What is Academic Discourse and Why Is It Important?

One of the **most important** components that will help you build an effective science inquiry program in your classroom is your ability to facilitate productive, lively, teacher-to-child, child-to-teacher, and child-to-child interactive, high-level, academic discourse.

**What is academic discourse and how is “academic discourse” any different than the talk that already occurs in my classroom?**

One way to think about academic discourse is to consider the different types of conversations we engage in every day. We conversationally engage with each other using a range of discourse styles, ranging from very informal conversations to high-level academic discourse.

The most casual form of talk is the informal conversations we use in everyday talking to family and friends (i.e., where we generally assume that the listener understands much of what we say without our being explicit). In this case, we often make reference to an activity or object that is present in the environment, and we typically assume the listener knows the context, or would ask for more information, if needed.

Here is an example of casual talk - I come in from the back door and say to my husband (who is “very into” measuring the amount of rain we get because he is “very into” maintaining his lawn!). “We really got a lot last night.” I use very non-specific language—no one would know (other than my husband) what I was talking about, because they would have to know that the rain gauge is next to the back door and that this is a familiar topic!

In the middle (somewhere between our most casual form of talking and academic language) is the form of communication during which we become somewhat more formal (use longer, complete sentences, avoid slang, more specific word choice) so that the listener is clear about our meaning. We typically provide more information, and do not assume that the listener has shared background information. As an example, I might switch to this “somewhat more explicit and more formal” kind of talk when I am talking to the person who applies my lawn fertilizer treatment. I use sentence structure that is more carefully constructed such as -- "I am thinking about ......” “I wonder if you could....” - and I track that the listener understands the ideas that I am communicating. This is likely the form of discourse that you use most frequently with the children in your classroom. You are clear in your communication style, but as in this example, the speaker sticks with the “here and now” -- the situation that is occurring in the present --and the speaker attempts to use clear (versus complex) word choice to increase understanding.
Finally, we come to the kind of talk we strive to facilitate during science inquiry. This is academic language (sometimes referred to as “productive talk”). Academic language is a higher, cognitively demanding level of talk that is used when we make a prediction about a future event, where we explain our reasoning, when we respectfully disagree with someone and learn to discuss differences in a productive way, and when we synthesize varying data points and ideas to formulate a conclusion.

Example: Imagine you are leading a unit on weather and you are discussing the impact of precipitation on the farmers’ crops in your community. You might say to your class, “The weather bureau is predicting that we will be experiencing a drought in the next two months and we will have record high temperatures. We grow a lot of red raspberries in our community, what do you predict will happen to our raspberry crops this July?”

It is this third level of language that is required to participate in higher level of thinking and practice is required to become proficient in academic discourse as compared to everyday communication. More sophisticated vocabulary is required and demands on higher level thinking comes into play during academic discourse.

• A summary: What is academic discourse?
  o Academic discourse is high-level, collaborative, productive dialogue used to express complex ideas, communicate reasoning, justify conclusions, and solve problems
  o Teachers must model and strategically instruct students in the use of academic language so that students learn what it sounds and look like
  o Young children must practice the sentence structure, vocabulary, and social practices foundational to academic discourse

An Important Side Note!
When children become more proficient in using academic language – research shows that children’s academic performance increases in other domains, such as literacy and math. As you see here many of the common core standards focus on academic discourse skills. When you work on science inquiry, you also target these important literacy and math goals.
In order to facilitate academic language we want to start moving towards more open questions (as compared to closed questions) and we want to focus more frequently on high-cognitive demand discourse prompts (rather than focusing on lower-level cognitive tasks).

A closed question is a question that can be answered with one word or only a couple words. Often when adults use closed questions they are looking for the right answer. Many closed questions start with “What” (e.g., What’s another word for "rain" or "snow").

