

Teacher Talk Seeks to Discover Children's Ideas

Teacher talk within a culture of conversation is intended to foster growth, independence, and learning. In these settings, teachers talk in order to stretch young learners' thinking and understanding about themselves and about the world, and not in order to test children's knowledge or control their thinking and actions. It is the difference between a monologue delivered *at* children, and a dialogue *with* them.

Teacher talk that only seeks one right answer is called *closed*. It will not reveal a child's rich schema about a topic. For example, while a child is playing with toy animals, closed teacher talk might sound something like this:

Teacher: What animal is this?

Ruth: Horse.

Teacher: Right! What color is it?

Ruth: Black.

Teacher: Yes, but can you see another color too?

Ruth: White too.

Teacher talk that instead seeks to gain an insight into a child's prior knowledge and experience would use *open-ended* questions and comments to bring out more information. An open-ended conversation in the same situation might sound something like this:

Teacher: What's happening here?

Billy: Horse is running...

Teacher: Oh, what else?

Billy: The boy wants to go on the horse but the horse run away.

Teacher: What will happen?

Billy: He waits and his daddy will get the horse. See? [Shows the teacher a toy man representing the daddy]

Teacher: How will the daddy get the horse? It's running so fast.

Billy: The rope on the horse and the horse is tired and the daddy... he puts the rope on and the boy he gets on the horse.

In the first conversation, the teacher's questioning gave very little information about Ruth's thinking or knowledge about horses. The questions were closed and looked for very specific answers from Ruth. Her answers were either right or wrong. Ruth's teacher learned that Ruth can recognize a horse and knows some colors.

However, the second conversation reveals much more about Billy's schema. His teacher's open-ended questions were aimed at finding out as much as possible about Billy's knowledge of the animals he was playing with. The teacher learned that Billy has such understandings as: horses run fast, people ride horses, daddies help fix problems that are too big for children, and a rope can be used to get a horse. The conversation also sparked the teacher's curiosity. He had questions about Billy's schema to explore further: Is Billy's rope a lasso or a rein? Has Billy been horseback riding himself? Does Billy see his dad as someone who can fix lots of problems? What else does Billy know about riding horses? The open-ended questions such as "How will the daddy get the horse?" provoked Billy to stretch his thinking. This conversation is far more effective at gaining insight into Billy's prior knowledge. It shows interest in his ideas and it fosters learning. It also allows Billy his independent thought: the answers were Billy's, not those already in his teacher's mind, and gave Billy's teacher much more information about Billy's unique understanding of the world. He had more information about Billy to plan a curriculum with Billy in mind.

By asking closed questions, Ruth's teacher found out that Ruth can name some colors. This might be new information for the teacher and adds to what she knows about Ruth. However, it is a very limiting understanding of Ruth as a learner. It defines Ruth's ability as a learner by what she knows and can say back to the teacher. This is an example of seeing learning as the ability to copy what the teacher does, as discussed in chapter 1. On the other hand, the conversation between Billy and his teacher built a wider understanding of Billy as a learner. The open-ended questions reveal Billy's ability to imagine, to problem solve, and to use his prior knowledge in his play and therefore his ability to learn.

EXAMPLES OF CLOSED AND OPEN-ENDED QUESTIONS

CLOSED

What are you making?

Does the light come from the sun?

Is the school building tall or short?

OPEN-ENDED

Tell me about this.

How did you do that?

Where can we see light?

How do we get light?

What do you notice about the school building?

What do you see when you look at the building next door?

What do you see when you look up/down?

Why did you put the block there?

What happened when you put the block there?

What do you want the block to do?

Why do we have windows?

What do windows do?

What would it be like with no windows?

Open-ended Questions

Open-ended questions were discussed in chapter 2. When I was in college, open-ended questions were called “fat” questions, and closed questions were called “skinny” questions. What a great mental image these terms create. Fat questions create an image of expanse, sumptuousness, and abundance. Skinny questions create an image of frugality or constraint.

Open-ended (fat) questions are more likely to receive a long answer or multiple answers. They have the possibility of richness in perspective and ideas. They are “owned” by the person giving the answer because the question does not seek a definitive, one-right answer.

Closed (skinny) questions have only one right answer. “Guess what’s in the teacher’s head” questions exemplify this because the teacher already knows the answer he’s looking for. Closed questions often block different perspectives or alternative ideas to those of the questioner. The answer is “owned” by the questioner, not necessarily by the person giving the response.

It is important to understand how open-ended and closed questions create or limit possibilities and multiple ideas. Then you can see how important it is to pay attention to asking more open-ended questions when your goal is to uncover children’s thinking.

Closed questions can lead children to a particular idea and, in doing so, lead them away from their own original thoughts. It is important for teachers to be aware of how they may unwittingly lead children to think the way they do, or unknowingly lead one child to connect to an idea from another child when it might not have the same meaning for both children. Teachers sometimes put words into children’s mouths when they expect children to think in their adult terms.

