman: I have a comment over here.

Bob: Other questions?

Woman: Since we're talking about environments, right now I struggle with families that are monolingual. So a Spanish-speaking family, they come to our centers and one of their goals is for their 1-year-old to learn English and they just want us to speak to the child in English.

Bob: Okay.

Woman: And so, it's a struggle because – just trying to communicate how it's important, you know, to build their language first and then gradually, you know, start introducing – because we have a mixture of different languages in the classroom. So that's where I feel like a lot of my teachers are struggling in communicating to parents because they want that goal. They want them to learn English, and so...

Bob: All right, so do you have a specific question or do you just want me to comment on the whole thing?

Woman: Comment on the whole thing.

Bob: All right, so that's another three-hour session. [Laughter] But it is a very – yours is a very common situation, so I'm glad to address it. Let's start by considering the perspective of the parent – the parent who makes this request. "I speak Spanish, my family speaks Somali, but we want you to speak in English." Where is the parent coming from? Why are they saying what they're saying? Are they disinterested in their child's development? Not at all; quite the contrary. Does the parent see a connection between infant/toddler language development and later development? Absolutely. So the reason why they want English spoken to the baby in your program is they think there will be some long-term developmental advantage.

So my first point would be to respond – to understand where the parent is coming from and acknowledge their interest. "So you're interested in your child's development. You see a connection between early language and later skills." The parent is thinking, "My child is going to go to a school. The school is English-speaking. I want my child to be successful, so let's start English as early as possible." It's a very... On the surface, it's a very logical set of ideas. But as I said earlier, where does language

development occur? Below the surface where we can't see it. Let me ask you to hold questions because I'm just getting started on this one.

So the parent sees a value to the child learning English. You can say, "Yes, we understand where you're coming from. However, if our goal is to support English acquisition, school readiness, school skills, life skills, Mr. and Mrs. Family, your home language is an essential ingredient." And the reason – you already know the answer, you already have the information of why that's so, but you may not know that you know it. So think about the five essential domains: physical development, approaches to learning, cognition, language, social-emotional. Are those domains developing separately or together?

Woman: Together.

Bob: Anybody want to say they're separate? Going once, going twice, going three times. Okay, that's the right answer. The essential domains are integrated. The OHS Framework is in the shape of a circle to show them as pieces of the pie. It would be very difficult to think of them as not integrated. So how do you respond to the family asking you to speak English to their baby?

As the child is growing up with a home language, it could be Spanish, it could be French, it could be Farsi, it could be Somali. All of those other essential domains are connected. So the child's identity, the way they think about themselves, is formed where? In the context of the home language. The words and phrases that the family uses are helping the child to understand themselves. The child's social-emotional development, how does the child understand expectations for their behavior? How does the child understand what a pro-social behavior is? How does the child understand how to greet others? In the home language.

The child's thinking skills. What are cognitive skills that infants and toddlers can develop? So between birth and age 3, what are all the cognitive skills that children are developing? Are children developing the ability to classify? So big doggy, little doggy? Are children developing the ability to categorize? So apple, banana, and oranges are examples of fruits. Dogs, cats, and fish in a bowl are examples of...

Audience: Pets.

Bob: So well before their third birthday, children are learning to classify and categorize. Children are learning directional spatial relationships, so above and below. Children are learning time concepts: before and after, today and yesterday. There are a wide range of cognitive and conceptual skills that children absolutely need for reading and for school success. Where are those skills being acquired? In the home language.

So does the child benefit if we suddenly say, "Oh, you're 2-and-a-half. Home language time is over. We're focusing on English." How does the child continue to work out issues of identity if we take away the raw material for thinking about who the child is? How does the child continue to develop their social-emotional skills if we take away their primary language? How does the child continue to make progress sorting out all of those conceptual skills if we minimize their access to the home language?

