

# How to Get Started: Teacher Strategies for Opening Up Classroom Talk

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**Classroom Discussion/Dialogue as Part  
of Talk Repertoire**



**What and Who Makes Productive  
Classroom Dialogue/Discussion?**



**How can Teachers Promote and Sustain  
Productive Dialogue/Discussion?**



**Productive Dialogue/Discussion in a  
Science (and Social Studies) Classroom**



**Building a Classroom Culture for  
Productive Dialogue/Discussion**

# Assumptions and Goals of Workshop

- To implement a more open, ‘articulate’ classroom is challenging. Shifting one’s interaction patterns in line with more student-centred and inquiry-focused curricula requires ‘a radical transformation of the inherited culture of classroom talk and the attendant assumptions about the relationship between teacher and taught’ (Alexander, 2008, p. 117).
- This workshop does not teach you a ‘right method’ to effective talk in your classroom but a broad repertoire of communicative strategies and practices that are required by the more complex goals and tasks of 21<sup>st</sup> century learning and work environments.
- If your current ways of interacting with your students have been mainly expository or closed question/answer/evaluation driven, you have not been ‘doing the wrong things’. Rather, you have been facilitating your students’ learning in selective ways, and will now be able to broaden the range of talk formats to include talk that can promote more productive engaged disciplinary learning among your students.

# Assumptions and Goals of Workshop

- **Creating a more articulate classroom aligns with, and supports concurrent MoE initiatives like TLLM, 21st CS, AfL, Every learner an engaged learner, and Collaborative and Cooperative Learning, all of which aim to promote students' deeper thinking and learning through talk.**
- **This workshop can begin to help you make more sense of rather ill-defined descriptions in your different subject syllabi about the kinds of cognitive skills and dispositions you are supposed to impart your students.**

# What Makes Productive Classroom Dialogue/Discussion?

- **Accountability to Others:** Talk that seriously attends to and builds on the ideas of others.
- **Accountability to Knowledge:** Talk that makes effort to get facts right and make explicit evidence (from facts, texts or other public information) behind claims and explanations.
- **Accountability to Standards of Reasoning:** Talk that emphasizes explanations, logical connections and the drawing of reasonable conclusions.

(Michaels, O'Connor & Resnick, 2005)

# Properties of Academically Productive Dialogue/Discussion

- **Collective:** members of the class address of learning tasks together, as group or class
  - **Reciprocal:** teachers and students listen to each other, share ideas and consider alternative viewpoints
  - **Supportive:** students articulate viewpoints freely, without fearing embarrassment over 'wrong' answers, and help each other reach common understandings
- 
- **Cumulative:** teacher and students build on their own and each other's ideas and chain them into extended, coherent lines of thinking
  - **Purposeful:** teachers plan and steer classroom talk with specific academic goals and learning objectives in mind. (Alexander, 2008)

PD research findings (Alexander, 2005): Acid test of dialogic teaching and learning, and most difficult to achieve: *cumulation*, as even the most refined and searching questioning technique is pointless if teachers do nothing with the answer except evaluate it as right, wrong or interesting.

# Who Makes Productive Classroom Dialogue/Discussion?

Creating opportunities for productive discussion will require learning and complex orchestration on the part of teachers.

- How to select and set up cognitively challenging tasks or questions that can provide the grist for worthwhile discussions?
- How do I support my students as they engage with and discuss their various solutions to these challenging tasks?
- How do I find a way to make sure that while they all get to see themselves as legitimate contributors to the talk they also reach the necessary learning goal: perhaps a particular solution or interpretation that will lead to the next step?

# Teacher Moves to Promote Class/Group Dialogue/Discussion

## Four Steps towards Academically Productive Discussions/Dialogue

- Helping individual students share, expand and clarify their own thoughts
- Helping students listen and orient to the thinking of other students
- Helping students deepen their reasoning
- Helping students engage with each other's reasoning.



Look at  
TERC  
Handout



## **Goals for Productive Discussions and Nine Talk Moves**

### **Goal: Individual students share, expand and clarify their own thinking**

#### **1. Time to Think:**

Partner Talk

Writing as Think Time

Wait Time

#### **2. Say More:**

"Can you say more about that?" "What do you mean by that?" "Can you give an example?"

