4. Seeking Detail and Building Complexity

In the complex question and answer exchange of your average lesson, the techniques we have discussed in previous sections will help create an engaging classroom dynamic. The next area we will concentrate on is eliciting more detailed and sophisticated responses.

Most teachers are familiar with the situation where they ask the class a series of complex questions and receive in reply very brief or even monosyllabic answers. How do we avoid this trap? There are some simple techniques for raising the sophistication and extent of student responses and we will investigate three of these techniques:

The Golden Question

"What makes you say that?"

The best classroom discussion seeks student interpretation, rather than just recall. One of the best ways to elicit this kind of student response is to focus on justification. ("What makes you say that?") Developed as a thinking routine as part of Project Zero, this simple question formulation encourages students to provide evidence to support their interpretation.

Used frequently in class it gets students into the habit of ‘evidentiary reasoning’ and helps them ‘understand alternatives and multiple perspectives.’ Easy to remember, flexible to employ and habit forming for students, the golden question is a classic default question for teachers running a whole group discussion.

Student: We should actually reintroduce the death penalty, instead of making sentences shorter!
Teacher: What makes you say that?

N.B. Of course, ‘What makes you say that?’ is not the only possible formulation of this style of question. If you are worried that you might sound repetitive, you could try some of these simple variations:

‘What’s your reasoning behind that?’
‘Why do you think that is the answer?’
‘Why did you make that choice?’
‘Why did you choose to approach it that way?’

Check out Project Zero at Harvard to read about the Golden Question and other simple but highly effective thinking routines:


While the ‘Golden Question’ asks students to support their reasoning with a piece of evidence, the next technique we will look at requires students to provide multiple sources of evidence, thereby demonstrating a conceptual understanding of the problem.

Student: I think the answer is 3.3?
Teacher: What makes you say that?
Exampleing

Sometimes students will give you the correct answer but only understand the question in its narrowest sense. Exampleing is a technique that teachers employ when they have already secured a correct answer but want to confirm that an individual student or the class group have fully understood the process for coming up with that answer.

Individual: The teacher asks the student who answered for another example to back up their initial response.

Student: Oh, that happened in the Phillipines, when mum and dad lived in Manilla.

Teacher: Anil, can you think of another occasion when that sort of protest led to a revolution?

Whole class: The teacher might ask the class group for another example to support what the individual student has suggested:

Teacher: Can anyone else think of an example to back up Anil’s answer?

A similar strategy for testing student understanding is the second draft technique.
Second Draft

Typically you use this technique when you want to improve the quality of student responses. After receiving an initial student response, you ask other class members to refine that answer.

You might ask them to use more formal language or more precise terms or get them to phrase it in a more fluent or concise fashion. The important point here is that they are evaluating the quality of class responses and trying to improve them.

Teacher: How would you best describe this group of elements?

Student: Xenon and Neon are part of that group of special gases that don’t react to stuff.

Teacher: Can someone come up with a second draft of that response, Aaron?

Second Student: Xenon and Neon are part of the family of inert gases that are non-reactive.

OR

Teacher: If you don’t know what the word is, what is one of the strategies that you can use?

Student: When you put your hand over some of the letters to try to figure out the sounds.

Teacher: Can someone come up with a second draft of that answer?

Student: When you chunk, you put your fingers over groups of letters to find smaller words or sounds that you already know.

Each of these techniques is relatively easy to use in class and many teachers will be aware of them. What determines their effectiveness however, is how routinely they are used in everyday classroom discussions.
# Dot Chart Survey: High-Order Questioning Reflection Tool

This data tool can be used to help you be more conscious of how often you use each of the techniques discussed above. Simply place a dot in the appropriate column each time you use one of these techniques during the lesson. At the end of the session total the results and reflect on their effectiveness. Did you use one technique more than another? Were there particular techniques that seemed to suit this class group? Did you identify a technique that perhaps is underutilised in your practice?