So on our website is a document called "The Office of Head Start Multicultural Principles." They were originally released by what was then the Head Start Bureau in 1991. And since then, they've been updated and revised. There's a revised document on our website. Multicultural principle six says

effective programs for children require the continued development of the home language while the acquisition of English is facilitated.

So if you have families asking for their child to hear English, help them to reframe their understanding. Start with the family's strengths, that they're already concerned with their child's education and they understand the developmental connections. But help them to see the value of the child's home language across all of the essential domains, and then help them understand that as the child develops skills in the home language, they can then transfer those skills to English once they learn the English vocabulary.

So essentially, you want to acknowledge where the parent is coming from but share the knowledge base that we have. The multicultural principles document does a much better job, cites specific research, and even looks at research on school-age children to help support the point. So school-age children who are assessed in reading in English and the proficiency of their home language, researchers have found what's called a "linear relationship" between the child's home language skill and reading in English. So the outcome variable is reading in English. That's the parent's goal. They want their child to be successful in English-speaking schools.

But in several different studies, researchers have found that the level or the degree of home language development was positively correlated with standardized reading scores in English. In other words, the children with stronger levels of home language development were actually scoring higher on standardized tests of English reading than children who had lower levels of development. The idea that one language is taking away from another language used to be very widespread. It's now obsolete. So the idea that two languages are in conflict with each other or confuse children, that is really an obsolete way of looking at things.

The neuroscience evidence is telling us that children have enough capacity to fully process the sounds, the grammar, the vocabulary of two languages. And so, we want to treat the child's home language as a resource while the acquisition of English is facilitated. So that was probably a lot longer answer than you expected getting. But hopefully that helps you to – helps orient you on how to go with this. Now, there are a number of hands up – a large number. I saw this one first, and then we'll try and be equitable as we can.

Woman: You're talking about the home language, but what happens when you have in a home that they have two languages and those two languages are the home language? I'm asking that because in my home I speak Spanish. My husband speaks English; he doesn't speak Spanish, even though he was living in my homeland for a long time. But both of our daughters got both languages at the same time, but one of them was more proficient, and she was more in both. But the other one is having more difficulties with both languages.

Bob: Okay, so there are individual differences in language development. So, children who are monolingual can experience development above norms or they can demonstrate a delayed level of acquisition. So what we know about dual language development or trilingual development is that the presence of more than one language does not cause the delay. So the child that has – some children have delays that are significant, others that are more mild.

What we see is that if a child has a language delay, it's there in both of their languages. So it's not like one is way ahead and the other is lagging behind. If the child has delays, there's no reason to withhold

one or the other of the languages, but to value both to allow the child to learn in both and then to support the child to do what? To transfer their knowledge from one language to another.

Woman: That's what I said. The therapist said, "No, you need to talk in one."

Bob: So, speech and language therapists have been trained for generations that you have to pick one language. The best resource that you can look at is the book by Fred Genesee and his colleagues. It's called "Dual Language Development and Disorders." It's available from Paul Brookes. There's an earlier version from 2004. A more recent version, I believe it's 2010. He is writing the book specifically for speech and language pathologists who were trained to think that languages interfered with each other, and therefore you had to make a choice between one or the other. Good question. By all means check out the resource. Yes.

Woman: My question is related to her question, too. There's a lot of immigrant families that kids – the older kids speak in English, right away they learn; and the younger ones, birth to 3, are catching up just to learn any language. And, like, some parents would prefer their kids to learn English first; however, is it confusing? My question is, is it confusing for those kids, since there's bilingual going on in that house, English and their native language constantly, is it okay to use those two languages since they are familiar with that?

Bob: Okay, so when you say "use two languages," do you mean they're switching back and forth? Okay, I'm glad you asked that question. I love when people ask a question that I like answering. [Laughter] So within the last few days, our center has just posted a major resource on code switching. So when we were in – somewhere – some regional conference a few years ago, this question came up and we said, "Gosh darn it, we need to do a resource." Originally, we thought it would be three or four pages. Now it's like 30 or 40 pages. But we just got it finished, just got the approval process. It's on our website. It's called "Code Switching." It addresses all of the research and all of the practice-based pieces.