#### **3. So, Are You Saying...?:**

"So, let me see if I've got what you're saying. Are you saying...?" (always leaving space for the original student to agree or disagree and say more)

### **Goal: Students listen carefully to one another**

#### **4. Who Can Rephrase or Repeat?**

"Who can repeat what Javon just said or put it into their own words?" (After a partner talk) "What did your partner say?"

### **Goal: Students deepen their reasoning**

#### **5. Asking for Evidence or Reasoning:**

"Why do you think that?" "What's your evidence?" "How did you arrive at that conclusion?"

"Is there anything in the text that made you think that?"

#### **6. Challenge or Counterexample:**

"Does it always work that way?" "How does that idea square with Sonia's example?"

"What if it had been a copper cube instead?"

### **Goal: Students think with others**

#### **7. Agree/Disagree and Why?:**

"Do you agree/disagree? (And why?)" "Are you saying the same thing as Jelya or something different, and if it's different, how is it different?" "What do people think about what Vannia said?"

"Does anyone want to respond to that idea?"

#### **8. Add On:**

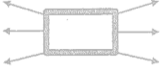

"Who can add onto the idea that Jamal is building?"


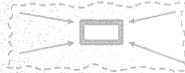
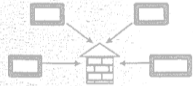
"Can anyone take that suggestion and push it a little further?"

#### **9. Explaining What Someone Else Means:**

"Who can explain what Aisha means when she says that?" "Who thinks they could explain in their words why Simon came up with that answer?" "Why do you think he said that?"

Figure 2.1 Core Academic Conversation Skills, with Symbols, Hand Motions, Prompt Frames, and Response Frames

Conversation Skills <i>(with symbols and hand motions)</i>	Frames for Prompting the Skill	Frames for Responding
<b>Elaborate and Clarify</b>  <i>(Pull hands apart)</i>	Can you elaborate on ...? What do you mean by ...? Can you tell me more about ...? What makes you think that? Can you clarify the part about ...? Can you be more specific? How so? How/Why is that important? I'd love to hear more about ... How does that connect to ...? I wonder if ... How so? Can you unpack that for me? I am a little confused about the part ...	I think it means that ... In other words, ... I believe that ... An analogy for this might be ... It is important because ... It's similar to when ...
<b>Support Ideas with Examples</b> (from this text, other texts, the world, and life)  <i>(Point thumb and three fingers up and place palm of other hand on top like a table; or point one index finger to the tip of the pinky of the other hand)</i>	Can you give an example from the text? Can you show me where it says that? What are examples from other texts? What is a real-world example? What is an example from your life? Are there any cases of that? What is the evidence for that ...? Like what? Why do you say that? How do you justify that? What does that look like? Such as? What would illustrate that? Why is that a good example?	For example, ... In the text it said that ... One case showed that ... An example from my life is ... For instance, ... According to ... An illustration of this could be ... On one occasion ... In this situation ... To demonstrate, ... In fact, ... Indeed, ... ... such as ... Have you ever ...?

<b>Build On and/or Challenge a Partner's Idea</b>  <i>(Layer hands on each other and build up)</i>	How can we relate what I said to ... How can we relate what I said to ... topic/question? What do we know so far? What is your take on what I said? I don't know. Did that make sense? What are you hearing?	I ... that ...? In a nutshell, you are arguing that ... In other words ... What I am hearing is ... Essentially, you think that ... It sounds like you are saying that ...
<b>Paraphrase</b>  <i>(Move both palms toward each other)</i>	How can we relate what I said to ... How can we relate what I said to ... topic/question? What do we know so far? What is your take on what I said? I don't know. Did that make sense? What are you hearing?	I ... that ...? In a nutshell, you are arguing that ... In other words ... What I am hearing is ... Essentially, you think that ... It sounds like you are saying that ...
<b>Synthesize Conversation Points</b>  <i>(Start both arms out wide and then cup them into a ball)</i>	What have we discussed so far? How should we synthesize what we talked about? How can we bring this all together? What can we agree upon? What main points can we share? What was our original question? What key idea can we take away?	We can say that ... The main theme/point seems to be ... As a result of this conversation, we think that we should ... How does this sound ...? What if we ...? The evidence seems to suggest that ...

