

## Tutorial: Conversation & Cognition

### WHAT IS A CONVERSATIONAL APPROACH TO COGNITIVE FACILITATION?

Studies of cognitive development in children have demonstrated the profound effects of the conversational style of parents and other adults on the subsequent development of cognitive abilities in children. Children learn to think, remember, plan, and organize their thoughts and their language in part as a result of interactions with adults and other, more proficient, children. When these conversational interactions are well conceived and implemented, the child's cognitive growth results from internalizing the thoughtfulness that is present in the interaction. In other words, adults teach their children how to think much as Socrates taught his philosophy students how to think and religious leaders teach their disciples how to think – by interacting with them in a way that reveals higher levels of thoughtfulness.

These cognition-enhancing interactions can be about any topic and take place at any time. Many families organize dinner time in a way that allows for conversations about topics of interest to the students. And bed time reading is another ideal occasion to engage in these positive conversations. Dinner time and bed time conversations may be the best occasions over the course of the day for truly effective “cognitive rehabilitation”.

A positive style of interaction that contributes to the child's cognitive growth has three important features:

1. **Collaboration:** These conversations are not thought of as an opportunity to have the child perform and answer a string of “testing” questions. Rather the adult engages the child as a partner – a collaborator – in exploring topics and talking about important matters. The tone is, “We are doing this together; we will help each other; we will have a good time.”
2. **Elaboration:** While engaged in these conversations, adults maintain and extend topics, showing the child the many ways in which things and events in the world can be understood. Thoughtfulness emerges in the interaction, a thoughtfulness that the child gradually appropriates and makes his own thinking system.
3. **Fun:** These conversations should be considered fun and not work or drudgery.

### WHY IS A CONVERSATIONAL APPROACH TO COGNITIVE FACILITATION IMPORTANT FOR MANY STUDENTS AFTER TBI?

Collaborative and elaborative interactions with adults are important for all children. However, they are particularly important for students with TBI for several reasons. First, these students typically have cognitive impairments in the domains of organization, memory, and planning, domains to which collaborative and elaborative conversations are known to contribute in a positive way. Second, these students experience a great deal of failure and frustration compared with the ease with which they could do things before the injury. Therefore interaction that is not “interrogational” – in which there is no performance and no failure – is important for these students. Third, students with brain injury have considerable difficulty transferring cognitive skills from training contexts to real-world contexts. Therefore, using real-world interactions about real-world topics is an ideal context for this “cognitive rehabilitation”.

## WHAT ARE THE MAIN THEMES IN A CONVERSATIONAL APPROACH TO COGNITIVE FACILITATION?

### **Video Introduction to Conversation and Cognition**

### **Video Illustration: Conversation Between a Preschooler and His Dad**

### **Video Illustration: Conversation Between Two Older Boys and Their Dad**

### **Video Illustration: Conversation Between Two Older Boys**

The following lists of conversational procedures – general procedures, collaboration procedures, and elaboration procedures – can be used by parents and teachers as a guide to how they can turn everyday interaction at the dinner table or in the car or anywhere into high quality cognitive facilitation for the student. Parents and teachers who have gotten into the habit of “performance-oriented interactions” (e.g., quizzing the student) report that it takes a great deal of practice and discipline to become competent in use of these with these positive conversational approaches. These parents also report that when they do become “competent”, they enjoy their interactions with children more and see the positive effects on the children.

A topic that many parents like to talk about with their children is the day at school. Unfortunately, the question, “What did you do at school today, John?” is usually followed by a terse, “nothing.” Therefore, at the elementary school level, staff are urged to make photo albums of all the places and events in the school to send home with the students to serve as retrieval cues during conversations about the school day. In addition, teachers are encouraged to write a list of the day’s activities at the end of the day, duplicate the list, and send it home with the students. In this way, parents know what happened in school, the child has the visual photo retrieval cues, and an enjoyable collaborative and elaborative conversation about the day at school is possible at the dinner table.