An important goal for science inquiry is for teachers to foster language in their classrooms that allows children to DO something with ideas. To ask children to reason. To do that we have to use open-ended questions. In open ended questions, the child has to answer with longer sentences, and there can be many right answers. Many open-ended questions start with “why” or “how.” Much more intellectual work takes place in response to an open-ended question.
Another important instructional strategy is moving towards high-level cognitive focus. For our students to be successful in the science and engineering practices – the SEPS – one of the dimensions of our 3D model of science learning -- children must learn how to think beyond rote facts and definitions of science content. They have to learn how to **predict** or **hypothesize**, or give **reasons** why they think a phenomenon is happening during their investigations. This kind of thinking is considered **high-level thinking** -- children have to learn how to infer or predict beyond the here and now. In high-level thinking, children have to reason and **do** something with their ideas.

- **As an example,** think about if the teacher asks, "Why do you think that happened?" Here the child is asked to provide evidence and also has to start using words like "because" ("I think the red ball will go faster because this ramp is very steep and the other ramp is not steep."). Using the causal language of "because" – making a prediction, thinking about cause-and-effect-- is an example of higher-level talk.

- **When a teacher promotes higher-level thinking** via open-ended questions and by asking more questions beyond the recall of basic facts -- we are prompting the child to connect her ideas to the scientific concepts. So, as you can see, with high-level focus of conversation we are asking children to: unpack an idea in their own words, compare or contrast ideas, solve novel problems, justify an explanation, use evidence to support a claim. A **focus on higher cognitive demand** serves as a catalyst for developing children’s reasoning and deeper thinking about science phenomena.

**Let's review**

- Use appropriate wait time
- Revoice/restate others' ideas
- Prompt students to elaborate their ideas
- Ask students to explain their reasoning
- Ask students to restate someone else's reasoning
- Help children evaluate and (sometimes) respectfully disagree with other’s ideas
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What Classroom Strategies Can I Use to Facilitate Children's Use of Academic Language?

A powerful technique is to practice turn-and-talk with your students. Turn-and-Talk is a discourse support strategy that gives your students opportunities to share their thinking with each other, practice verbalizing their thinking, and facilitates scaffolding of student understanding. Many of you know and probably use the think-pair-share strategy. Think-pair-share is a helpful strategy to improve student time to think, discuss, and then “share out” ideas. Turn-and-talk is similar – but somewhat different – in that in turn-and-talk we explicitly teach children:

- **HOW** to talk to each other.
- **WHAT** good conversational partners do when they are communicating.
- **LISTEN** as well as talk.
- a **FOUNDATIONAL STRATEGY** to introduce to children what “TALKING” in a classroom should look like.

Turn-and-talk is taught by modeling and explicitly teaching conversation skills. The use of “sentence stems” or “sentence starters” goes hand-in-hand with turn-and-talk.

You will view a video of a classroom teacher, Ms. Simpson whose students use turn-and-talk during her classroom discussion on math concepts. Ms. Simpson asks: “Say WHAT you think the answer is and WHY you think that” and then asks the children to turn to their turn-and-talk partner to discuss this idea. The turn-and-talk session was followed by a whole class discussion.

Good practices to emphasize
- Low voice
- Look at partner
- Listen to partner

It is recommended that the teacher should strategically pair students. Children tend to improve the most when they practice with someone who is AT or SLIGHTLY higher level of language/conversational skill.

Classroom Strategies

To facilitating student’s level
High-Level Discourse

- Turn-and-Talk
- Sentence Stems (sometimes called sentence starters)
- Practicing social conventions for peer-to-peer discourse (i.e., classroom rules)
Here is an example of a sentence stem chart that a teacher could use (and post) in the classroom to remind students of the appropriate stems to use when they are asked to make a CLAIM, discuss their EVIDENCE, or make an "EXPLANATION."

Remember that this higher level of talk will be developed slowly and students will need a lot of practice using these stems.

Once students are familiar with these stems during TURN AND TALK, they can use these sentence starters during whole class discussions. You will use WAIT TIME and TALK MOVES to deepen the discussion and to prompt children to elaborate their ideas, give reasons for their thinking, and to RESTATE, ADD ON, or GIVE NEW IDEAS in response to their classmates’ comments.

Thanks for taking the time to review this background material before our discussion!