

Teaching and learning issues

Questioning

Teachers use questions all the time. This issue explores the purposes of questioning and techniques for asking them.

We know that in order to learn, students need to actively participate. Being told is not the same thing as learning. Questioning is the key way teachers engage learners and encourage participation.

The perils of whole group questioning

Talks, explanations and demonstrations should incorporate questions to maintain student attention and ensure that people are engaging with the material.

However, throwing out questions to a whole group is fraught with problems, particularly if the group is large. What happens? The most confident students answer. A lot of students never speak. We assume because one of the students has got it right, everyone understands or agrees.

To add to the above, research has found that most teachers leave an average of 0.6 secs after asking a question before they answer the question themselves! Only the quickest students have time to respond.

Giving Wait time

Giving wait time is possibly the single most important way we can improve our questioning.

People need time to process a question and consider their answer. We need to slow down and hold a pause instead of relying on the quickest learners. That is why in schools many teachers are using a 'no hands up' policy and finding other ways of encouraging all their pupils to participate.

You could try:



Question Audit Challenge

In studies school teachers said that they asked the vast majority of questions in their classrooms to check knowledge and understanding or recall of facts, or to diagnose pupil difficulties, and only around 10% to encourage pupils to think.

What questions do you ask? Do an audit of a class you have taught.

- How many do you ask to check learning?
- How many do you ask to recall facts, sequences or processes by rote?
- How many ask students to think?

Could you ask more thinking questions to encourage students to reflect, explore and work things out for themselves?

- Say 'I'll give you a minute to think about this' and then wait.
- Simply ask your question then count to 20!

You may have to stop people shouting out the answer!

Even better, ask people to think in pairs. Then choose who to answer. This works well with puzzles:

- What are 3 ways we could write probability?
- What is the difference in meaning between these two sentences?

You can then choose who answers - it's far more likely

everyone will have something to say if you have given 'wait time'.

Use directed questioning

Directed questioning is when you choose who to answer the question so you can ensure everyone participates. With adults, we need to be careful not to put people on the spot and remind them of school, and be sure the person we choose can answer the question. But with tact it can work well. Giving **wait time** will help. Directed questioning is also a **differentiation strategy** and we will discuss this below.

Setting purposeful questions for small groups

Small group discussion is the most effective way of making sure that everyone considers questions and has an opportunity to comment. Group work however needs to be **carefully planned and purposeful**—so that all can engage and it can take learning forward.

Suppose in a creative writing class, the teacher asks students the following in small groups:

Teacher 1: Discuss this opening to the novel. What feedback would you give to the writer?

This question depends on learners having already some kind of criteria for what makes an effective opening. More confident students may lead the discussion and others not speak. Or the discussion may founder or become unfocussed. It may not achieve learning. Teacher 2 asks more specific structured questions and we look at some below.

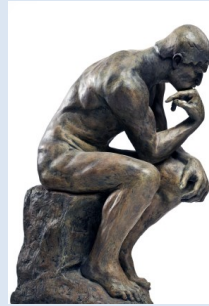
Questioning for Differentiation

Bloom's taxonomy identifies stage of learning from beginning 'surface' learning where students are still grappling with the facts and basic comprehension to the most advanced stages where learning is really embedded where students can reflect on, create and make judgements based the knowledge, understanding and skills they have developed.

On the next page is a series of questions designed by Helen Cox, Creative Writing Co-ordinator for a creative writing course. They follow the stages of Bloom (see back page).

Helen can use her questions in different ways. She could give all the students in the class all her

Questioning for thinking



Socrates famously taught philosophy entirely through questioning and dialogue. He believed his students were not 'empty vessels' to be filled up by the teacher pouring in knowledge. Students could solve problems themselves if the teacher asked the right questions. He always responded to his students answers with another question designed to lead to deeper levels of thinking.

Questioning can be used to:

- **Problematising an area – to open up the topic to enable critical thinking (not take things at face value)**
- **Produce learning and knowledge by generating more questions**
- **Learn through discovery**
- **Deepen knowledge**
- **Check knowledge and understanding**

The example dialogue below could be generated on a teacher training course. (T = tutor)

T: Often teachers mark work but students don't improve. Why do we bother?

Anna: Everyone has different things they don't understand - we need to give students feedback

T: Why might some students not respond?

Minz: Perhaps the feedback is not helpful, or they don't understand it?

T: Why would a student not find feedback helpful?

Sheila: You need to know your mistakes - but not too many. Otherwise you just give up. I had teachers at school who just marked every mistake.

Paula: The teacher needs to build student's confidence by saying what they have done well. But they also need to say what to do to improve. Not too many things.