So when the child switches languages, decades ago, people thought this was a really bad thing. So if you go back to the library and you look at books published in 1927 or 1933, the child will say something simple like, "Quiero jugar outside," right? "I want to go outside." Or, "Yo no quiero tomar milk." "I don't want to drink milk." Fifty years ago, 75 years ago, people said, "This is a terrible thing. Number one, it's evidence of confusion. It's a disability. It's bad. Number two, it will lead to other bad things. It will lead to mental retardation. It will lead to moral depravity." I kid you not; I mean, for some reason people thought this way.

For the last 30 years, our ability to understand this has gone in the completely opposite direction. What used to be seen as a disability is now regarded by the research community as a strength. So the child has vocabulary in one of their languages, vocabulary in another language. The child says, "Quiero jugar outside." How many languages is the child using? Two. How many ideas is the child expressing?

Audience: One.

Bob: If there was something in the baby's brain that kept them from mixing their languages, what would happen to what the child said? It would reduce the complexity of the child's language use. Fortunately, there is no such thing in the child's brain. But if there was, the child would say either, "Quiero jugar," which we don't know what that means – in the block area, outside, in the bookkeeping, you know, where? Or the child would simply say, "Outside."

So if the child was not able to mix their languages, it would reduce their expression. It would reduce the complexity of the language that they are able to produce. By combining vocabulary from two languages, children are able to express a single idea with more details. They're able to be more – to use language at a higher level. So what the resource does is that it points to infant/toddler examples as well as preschool examples. And there are two or three basic considerations for those of you working with children. Number one, expect children who are dual language learners to code switch. Once the child moves beyond the one word stage – you know, even a 14-month-old can say "delicious comida," or something like that. A simple – a simple statement.

The point that I want to make is – is that if you're looking to talk about your assessment systems – say, for example, during a five-year oversight call – you're saying we're looking to strengthen our ability to assess children and to use the information for curriculum purposes. When children code switch, they're actually demonstrating a high level of language skill. By combining vocabulary from two languages, the child, to use the sports metaphor, is at the top of their linguistic game. They're saying more by combining two languages than they could do by keeping to one or the other.

So how do you strengthen your assessment system? When children code switch, that is evidence of a strength. Now is the time to write it down, to record it, to look at the ideas that the child is using, the vocabulary, the meaning, and to use that as a source of – as a source of strength in the child, and then to use that for planning curriculum and teaching. Make sense? So...

Woman: Bob, I have a couple of questions.

Bob: Yes. Oh, very good.

Woman: The first one is: The book reference that you gave, I think, Paul Brookes? Could you repeat that?

Bob: Okay, so the author – the lead author of the 2004 book was Fred Genesee, G-E-N-E-S-E-E. If you go to the code switching resource that I'm talking about, which is if you go to ECLKC and Cultural and Linguistic Responsiveness, the Code Switching document is on our landing page. If you download the Code Switching document, it will have the complete reference.

Woman: Thank you.

Bob: That would be the easiest way.

Woman: And the other question, which you may have already answered was, could this higher level of learning using dual language be a result of the different sounds made and meaning between the languages, therefore providing more information for the child to learn?

Bob: Yes, there is that. We have particularly good research from Canada that says that children who are growing up with two languages on a consistent basis are actually acquiring skills at a more rapid rate than monolingual children. So, for example, the ability to identify words, certain very specific phonological skills, things that are called print concepts. So how does written language work? What... How do you know what a word boundary is?

The findings across several studies are that children who are growing up with two languages are actually achieving these milestones up to six months earlier than monolingual children. So eventually, children are observing written language and how it works, and they're figuring things out about written language. The child who has access to two written languages has the opportunity to make observations about how language works, so that is a possibility.