- Principles frame these dialogic skills:**
- (1) Each skill is a double skill: appropriate prompting of addressee, and effectively responding to addresser's prompting
  - (2) Each skill requires good listening and attempting to understand what is being said
  - (3) Each exchange should have a clear academic destination vital for content area learning and make progress towards it.

# Why Focus on Follow-Up Moves and not Initial Teacher Questions?

**“It is not the type of question that a teacher asks that limits or opens up pupils’ response. Rather it is the feedback/follow-up given in reaction to pupil responses ... which either opens or restricts classroom interaction. Using such conversational moves as regular alternatives to evaluative ‘yes’ or ‘no’ or ‘right’ or ‘wrong’ will lead pupils to expect the purpose of teacher questions as a tool to focus their minds on a problem to be jointly discussed and solved.”**

**(Smith & Higgins, 2009, p. 500)**

# Mrs B's Primary 3 Science Class

## Context:

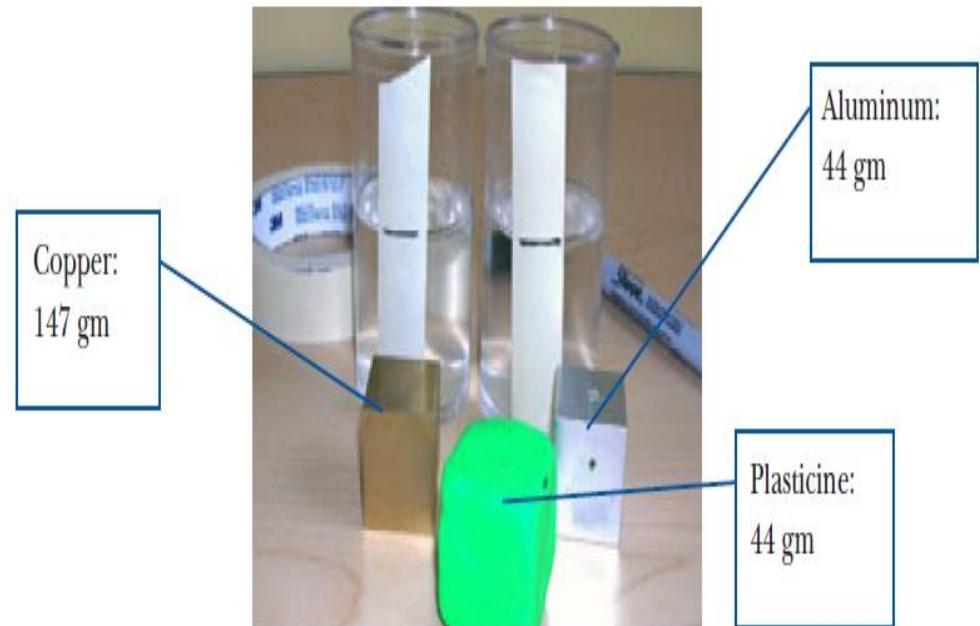
Investigating Water Displacement

## Learning Goal:

What property of a sunken object, volume or weight, causes the water level to rise

## Prior Learning:

Volume does not depend on weight and vice versa.



Classroom data adapted from Michaels & O'Connor (2012).

# Mrs B's Primary 3 Science Class

## Structure of Lesson:

Launch -> Explore -> Discuss and Consolidate

## Teacher's Rich Framing Question:

*Mrs B: Well today we're going to take those ideas of what we learned about weight and volume and think about them in a different way. Our big question for today is, what causes the water level to rise? When you put an object in water, like this stone here, what causes the water level to rise? Is it weight or is it volume? Let's explore this.*

# It's not just a matter of improvising, of diagnosing student thinking on the fly....

- While in-the-moment responses and feedback is important, the degree of improvisation required by teachers can be moderated through planning:
- Prior to opening the discussion Mrs B had
  - **Anticipated** her students' likely responses to the task
  - **Monitored** their groupwork by circulating and carefully attending to what they did and the range of strategies different students used.
  - **Selected** particular students to share their ideas with the rest of the class, in order to have more control over the discussion and guided by the learning goal for the lesson
  - **Arranged** the order in which they were to share their ideas so that she could maximize the chances of achieving the learning goals for the discussion.