Etc

questions. More confident students might get to the final stage and less confident ones may be stretched by the discussion. Or she might divide them into 'mild' and 'spicy' worksheets and ask her learners to choose. Those choosing 'mild' might just have the first few

Staged Questions: Language in Creative Writing

- Pick out three verbs in this piece of writing that stand out to you in some way. Discuss why you've made those choices.
- How might the reader respond or react to these verbs and why? Explain your ideas on the post-it notes provided.
- Choose one of the verbs. Experiment with three other powerful verbs that could replace it.
- Rank your experimental verbs in order of effectiveness. Are any of them more effective than the original verb? Why or why not?
- Offer a suggested rewrite of three sentences focusing on the use of adjectives. Experiment in the same way as you did with the verbs.
- Based on your discussion and analysis, how would you rate the effectiveness of the verbs and adjectives in this piece of writing. Offer some feedback on the post-it notes provided.

E.g. *The writing would be crisper if verbs didn't need support from an adverb. 'He said angrily' could be changed to 'he growled.'*

questions. Those choosing 'spicy' might be given the whole worksheet.

Or she might use this list to help with whole group discussion, eliciting from beginner students their choice of a verb that stands out and their response, and from the more experienced ones, a more effective alternative.

A series of 'question stems' for each stage of Bloom is on the next page.

Questions for reflection and stretch and challenge

Consider the questions (abbreviated) in the box in the next column, used for tutorials on the Art Foundation course. The tutors work at using continual questioning to help students critique and develop their own work.

In tutorials they ask students to explain their ideas and projects, not only to find out their interests and themes but to encourage them to explain and articulate their thinking – leading to deeper and wider thinking that is essential to creating fine art. Ian Tucknott says, *'This is a great and simple way to stretch and challenge*

learners, especially accompanied by their own self-reflective process in journals where we encourage them to ask themselves questions and try to answer them.'

Tutorial questions used on Fine Art Foundation Fashion and Textiles

- What happened?
- What did you find inspiring about doing this work?
- How did you choose the materials, techniques and processes for the piece?
- How do you feel about the project and your work?
- What did you learn from this experience?
- What was unsuccessful about the project/your work?
- What would you like to change and why? What actions could you have realistically taken to change negative parts of the work?
- What will you do differently next time?

Emmylou Laird

Questions that encourage thinking can and should appear at any level. Although in a beginner language class much questioning will be checking and understanding - to remember, name and reproduce, it is still possible to ask, for example:

- 'Look at these examples of how x word is used? What do you think is the rule?'
- 'How would you say x in your own language?'

Problematizing questions and starter questions

Problematizing questions are intriguing questions that encourage critical thinking and more understanding of 'why?'. For example, in an ESOL class, the teacher could ask,

'Do you need to come to class to learn English?'

The question challenges students to discuss and reflect on how they learn. Tutors can also use the discussion as a basis of vocabulary and language work.

In Art History James Mansfield asks students what question they would most like answered by the end of the course eg 'Why was Picasso so famous compared to other artists?' This not only aids the tutor in planning his classes to differentiate learning and meet individual student goals, but also provides interesting questions for the course.

Question starts to select from to choose FOR DIFFERENT LEVELS OF BLOOM'S TAXONOMY

Keep it by your side when you are planning questions for differentiation

Bloom's Taxonomy and Questioning				
Lower level thinking skills			Higher level thinking skills.....	
KNOWLEDGE	COMPREHENSION	APPLICATION	ANALYSIS	SYNTHESISE/ CREATE
Students can recall basic facts or key terms.	Students demonstrate an understanding of the facts or key terms.	Students apply the knowledge and comprehension in a new, unfamiliar situation.	Students examine an aspect of the subject in detail.	Students draw on knowledge from several sources to create something new or from scratch.
USEFUL QUESTION STRANDS Can you remember ...? Can you choose ...? How did _____ happen? How is ...? How would you describe ...? How would you explain ...? What is ...? When did ...? Where is . . . ? Which one ...? Who were the main...?	USEFUL QUESTION STRANDS Can you explain what is meant by . . . ? How would you rephrase...? How would you summarise ...? What is the main idea of ... ? Which statements support ...? Can you state or interpret in your own words ...? How would you compare ...? Contrast ...?	USEFUL QUESTION STRANDS How would you solve _____ using what you have learned ...? What approach would you use to...? How would you apply what you learned to develop ...? What other way could you...? What would result if ...? Can you make use of the facts to ...? What questions would you ask in an	USEFUL QUESTION STRANDS What are the features of ...? How is _____ related to ...? What inference can you make ...? What conclusions can you draw ...? What is the relationship between ...? Can you make a distinction between ...? What ideas justify ...?	USEFUL QUESTION STRANDS How would you improve ...? How could you achieve the effect you are looking for? What would happen if...? How would you adapt...? How could you modify? What could be done to minimise (maximise)...? Suppose you could _____ what would you do....? Can you think of an original way...?
				USEFUL QUESTION STRANDS Can you assess the value/importance of...? What would make it better if...? How would you rate the...? How would you evaluate ...? What choice would you have made...? What judgement would you make about...?

This newsletter is written by Wendy Moss, with help and ideas from Helen Cox, Ian Tucknott, and Ian Wollington.

All past issues are available on the web—Staff Resources/Teacher Resources/Teaching and Learning Newsletter Archive

Or click on the link on Sharepoint.