For example, during the following conversation with four-year-old Alice, I made an assumption based on my own schema, and it did not match hers.

Alice: My brain's a balloon.

Lisa (adult): A balloon?

Alice: Yep, a big balloon. [giggling]

Lisa: So it gets bigger like a balloon does? How interesting. How does the brain get bigger?

Alice: No... it's round like a balloon. See? [shows me her drawing]

Alice had the confidence to tell me my understanding was incorrect, but it made me wonder how often I do the same thing to other children I teach. Perhaps they don't have Alice's confidence to tell me I don't understand. I can now see how my question "So it gets bigger like a balloon does?" led Alice in a particular direction, which in this case was not the direction she was headed. It is a closed question—she could answer yes or no—but it is also a leading question. It led her to my understanding, *my* idea, *my* schema about the brain and balloons; not her idea.

This brief conversation with Alice alerted me to be more careful about assuming I know what children mean by their metaphors and language. By remaining clear that your purpose is to uncover children's thinking, to be a researcher of their mind's workings, you are more likely to be alert to questions that might lead children in a less than meaningful direction for them.

Questions That Delve Deeper into Children's Thinking

Some questions are open and specifically seek to get more detail or more information. They are like a mini bulldozer, gently digging at the ground to uncover the layers beneath the topsoil. These are the most helpful kinds of questions when you want to understand children's thinking. Delving questions search for more information. If I could rewind and have the same conversation with Alice again, I would change my question to one that was more open-ended and that sought to delve into her ideas, such as:

Alice: My brain's a balloon.

Lisa: How is that? Tell me more.

Or in this example, from an instance when Alice and her friend Isobel were blowing bubbles outside:

Lisa: Why do you think the bubbles just burst like that?

Isobel: Because they're not that strong and they can't fly really well.

Lisa: Oh, why do you think they're not strong?

Isobel: They're just sort of plastic.

Lisa: What could make them stronger?

Alice: Metal!

The purpose of my questioning here was not to get the girls to give me a response that I already knew. I was not trying to get them to guess what was in my head or what the adult explanation was. If that was my purpose, I would have decided that the bubbles burst because they connected with the grass, and I would have questioned until the girls gave me that answer. Instead, I wanted to find out what *they* thought about the bubbles bursting. I was interested in discovering their ideas, their emerging theories of the world. By finding out their schema like this, I got a view into their understanding or misunderstanding. I wanted to find out if they made connections between other phenomena and the bubbles (as Alice did in connecting her schema that metal is strong, so adding it would make the bubbles stronger).

Other times your purpose for questioning will be to scaffold young children's thinking so they learn to make a hypothesis. You will then want to guide them to think about the hypothesis in terms of their other knowledge of the world, or perhaps to support them to plan ways to test out their hypothesis. Your questions will then guide children to think through ideas, wonder about them, come up with a possible explanation, and then continue thinking or exploring the idea. In doing so, you guide children to learn *how to learn*.

The following conversation shows an example of how this might sound in your learning environment. A small group of children are making shadows by placing different items on an overhead projector, which projects the shadow onto a wall in their learning space.

Teacher: How can we save this shadow?

Jason: Can't save the shadow because the sun changes because it's dark at nighttime.

Caleb: Turn off all the lights, we can't save it, then it goes away and put the lights on and it's a different shadow.

Brian: Save if we draw it.

Chloe: Yeah, draw it.

Teacher: How can we work it out? Shall we try one of those things?

Brian: We can draw it.

Chloe

and Caleb: Yeah!

Teacher: So what do we need to get?

Caleb: Paper. And markers. They'll work.

Teacher: What kind of paper do you need? Let's go to the shelf and see which paper will be best.

The teacher supports the children as they choose the size of paper appropriate to the shadow they want to draw. He allows them to try two different sizes before they find one large enough to capture the whole shape.

On subsequent days this teacher could return to Caleb's original idea expressed here: "Turn off all the lights, we can't save it, then it goes away and put the lights on and it's a different shadow." He can ask the children, "How can we discover if the shadows are different each time we turn the light on and off?" His question provokes new thinking, stretches children's ideas about shadows, and also provides opportunity to learn strategies for exploring and researching.

Questions That Clarity and Focus Ideas

There will be times during conversations when you do not understand what a child is trying to communicate to you. Don't be afraid to say, "I don't quite understand. Can you tell me again?" or "I think I'm a bit confused. Tell me more about that." Within your secure and trusting environment and from your consistent interactions with them, children will learn this questioning for clarification is a normal part of conversation. They will become very comfortable clarifying or explaining their thinking to you because you are always interested in understanding *them*, not testing if they know something. They won't be like many of us were in our schooling, when we would freeze if a teacher told us he didn't understand. The children will understand that you see it as your responsibility to understand them. Asking children for more information is a powerful sign of respect for their ideas.