# Step 1: Helping individual students clarify, expand and share their thoughts

Mrs B So now that you've had a chance to investigate your cubes and plasticine what do you think? Is it weight or volume that makes the water level rise? [8 sec wait time]. Yes, Jashida?

Gives student time to think

Jas It's the weight, I mean they all have weight, so yeah it's the weight.


Mrs B Can you say more about that? Tell us what you mean and how you figured that out.

Invites student to expand

Jas I came up with ... I thought that it was, um, the weight for the copper cube and the aluminum cube because... because in my group I found out that aluminum cube had less, less... the water went less up. It didn't go up more than the copper cube. So it's weight.

# Step 1: Helping individual students clarify, expand and share their thoughts

Mrs B **Ok let me see if I understand. So you're saying you found that the water level rose more with the copper cube than with the aluminum cube, and so the weight is what's making you think it's weight that caused the water level to rise? Do I have that right?**



Revoicing  
(verify what I  
understood)

Jas Yeah, because right here [ pointing to her notes] I've written that ... oh wait [5 sec pause], I'm confused, The water rose the same with both cubes. Wait... I think I made a mistake. I think it's weight because the heavier cube has more force and pushes the water up more, but just a tiny bit more.



## Step 2: Helping students listen and orient to the thinking of other students

Mrs L Can anyone repeat or put in their own words what Jashida has just said? Ok Lionel?

Invites  
paraphrase

Lionel I think what she's saying is, um, that it's the weight that matters because heavy things have...have more force than light things. And I think she noticed that the heavy cube made the water rise just a little bit.

Verifies with  
student

Mrs B Is that right Jashida? Did Lionel get your point?

Jas Uh huh, yes.

Lionel But I'm confused now, because we found that the copper and aluminum cube went up the same amount, I mean they made the water rise the same amount. And it was the ... the plasticine that made it go up a bit more.

# Step 3: Helping students deepen their reasoning

Mrs B Ok, let's slow down a bit. It looks like we need to discuss our evidence. Can someone from Jashida's group explain their results? What did you find out when you put the two metal cubes in the water? Alice, you were in Jashida's group?

Presses  
for  
reasoning

Alice Umm ... yeah I think I have to disagree with what Jashida said. What we found in our group is that, um, the metal cubes [Pause] both made the water rise, like, the same amount. The copper cube was heavy and the aluminum cube was, um, lighter but they both went up the same. And we also found that the plasticine cube made the water go up a bit more. Kind of like what Lionel said.

Mrs B Alice, you offered quite a complicated set of ideas there. Can you put that into their own words? Ok, Jen?

Invites  
paraphrase

Jen Her group they found that the aluminum and the copper cubes made the water rise the same even though they have different weights. And that's what we found too, and the plasticine made the water rise more, even though it's a whole lot lighter than the copper. So ... doesn't that mean that the weight didn't make the water go up?

# Step 4 Helping students engage with each other's reasoning

Mrs B So I'm hearing some different ideas here, about what happened and what made the water level rise. Could someone from another group explain what they found and where you stand? **Do you agree or disagree and why?**

Agree/Disagree and why

Matthew Well my group we found that... we thought it was because of the volume because we found that if the volume was the same but the weight was different the water level stayed the same... like there is more weight in the copper cube than the aluminum cube... it can't really be the weight, right?

Building on/challenging

Mrs B Ok, Matthew isn't quite sure. **Who wants to respond with their own ideas and maybe push it a little further?** Kelvin, go ahead.

Kelvin I agree with what you just said because this, for example, if you put... if you had a big cup of water and you put something like, like the whiteboard eraser [points to eraser] in the cup it would rise quite a bit and if you put in the copper cube... it's not going to rise that much even though it weighs more than the eraser.

