

Thoughtful questioning in the inquiry classroom

Inquiry is a 'mindset'. The inquiry learner brings a disposition of curiosity and intrigue to their learning. Inquiry teaches us how to look beyond the surface, how to maintain a sense of 'wonderment and awe', how to find important problems and address them and how to explore ideas from multiple perspectives. The questions teachers ask - and the manner in which they ask them - have an enormous impact on the quality of students' thinking. Our questions can promote or prohibit inquiry. Denis Palmer (1987) argues that focusing on quality questioning may result in one of the most important skills for 21C learning - that of 'question finding':

"Question finding is the ability to go to a poem, a painting, a piece of music- or a document, a mathematical description, a science experiment - and locate a novel direction for investigation. The ability is difficult to teach directly, yet it may be one of the most important by-products of learning in an educational climate in which questions are varied, worth pursuit, authentic and humanely posed." (Wolf 1987: 7)

A great deal has been written about the art of teacher questioning. The following serves to summarise just some of the issues salient to inquiry learning in particular:

The mindful questioner - paying attention to our questions

Perhaps the most powerful thing we can do to is to be more *aware* of our questioning as we teach. By paying more attention to what we are saying, slowing ourselves down and pausing before and after questions the quality and effectiveness of our questioning improves. Developing quality questioning techniques means considering not just the questions themselves but the *ways* in which we choose to ask questions - our questioning style and 'behaviour'. Discussions are an important part of the inquiry teacher's repertoire and can be a wonderful forum in which students clarify their thinking and benefit from hearing other's points of view. When we engage in quality conversations with students, we also get important 'windows' into their thinking - much of our formative assessment can take place in the context of conversations - providing we know what to ask and how to ask it.

Common questioning traps

Questions designed to embarrass or humiliate the learner. Asking a question to 'test' whether someone is listening is unnecessary and demeaning

Questions that answer themselves: "So, can you see the way adding these three numbers makes it easier to solve the problem?"

Over-use of closed questions or those with yes/no answers: "So, who can tell me the name of this part of the world?"

Rhetorical questions: "Are we ready to begin?"

Disjointed questions that fail to follow through a line of thought....(and therefore keep the conversation at the shallow end!)

Playing the 'guess what's in the teachers' head' game...asking a question and only expecting/accepting one answer.

Lack of 'wait time' before and after a question is asked

Asking a limited range of questions that mainly focus on recall rather than deeper analysis and reflection

Opting for whole class discussions rather than the more effective small group or one to one discussions where questioning can be more personalized.

Asking all the questions - rather than encouraging students to question each other.

Poor listening to students' responses - not making eye contact with the student who is talking. Inauthentic listening.

Marginalising certain students (often unconsciously) - eg asking questions only of students whom we know will be able to answer

Praising 'correct' responses in a way that decreases student risk taking or sharing alternative viewpoints.

Waiting until the end of an instructional period to ask questions rather than asking before and during.

Negative or judgmental feedback to what are deemed poor or incorrect responses rather than seeking more information or constructively challenging and probing to scaffold thinking.

The tyranny of raising hands.

Having students raise their hands to speak is a widely used means of control when working with a large group. In some situations, this technique is useful. For example - a quick show of hands to find out who has brought back a form, who is going to the library etc. If, however, your intention is to help students participate actively in quality conversation - raising hands can be problematic. When students can only speak if their hand is raised:

- it's often the same students every time
- those who don't get 'chosen' switch off and stop listening
- the conversation is often stilted and superficial as those with hands up are selected in turn
- the teacher controls the conversation
- in an effort to be heard, students will fling their hands up before they have given adequate thought to the question
- students who take TIME to think are not chosen because their hand is not raised in time
- those with their hands up are often focused more on getting your attention than really listening to the other contributions.

What are the alternatives?

It is very easy to have a manageable conversation - even with a large group - without needing to have students raise hands. Try this:

Rehearsal time

1. Tell students you will be having a conversation with them but you will not be using the 'hands up' technique. Instead you will:

- *Ask a question*
- *Give them time to think/talk to partners/jot down their ideas*
- *Then you will invite a few students to share their thinking (it could be anyone - but all students have had time to think and prepare to share)*

Examples:

- Turn to the person next to you and ask them: ‘What is your favourite picture story book and why?’. Be ready to share your partner’s thoughts with the rest of us.
- No hands up please. I will pick two people to share - what are two ways you already know that we can keep ourselves healthy? (Teacher waits 10 seconds and then asks 2 students)
- OK. Thumbs up if you agree and thumbs down if you disagree with this statement...and be prepared to defend your answer. ‘Uniforms should be compulsory’
- Close your eyes everyone. Think about some of the things that we have discussed about ‘what makes a group work well’. I am going to give you 5 seconds to think. Be ready to share your answers with your group.
- Think to yourself and then I will ask you to share with a partner: Can you explain some of the differences between reptiles and mammals?
- Jot down some of your ideas about how we could design a better book corner. When you are ready, bring your jotters to the floor and I will ask you to share your best idea with others

Circle formation

2. Have students sit in a circle rather than a group all facing you. Introduce them to the idea that they will be having a non hands up conversation. The rule is that only one person speaks at a time and that they need to wait until there is a pause before they speak. In the early stages of this technique, you may use rules such as each child only having two speaking opportunities so quieter students can participate

Talk tokens

3. This technique works best with small groups but can be used with a whole class discussion. It also works best when in a circle. Give students two ‘talk tokens’ - when they wish to say something, they spend’ their token by placing it in a basket in the middle of the circle. They must try to use both tokens in the conversation but once spent, they can no longer contribute. This is a good strategy to raise awareness about how to share talk time in a conversation.