<table>
<thead>
<tr>
<th>Golden Question</th>
<th>Exampling</th>
<th>Second Draft</th>
</tr>
</thead>
<tbody>
<tr>
<td>After a student gives you their initial answer, quiz them for their reasoning behind it.</td>
<td>Once you’ve secured a correct answer, seek another example to confirm that the student has a conceptual understanding of the problem.</td>
<td>When the student gives you a correct, but imprecise response, ask another student to clarify.</td>
</tr>
<tr>
<td>‘What makes you say that?’</td>
<td>‘Give me another example of that?’</td>
<td>‘Can someone come up with a second draft of that response?’</td>
</tr>
<tr>
<td>‘Why did you choose to approach it that way?’</td>
<td>‘Has anyone else got another example?’</td>
<td>‘Could someone rephrase that answer, using the key terms we’ve discussed?’</td>
</tr>
</tbody>
</table>

---

**The Top 10 Strategic Questions for Teachers**

© Glen Pearseall 2012 Classroom Dynamics TLP Press pearseall@gmail.com
Thinking Routines

There are a number of well-established thinking tools and questioning techniques that can be used to elicit high-order responses from your students.

Think Pair Share

Think Pair Share is the most well known of the exercises and its popularity derives from the fact that it is an easy-to-implement way to help students create detailed responses. If you are unfamiliar with Think, Pair, Share here is a succinct summary from the Reading Quest website:

http://www.readingquest.org/strat/tps.html

You might also wish to look at:
http://www.youtube.com/watch?v=ykS2dq2kwpg

Another technique popularised by Harvard’s Project Zero is the ‘See, Think and Wonder’ convention. This is particularly useful when you are questioning students about visual learning materials.

‘See, Think and Wonder’

Another strategy for getting students to deepen their enquiries is to use the See, Think and Wonder convention. This simple device gets students to frame their response to visual material by responding to three simple questions:

1. What do you see?
2. What do you think about that?
3. What does it make you wonder?

By breaking their response into separate categories this simple tool has a number of profound effects for students:

- It requires them to demarcate between what they see and the presumptions they draw about this impression in what are often visceral first responses.

- It reminds students to look in a more sustained way about what it is exactly that they are seeing before jumping to further conclusions.

- It deepens their inquiry beyond these impressions to focus on the implications of their thinking, encouraging them to frame their response to the material around further inquiry.
The convention is also highly flexible and can be used by students to record their first responses in a brief three part statement – “I see... I think... and I wonder...” or as part of a sustained whole class activity.

N.B. In the whole class version taking the questions one at a time has the advantage of encouraging students who might normally be reluctant to engage in large group activities. Typically, these students are less likely to leap immediately to inference, and in offering some concrete — “I see...” observations they often build the confidence to continue to take part in class as the discussion progresses.

Many people only use ‘See, Think and Wonder’ with visual images but it is particularly effective when used to explore websites or even course materials such as assignment sheets or rubrics.

Another strategy for getting students to provide more detailed and sophisticated responses is the ‘Hidden Thoughts’ activity. This activity is particularly useful for getting students to develop a more complex understanding of another person’s perspective.
Hidden thoughts

In this activity students are required to answer a sequence of rich questions to help them empathise with another person’s motivations. This simple but elegant piece of pedagogy is very effective for cueing them to deepen their thinking about the motivations of others and understand issues in a more complex way. Its greatest strength lies in its flexibility. A Hidden Thoughts activity can be used to investigate a stake holder in a real life situation, explore the motivations of a historical or fictional character, or even better understand the viewpoint of a classmate.

Hidden Thoughts Instructions

- Ask students to draw a stick figure at the bottom of a page. The figure's height should be no more than an eighth of the length of the page. Alternatively, you might give each student a copy of this pre-illustrated handout. Tell them who this figure is meant to represent. Explain that they are going to be exploring the ‘hidden thoughts’ of this person.

- Have students draw a thought bubble above the head of this figure.

- Explain to the class that you are about to ask them a series of prompts to explore what this figure might be thinking. For each question they are to write the answer in a separate speech bubble. Make sure they understand they need to draw the bubbles so that they have space for between six to ten bubbles to fit on one A4 page.

- Ask students to answer each of the following questions. Make sure you leave appropriate time for reflection between each response; pausing occasionally to get students to share their answers with the class.

  What is this figure thinking?
  And what else are they thinking?
  What is this character feeling?
  And what else?
  What do they hope for?
  And what else?
  What do they fear?
  And what else?

- Prompt students to share and compare their answers through a class discussion or gallery session.