# Step 4 Helping students engage with each other's reasoning

Agree/Disagree

Mrs B So Kelvin brings in another example to support what Matthew said earlier. **Anyone wants to respond?** V  
Aisha?

Aisha I have a question Kelvin. **Umm what if the object float, like it had... buoyancy?**

Building on/  
challenging

Mrs B Oh... I think that's a good question for all of us, but go ahead Kelvin.

Kelvin Then it would be a different story, because if it had buoyancy then... it wouldn't really be taking up much space but I wouldn't know, um, it wouldn't do the same thing like I was taking about.

# Step 4 Helping students engage with each other's reasoning

Mrs B For the moment let's stick with the idea that all our objects sink ok? So Kelvin is saying if I got this right that you think the object matters, that objects with greater volume displace more water to rise more. Let's go back to Jashida. Now **heard the different views what's your thinking now?**

Agree/Disagree and why

Jashida I think I was more concerned with the copper and the aluminum cube and what happened to them, and didn't really look at the plasticine. When you put the plasticine in the water it rises more because its volume is bigger than the copper cube. **And... [1 sec pause]** I think what also got me to think it was weight that makes water rise is because I compared when you're in the bathtub, when you sit it's your weight which makes the water rise but now I know it's really your volume.

Gives student time to think

Mrs B Alright, it looks like we've resolved the problem and have an answer with an answer to my initial question that we all agree with. **Of course as Aisha mentioned this can become sometimes more complicated when we have objects with buoyancy. That's what we're going to look at next ok?**

Building on/challenging

# Activity

The Sec 3 Social Studies teacher tried to create a classroom of learners who are apprenticed into the ways of reasoning, arguing and questioning advocated by the subject syllabus. A great deal is going on in the series of exchanges in her classroom.

- Take a closer look at the teacher's talk repertoire, both in the way she initiates exchanges and the way she follows up on her students' responses. What sorts of moves can you see her use and what do these allow her to achieve pedagogically?
- In what ways does the interaction adhere to the features of academically productive discussion/dialogue that we established earlier?

# Principles for Implementing Academically Productive Classroom Discussion/Dialogue

- **Principle 1: Create ‘ground rules’:** Explaining your reasons for and expectations about new forms of talk in your classroom
- **Principle 2:** Have clear academic purposes for the discussion (Is it a discussion about elicitation, data, consolidation or explanation?)
- **Principle 3:** Have a well-thought out question or issue to frame it, and plan by anticipating, monitoring etc
- **Principle 4:** Have a set of strategic talk moves to help maintain an academically rigorous, coherent and equitable discussion

# Principle 1: Create 'ground rules': Explaining your reasons for and expectations about new forms of talk in your classroom

1. We share our ideas and listen and try to understand each other.
2. We talk one at a time and speak loudly enough for the others to hear.
3. We ask questions if we don't understand each other.
4. We respect each other's ideas and opinions.
5. We give reasons for explain our ideas.
6. If we disagree, we do it respectfully in such a way that it is clear that it is about the idea not the speaker. We also explain our disagreement with the idea.

(see O'Connor & Michaels; Mercer)



# And remember....

- There is no single 'best' talk format for any academic goal or learning outcome.
- Yet whole-class or group discussion/dialogue is usually most effective when the curricular learning to be achieved requires students to deal with relatively open-ended, rich questions (i.e. questions worth thinking about even though at times they may have preferred answers), or concepts, problems or tasks, which engage them in complex and intensive thinking.

# And remember....

If successful academic class dialogue/discussion depends on the teacher setting up rich, open-ended problems or tasks and on the class members having coherent discussions generating insights, then teachers must carefully match such talk types to suitable purposes and tasks. For example, if teachers want students to practice some particular skill, recitation and seatwork may be better than class or group discussion. On the other hand, if teachers want students to compare ideas, develop a train of thought, air differences or arrive at some consensus on a controversial issue, then class or group dialogue may be just the right format and talk style for most students.

(Nystrand, 1997, p. 71-2)