The point that I want to make is that we want to utilize instances of written language with infants and toddlers. Let me ask you to hold off just a second. So one of the slides that is in there somewhere talks about the importance of exposing infants and toddlers to written languages. So we want to read to babies; you know that already. We want to expose children, though, to a broader range of written language. So it's very common to go to Early Head Start classrooms and to see things labeled, right? Do any of you have classrooms where there's no written language? So the block area might say "block area" and something might say something. There are examples of written language throughout classrooms.

The question is, how often do the adults in the room refer to those instances of written language? So there may be an exit sign above the door. There may be a label that says this is the block area. And there may be another sign that says "área de bloques," and they're in contrasting colors, and the program spent a lot of time color coding the different areas. The point that I want to emphasize is that if the adults in the room never mention, never refer to, never deal with the written information, what message does that send to even very young children?

Woman: It's not important.

Bob: It's just sort of there in the background. So if there are ways... if you've got written language – one of the things that you can do and take back is – say, "Okay, we probably have written language in our classrooms, but how often do we refer to it; how often do we talk about it? What could we do that would be developmentally appropriate but more visible references to the examples of written language that are in our classroom?"

Woman: So they can make that connection.

Bob: Exactly. So, "I see the exit sign, the light has gone out." So even preverbal infants can follow along with, "I'm looking at that thing over there, over the door." Older children may begin to process that there are specific letters that are there. And as the child continues to develop, they may say, "This particular combination of letters means "exit" in English. It shows the way out." So we want to have examples of written language, but we want to refer to it and use it so that children can see the uses and purposes of written language even from the youngest ages.

Another question; you've been very patient; I appreciate it.

Woman: I was just going to say about... Oh, I'm sorry. I was going to say about – even though music isn't a language, it's a system of codes, and just if you could touch on that.

Bob: I was just discussing with a colleague at George Mason University. There are a number of really terrific studies within the last five years. So arts and language, music and language, very detailed. Rather sophisticated research methodologies. The findings are very common sense. Yes, it works. So whatever you can think of to use music to support children's language development – books, science, artwork – you want to integrate across the curriculum. When I was at the American Educational Research

Association Conference in 2010, there were many, many sessions on vocabulary. And there are all kinds of things that adults can do to support children's acquisition of vocabulary, even for children under the age of 3.

So reading the book is great, but there are many, many other strategies that we can use. So if you're familiar with the "read aloud" strategy, the idea that you take a book and you read it over and over in sequence – so in a two-week period you may read the book three or four times – that repetition adds to the child's learning. You're reading along and there's an unfamiliar word. The teacher stops and explains the word. That adds value. The teachers link the ideas and information in the storybook to the children's play, and vice versa, adds to the children's learning.

Teachers using music to connect with language acquisition adds to the outcomes. Science, artwork, music. Take a very... If you want to go through the studies, I will be glad to email them to you. But the common sense conclusion is that developmentally appropriate practice, using a wide – engaging infants and toddlers across all of their senses is supportive of language. And then individualizing to best meet the needs of individual children, that basic Head Start set of concepts, is being validated with the most recent research. Excellent question.

Woman: And also important to the social-emotional. That's why all these activities are healthy.

Bob: Yes, so we go back to this idea that the five essential domains are all connected. So language – when we go back to this photograph, the physical – the physical is there in many different ways. The approaches to learning, there's an ongoing attention span. The adult and the child are focusing on each other in real time. There's language. There's communication. There's the social-emotional piece. As the adult continues to talk to the child, there's that nonverbal message that, "You are important. I value you. You are safe." All those messages that we mentioned earlier on in the day are being reinforced. So infants are wonderfully designed to integrate all of their different experiences.

Woman: Bob, I have a couple of questions again.

Bob: All right.

Woman: When a child's home language is Spanish, how much percentage of English should be in the classroom for infants and toddlers?