4. Conversation protocols

Eliminating hands up from a class discussion usually means that the students need to be more mindful of and responsible for the way they speak to each other. The conversation flows more naturally and deeply if they know how to build on what has been said, how to respectfully disagree, how to justify their opinion, etc. Learning how to hold a respectful and equitable conversation can be an inquiry in itself! Pose the question to students: “How can we help ourselves have an effective conversation when talking as a class?” Support students by introducing them to some useful **conversation connectors**:

I agree with what.. said about...and I want to add...

I would like to ask...a question about...

I have a different point of view about...

The reason I think that is because...

Can I suggest another way of looking at that...

I disagree because...

I can see your point of view but I am also thinking that...

What you said about...made me wonder about...

I want to add something to what...said about...

Am I right in thinking that you are saying...

I am not sure I understand what you mean by...could you explain that a little more?

I am confused about...

I would like to hear more from ...about his/her ideas

(Students’ name)...do you have a point of view about this?

Maybe we could agree to disagree about....

Conferring - inquiring into students' learning

Perhaps the most effective way to modify our questioning behavior is to limit the amount of time we work with large groups. While the strategies listed above will certainly make those conversations more worthwhile - the larger the group, the harder it is to ensure participation by all. Setting up the classroom so that the dominant mode of dialogue is with **small groups and individuals** means we are more likely to connect with each student and to question them more thoughtfully. Scheduling regular 'conferring' time with groups and individuals is part of the routine for many inquiry teachers. 'Conferring' is the term commonly used to describe a deliberate conversation with students about their learning. It may be about a piece of writing they are working on, a text they are reading, a project they are investigating or an extended maths problem they are working on. Conferring with students is more than an informal "how are you going" conversation we might have as we roam around the classroom. Good conferring is more deliberate and structured - often with a routine set of questions and prompts used to glean as much about the child's progress as possible. Conferring with students is formative assessment at its best - as we gain a sense of where the child is at - we can also provide on the spot, specific feedback and guidance about where to next. Teachers who regularly confer with their students tend to have more personalized and differentiated programs and a deeper understanding of the needs of the students in their care.

Useful questions for conferring with students

- *What would you like to share/show/tell?*
- *That's interesting - tell me more about that...*
- *That's interesting, keep going...*
- *How did you figure that out?*
- *What makes you say that?*
- *What went on in your head when I asked you that/when you did/saw that?*
- *What can you tell me about this?*
- *What have you been trying to show/do/explain?*
- *How is what you're thinking connected to.....'s thinking?*
- *Can you make a connection?*
- *I wonder if you can a connection to something else you know?*
- *What puzzle's you about this?*
- *Is there another way of thinking about this?*
- *What have you found most interesting? What has been the best thing about this for you?*
- *What did you notice about yourself when you said/did that?*
- *Could you share what you are thinking about this with the others?*
- *So what has helped you decide that? What evidence do you have for that idea?*
- *Which part is making sense?*
- *Which part is still confusing?*
- *What are you wondering?*
- *Which part of this do you think is the most important? Why?*
- *What are you planning to do?/Do next?*
- *What might you need to think about before you get started?*
- *Am I right in saying that you....?*
- *This is what I think you are saying....is that right?*
- *Is there something else you would like to tell me about this?*
- *Is your thinking changing? How? (I used to think...now I think)*
- *How could you use this again?*
- *Where/when have you done this kind of thinking before?*
- *What do you need more help with?*
- *What might make this better?*

- *What are you most proud of?*
- *What would you like feedback on?*
- *What's the most important part of this?*

Listening - to what is said and what is NOT said.

When in conversation with students, the inquiry teacher is mindful not only of what students say -but also mindful (and respectful) of the silences. We so often mistake silence for confusion, disengagement or even resistance when it may well be indicative of reflection and deeper thinking. If students are not participating, we should (as appropriate) respectfully ask them why - when this is asked without judgment, the student may reveal learning we had not anticipated. For example: “Jack, I notice you have not yet shared your thinking or taken part in the conversation. You may have good reasons for choosing to be silent right now but is there anything you would like to add?” Students’ silences can tell us as much as their words (Shultz, 2010) Paying attention to silence and avoiding quick judgments help us become better inquirers into the needs and interests of our students.

Asking better questions

Inquiry teachers know that the kind of questions they ask work in two ways. The question itself will prompt a certain kind of thinking and it will also *model* the art of questioning to the student. Inquiry teachers know how important it is for students to learn about different kinds of questions so it is critical that practice what we teach! The kind of questions we ask is determined by purpose. In an inquiry classroom, questions have a range of purposes, including:

- To engage students’ interest/intrigue/curiosity
- To ascertain students’ understanding of something (and, therefore, inform our teaching)
- To help students ‘dig deeper’ and take an idea further
- To help students critique and analyse something
- To promote divergent, creative thinking - to help students think beyond the obvious
- To help students make connections between ideas and establish patterns/ relationships
- To scaffold students’ planning or problem solving - to help them figure something out for themselves
- To promote reflection and encourage the student to evaluate, self assess and goal set