In order to clarify what a child is saying, it sometimes helps to rephrase what they have said in slightly different ways or using slightly different vocabulary. Often when we think aloud as adults, our ideas are not expressed in a succinct and clear way, and young children are no different. When you listen carefully beyond the words to the *ideas* the child is expressing, you can often support the child to bring clarity to her own thinking by rephrasing what she has said. This can clarify your own understanding and can also clarify the ideas for the child.

Be careful to choose vocabulary that children are familiar with, so that in rephrasing, the child's initial meaning is not lost or changed by words new to the child. This example is from a small-group facilitated conversation with some four-year-olds who were exploring shadows in a long-term inquiry.

Lisa (adult): We looked at shadows in the playground yesterday, remember? So what about today? What do you see today?

Adam: No shadows today.

Chloe: Can't see shadows today.

Lisa: Why do you think there are no shadows today?

Adam: Cause it's raining.

Lisa: Oh, it's raining?

Adam: Yeah and all wet. My shoes got all wet.

Lisa: [waits] Oh, so your shoes got wet when you came to school?

[Adam nods his head]

Lisa: [waits] So why do you think there are no shadows today?

Binh: The sun takes them.

Areulia: No sun.

Rachelle: When the people walk, the shadows follow them.

Chloe: The moon casts a shadow and that can make a shadow.

Rachelle: I moved my hand and I saw my shadow come back!

As we can see in this example, it was a useful strategy to repeat the initial question. It helped other children participate in the conversation and to keep it on topic. Once you have allowed time for thinking, but silence and body language indicate there is no further information forthcoming, you can repeat the same question in a different tone or with different body language. You might repeat it more slowly, or with a more gentle or upbeat tone. You might repeat the question but turn your body to face other children if you felt that the question had initially been directed at one particular person. In repeating the question "Why do you think there are no shadows today?" my aim was to keep the conversation focused and to ensure the question had been given the time and thought it deserved. I wanted to find out what the children's ideas about shadows were, whatever they were. Their answers did not have to match my own ideas about shadows. I repeated the question to support the sharing of ideas. Repeating the question can give more thinking time and therefore more response and participation from the children.

You will also notice there were times where I waited before making my next response. It is a delicate balancing act to decide when and how often to repeat a

question to focus the conversation or draw more children into it. The key is to know the children well. Then you will be better able to read their body language and understand their disposition and prior knowledge. These things will guide you to ask questions that support the conversation, rather than hindering it.

Questions That Connect Experiences or Ideas

We have explored an understanding of learning as making connections between prior knowledge and new experiences or ideas. Therefore, it makes sense to ask questions that will help children make such connections for themselves. Teachers can hypothesize about the connections children are making, but asking the children for their ideas or opinions provides far more information about how children are thinking. Listening to children's responses helps teachers see how clear these connections are within children's minds. Connecting questions serves as a bridge between experiences that can otherwise remain isolated activities. For example, the following conversation occurred when Isobel and Alice were drawing their memories of blowing bubbles in the backyard:

Isobel: I'm drawing the bubbles.

Alice: Me too.

[Silence for a few moments while the girls draw.]

Lisa: Do you remember what we saw inside the bubbles?

Alice: A rainbow!

Isobel: Yeah! A rainbow! I'm going to draw the rainbow now.

Alice: I did a little bubble in another one. Remember when that happened, Lisa? It's the tiniest one. [referring to her drawing]

[the girls continue to draw for a few minutes]

Lisa: Where did the bubbles come from again?

Isobel: We blew them! I'm going to draw me blowing the bubbles now.

These questions helped the girls reconnect with a prior experience and sparked new ideas for their drawings. This next example shows questions that helped the girls connect their observations of the bubbles to their prior knowledge about the world:

Lisa: Issy, what did you say about how the bubbles look again?

Isobel: They're round.

Alice: And they have rainbows.

Lisa: Oh that's right, now I remember. [waits] So the bubbles were round. Hmmmm . . . What does that make you think of? . . . The bubbles were round? Did they look like something else? [waits]

Alice: A ball is round.

Isobel: And one of them looked like the world one.

Lisa: It looked like the world? How?

Isobel: Cause it's kind of a jelly beans shape.

Alice: Jelly beans? They're not round.

My questions were intended to stretch the girls' thinking about the characteristics of bubbles by asking them to think of how the bubbles are like other round things they know. Asking a question to connect their ideas to their knowledge about the world (in this case, about roundness) can support children's thinking across different experiences and begin to integrate their ideas (in this case, their ideas about the shape of balls, the globe, jelly beans, and bubbles). The question "Did they look like something else?" connects the bubbles to other round things without expecting a particular answer. The girls were open to respond with any kind of object, and their responses gave me new information about their schema. It led them to make a connection, but did not lead them to my own adult view of the world. At the end of this transcript, the girls proceeded to draw the bubble "like the world one" and Isobel showed us how the "jelly beans shape" referred to her image of land drawn on a globe.