Bob: All right, so that's a question that programs can decide. It's completely up to the program. So the requirement for English language development in Head Start is for children ages 3 to 5. So in your 3-to-5 classrooms, you've got to attend to children's English language development. That same requirement does not exist for classrooms serving children birth to 3.

So one option, if you have the resources, would be to do the classroom entirely in Spanish. That is an option. Another option would be to do some proportion in the home language and in English. So the program would want to think about what are their goals, what are their resources, how do they understand how children develop language, and then make that decision based on their own best thinking. So there is no research study that says x percent and y percent. In some cases, programs implement a 50/50 approach, where both of the languages are used on a roughly equal basis. I don't know of infant/toddler studies. For preschool-level classrooms, we have a number of research studies

on what are called "dual language classrooms," or 50/50 models, where two languages are used in roughly equal amount in the classroom.

In some cases, the teaching staff are monolingual English and monolingual Spanish. In some cases, the teachers are bilingual. In some cases, one language is done in the morning and the other language is done in the afternoon. In some cases, the one language was used one day and another language was used the next day. In one study in New Jersey, English was used for a full week and then Spanish was used for a full week. So, there are a variety of ways of doing this approach that have been studied in the research. For all of those different approaches, children demonstrated statistically significant gains in both English and in Spanish.

Woman: And then I think it plays into the next question – is, do you recommend having a bilingual teacher in the classroom to encourage the first language of the child?

Bob: Okay; so our recommendation is to assess your candidates, your applicants, and to review their ability to relate to children and to assess language ability as a key component in terms of hiring. So do we recommend it? No, we don't; because in some places, like rural Tennessee, there aren't candidates. I'm just making that up, but some places there is not the option to hire bilingual staff. Or the program approaches families and says, "Would you like to be a classroom aide?" "No, I would not." So in some... The program has to look at the circumstances of their service area. So if they are able to hire bilingual staff, they're going to want to look at the ability of that staff person to work with children and consider a range of variables. If they want to prioritize bilingual ability, they can do that. Here and then Kiera.

Woman: Hello. I just wanted to share some experiences. I have been working with Early Head Start for nine years, and – just observations. I've seen that – when I started doing Early Head Start as a home visitor, I chose to do Spanish at the home along with the home language. But I saw that the children were having a real hard time adapting to the classroom when they will start moving on to Head Start, to the point I had one of the babies that had a really bad experience because she didn't know how to say that she needed to go to the bathroom.

So then I made a decision as a home visitor to go ahead and do English and then encourage Mom to continue to educate the child with whatever words I was doing that week. And I have seen that none of my children have repeated any grade when they become kindergarten and first grade. I also have seen that, unfortunately, we lost one staff. We used to have two bilingual staff. I'm the only bilingual staff on my program. So now we have English-speaking home visitors go into these homes, and I see that the children are able to – by the time that they get to kindergarten, they're able to choose Spanish at home to be able to communicate with their parents successfully and then also be able to adapt to the classroom and be successful in the English also. So I just didn't know if there's some research to back up my observations about that.

Bob: So that was at least 10 different great observations. The point that I want to address is that there is starting to be some research on the value of English-speaking classroom teachers learning a few words and phrases of the child's home language, particularly those key survival skills like going to the bathroom, washing your hands, things like that. It supports the child outcomes. So if you are serving Spanish-speaking children, Arabic-speaking children, if you can ask within your regional associations and meetings, you know, who has those lists of survival vocabulary, a lot of programs have those. Those would be ideal to include in the transitioning of children into classrooms.

Ideally, we would want classrooms to be welcoming of children, whether they speak a little bit of English or none whatsoever. So, we would want to welcome the child. We would want teachers to recognize that they have the capacity for nonverbal communication. And so, when children need to go to the bathroom, it ought to be pretty clear what they're trying to communicate, particularly after a few minutes. So we want teachers to key in to the nonverbal behaviors, treat it as communication, get the children involved in the classroom activities, and then model English as it goes along. Kiera?