**GENERAL PROCEDURES:** Facilitating conversation should always focus on parents and teachers:

1. Being playful and showing enjoyment (e.g., joking, teasing, playing with words, laughing, acting animated)
2. Using the language of thinking and organizing (e.g., “Let’s think about that” “Let’s try to organize – connect these things”) and remembering (e.g., “I didn’t remember that; but now that you reminded me, I do remember.”)

**COLLABORATION PROCEDURES:** Parents and teachers can model conversational approaches to cognitive facilitation by engaging the student in a collaborative exchange. In these conversations, the adult does the following:

#### **Collaborative Intent**

1. Shares information versus routinely asking questions or in other ways testing the child
2. Uses collaborative talk (e.g., “Let’s think about this”) versus talking like a trainer
3. Communicates understanding of student’s contribution (e.g., “I see what you’re saying; that’s a good idea”)
4. Invites the student to evaluate his own contribution (e.g., “What do you think about that; does it sound right to you?”)
5. Confirms the student’s contributions (e.g., “You’re exactly right about that”)
6. Shows enthusiasm for the student’s contributions (e.g., “I like the way you think!”)
7. Makes effort to establish equal leadership roles (e.g., “Let’s think about this the way you want to think about it.”)

#### **Collaborative Support**

1. Gives information when needed, within statements or questions (e.g., "I think you were probably tired at the time, which is why you got upset") versus ongoing quizzing
2. Makes available memory and organization supports (e.g., calendar, photos, graphic planning systems, memory book, gestures)
3. Gives cues in a conversational manner (e.g., "If I'm not mistaken, the first thing you do at school is reading, right?")
4. Responds to errors by giving correct information in a nonthreatening, nonpunitive manner (e.g., "I remember that differently; I remember ...").

### **Emotional Support**

1. Communicates respects for the student's concerns, perspectives and abilities (e.g., "I know that in your head it's a big deal – and that makes sense to me")
2. Explicitly acknowledges difficulty of the task (e.g. "It's hard to put all these things in order, isn't it?")

### **Positive Style of Questions**

1. Asks questions in a non-demanding manner (e.g., "Could you help me understand why ...")
2. Asks questions in a supportive manner (e.g., questions include needed cues: "Do you need to get the paint first?" versus "What are you supposed to do first?")

### **Collaborative Turn-Taking**

1. Takes appropriate conversational turns versus interrupting or shifting topics abruptly
2. Helps the student express his thoughts when difficulties arise (e.g. word finding difficulties)

**ELABORATION PROCEDURES:** Parents and teachers can facilitate cognitive development by modeling ways to elaborate conversations. In these conversations, the adult does the following:

### **Elaboration of Topics**

1. Introduces/initiates topics of interest with potential for elaboration
2. Maintains the topic for many turns versus rapid shifts of topics
3. Contributes many pieces of information per topic; connects more and more pieces of information
4. Invites elaboration (e.g., "I wonder what would happen if ...").

### **Elaborative Organization**

1. Conversationally organizes information as clearly as possible
  1. sequential order of events (e.g., First we..., then we...")
  2. physical causality (e.g. "The radio's not working because it got wet.")
  3. psychological causality (e.g., "Maybe you don't want to do it because you're scared.")
  4. similarity & difference (e.g., "Yes, they're the same because...; they're different because")
  5. analogy & association (e.g., "That reminds me of... because...")
2. Reviews the organization of information (e.g., "Hold on; we've talked about a lot of things; let's see if we can put it all together.")
3. Makes connections when topics change (e.g., "I think you brought this up now because you saw a connection between .... and .....")
4. Makes connections among day to day conversational themes (e.g., This reminds me of something we talked about yesterday at dinner...")

## Elaborative Explanation

1. Conversationally adds explanation for events (e.g., "Maybe the fact that you were sick at the time had something to do with it.")
2. Invites explanations for events (e.g., "Why do you think that happened?")
3. Invites discussion of problems and solutions (e.g., "I wonder whether we can think of a better way to handle this if it comes up again.")
4. Reflects on the student's physical and psychological states (e.g., "You must have felt miserable about that") and invites the student to reflect on her physical and psychological states (e.g., "Can you tell me how you felt about that?").

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