Kiera: My question is – has to do with – would you talk a little bit about the importance of the quality of English or the quality of the second language in the classroom? Does that make sense?

Bob: Okay, so the best way that I can explain it is that children benefit most from strong language models. Strong language models are frequent and the child – strong language models are extended. So if the teacher says, "Hello, I see you have new shoes. Do you want... Are you finished eating? Do you want to go play in the book area?" If the teacher is talking constantly but they're dividing their language child by child, sentence by sentence, is that really a strong language model?

What we want is the opportunity for a sustained, ongoing interaction between an individual child or a small group and an adult. We want a back-and-forth to take place. So, "I see you have new shoes on. I see this. I see that." We want to look at – we want to incorporate nonverbal communication, the child's home language, and English. We want back-and-forth extended exchanges. As that sequence of back-and-forth language and communication continues, what is the child's brain doing? They're following the topic of conversation.

So whether we're talking about what it is that we're eating for lunch or what we did on the playground or what we would like to do in the future, children benefit when there's an ongoing, extended interaction involving language. The child's memory has got to literally stretch to follow and process that information. So when it comes time to go to school and the child has got the task of reading comprehension, what is reading comprehension? It's keeping track of that logical sequence of information. So strong language models involve frequency of communication. It involves extension and repetition. It's used for a variety of purposes.

So we can use language to be creative, to have fun, to exchange information, to express feelings, to share information, to test hypotheses, to evaluate, to judge. We want our communication with children, as much as possible, even with infants and toddlers, to be multi-level and multi-purpose. The more that we can engage children on different levels, the more that they can form a mental template of, "This is what language can be like." If all the child hears is, "Now it's time to sit down. Now it's time to wash your hands. Now it's time to brush your teeth," if all of the child's language is restricted to controlling their behavior, they're not getting that full range of uses of language.

The final piece is that we want to use language with children in ways that orients them to future activity as well as past events. So we don't only want to talk about what the child is doing right now. It's fine to say you're putting the pieces of a puzzle together, you're twisting it; that's fine to do. But we also want to use language to talk about what's coming in the future. What will we do tomorrow? What will we do after nap time? We're using language to explore the future; and as much as children are able to, we want to talk about what happened in the past.

So during lunchtime, we talk about the morning's activities. On Tuesday, we talk about the field trip on Monday. We're encouraging children to use language to describe past events. When we do that, we're

naturally getting the kinds of complex grammars that are represented in written texts. So in a very short amount of time – there's a longer answer to your question, but since we're rapidly running out of time, I think that's – that's where I'll leave that.

Woman: [Indistinct]

Bob: This PowerPoint is on – yeah, it was posted a long time ago. I actually did meet the deadline; how I did that, I don't know. So by all means, look for it online. I encourage you, in the time... We only have a couple minutes left, so thank you so much. Every single comment and question was just so enjoyable. I encourage you to go to our website and look over the resources that are there. We have something called "The Importance of Home Language" series. Some of those pieces are written specifically to use with families. We've got our newest resource on code switching.

Remember, as you leave, the two different dimensions of time that are important to first and second language acquisition. So before – in the final 60 seconds before you walk out the door, remember that there are two radically different scales of time. Those second-by-second, moment-by-moment interactions between an adult and a baby. Could be a parent; it could be a family member. It could be an Early Head Start teacher; it could be someone else on staff. As that moment-by-moment interaction continues, the baby's brain is processing the language and the learning into a mental template that will then expand and serve them over time, not only to be school-ready but for success in life.

So the baby's biological capabilities are nothing short of amazing. The baby's brain takes those moment-by-moment interactions, those questions, those caresses, those touches, those observations, and links them into a long-term developmental sequence that begins prenatally, continues through the birth-to-3 period on through preschool, into the school-age years, and on to adulthood. So do you see how important your work is? Hopefully this session has been of value to you. I really enjoyed doing this, and I wish you much success in your work. [Applause]