Explaining by asking
Some thoughts on questioning

Questioning is fundamental to teaching and learning.

We all use question and answer - probably in every lesson, and probably without giving it a second thought. However, as teachers, it is worth reflecting on our questioning technique. Scores of opportunities for promoting learning can be created through refining our practice. Here are some thoughts.

• Be patient, wait
  When you ask a question, wait for 5 or 6 seconds - students need time to think and gather their confidence to contribute.

• Be comfortable with any silences
  If nothing is forthcoming, don’t worry and never answer your own question. Ask a different question, often going back a step of logic in order to build back up to your original query (one step back for two steps forward).

• Explain by asking
  Try basing your questions on the principle of ‘explaining by asking’ – let the question point the way to the answer.

Here is an example of some whole class open questioning. It’s from a teacher training setting so hopefully it makes sense whatever your subject specialism.

Introducing a session on the need for a scheme of work to beginner teachers

Q: “Why is it important to plan?”
A: “So you know what you’re doing”

Q: “Alright, but what does that mean in detail?”

{silence or weak answers}

Q: “Ok, what if I taught some really difficult topic in week one?”
A: “The students would be lost and get frustrated”

Q: “Right, so what do we need to do?”
A: “Plan a logical sequence of topics, so that students can progress through the levels of difficulty.”

Q: “Excellent, what else? What if I only had 10 weeks for this course?”
A: “You need to make sure your plan contains everything you want to cover.”

And so on.... Each point teased out can be placed on the board in a ‘spider diagram’ of the reasons why a teacher should have a scheme of work.

The teacher could have delivered the same material through a lecture, but it would have been less engaging. It would also have been less effective as the students would have been passive recipients of the information.

Instead, the act of thinking about and answering questions (even ones that fairly obviously have a clue to the answer in them) began the process of anchoring the ideas into the learners’ minds.

The Q&A sequence as a whole is also self-reinforcing, each question links to the next and the overall idea that planning is a necessity is constantly reinforced.
Q: “So what strategies might we be thinking about?”
A: “Practicals, demonstrations, individual, pair and group work.”

Q: “Great, and why do we need to consider all these?”
A: “Some might be better suited than others to different topics.”

Q: “True, but what would happen if I just taught the same way each week?”
A: “The learners would get bored, and mess around or not turn up.”

And so on…. There were several opportunities for the teacher to take over and explain that a teacher needs to think about a variety of teaching strategies and why. Instead, they stuck with it and teased out a much fuller answer over a sequence of questions.

The same class again, but after the initial open Q&A the teacher has put the students into breakout groups and asked them to examine particular aspects of planning. As the teacher circulates round the groups they use directed questioning to follow up contributions.

Q: “Ok, so the content of our plan needs to progress from lesson to lesson, but is there anything else that will need to evolve over the length of the plan? What else will need to change?”
A: “How we teach.”

Q: “Good. Can you give me an example of what you mean?”
A: “The strategies we use.”

Pass the baton
If a student asks you a question consider relaying it back to the class – “I’ll answer that, but first what do others think?”

Be careful though – it is good in some circumstances, not so good in others.

It is ideal for questions that are genuinely a subjective matter of debate – questions of the “But what would you do in these circumstances” variety. It encourages learners to think for themselves, to have a discussion and to recognise that you are not the only source of knowledge. The right answer is not necessarily always whatever you say.

It is not suited, however, to a straight question of fact - like a grammar point in an English language class. Throwing such questions open risks embarrassing the questioner when one or more of their peers does know the right answer.

“Does everyone understand?”
We’ve all found ourselves asking this question or some variable of it during our teaching – “Is everyone ok?” “Is everyone clear on that?” etc…

It’s like a reflex, and for a teacher quite comforting. It’s also an expression of our care for our learners,
but we need to recognise that as a means of checking on learning it is almost worthless. Most of the time it will be greeted with silence or a few affirmative replies. It reassures us that everyone is ok, but actually that’s not necessarily true.

Some learners have the confidence to speak up and tell us that they don’t understand, but they are a relative rarity. Most learners will keep quiet assuming it’s only them who are lost.

Actually this question does have a purpose. If you catch yourself asking it, it’s an indication that maybe you are not certain that everyone in the class is ok. If that’s the case then it should prompt you to deploy some directed questioning to check on each individual’s understanding of the learning task in hand.

What is Inductive Questioning?
Ultimately, this practice adds up to inductive questioning. What does this mean? Well one definition of induce from the dictionary gives a clue...

Induce [definition] to influence, to bring on, to produce an effect without contact, to arrive at general principles by reasoning

In other words, inductive questioning does not merely check on learning (although this is very important), but actively promotes and deepens understanding. It brings learners on, and leads them through the reasoning behind the concepts you are teaching.

Final thoughts
Use inductive questioning! It should form a key part of most, if not all, lessons. It checks on learning, but also promotes understanding. The act of thinking about and answering questions helps learners grasp the concepts involved.

It is also the easiest ‘ad hoc’ way of tailoring your teaching in real time. Your assessment of previous answers drives the next question. This means that it can be tailored to the needs of that set of learners, at that time and with that topic in a way that a lecture can never be. It is therefore highly efficient in terms of the learning it produces and the time it takes relative to simply explaining.

So stop explaining and start questioning, or rather start explaining by questioning.
Summary

- When you ask a question give students a chance to think by waiting 5 or 6 seconds
- Never answer your own question when faced by silence. Go back one or more steps and ask a new question
- Explain by asking – tease out each step of reasoning incrementally through a series of questions
- Keep going – don’t drift into lecturing after a few successful questions
- Make use of partial answers to tease out more learning. Don’t give the answer away by filling in the gaps yourself
- Use open questioning to introduce topics and prompt discussions
- Make extensive use of direct questioning to check on the learning of all learners
- Use direct questioning to differentiate for attainment – stretching the high flyers and supporting the lower attainers
- ‘Bounce’ questions that call for a subjective matter of opinion back to the group before answering it yourself
- If you catch yourself asking “Does everyone understand?” or its equivalent consider using a round of directed questioning

What Ofsted say...

These quotes are taken from a recent report on a FE College in London East

“In the best lessons, teachers make students think through good use of questioning. For example, in one plumbing lesson, effective questioning was used to encourage students to apply their knowledge to identify the procedures and checks involved in commissioning a central heating system.”

“In the best lessons, teachers ensure that questions are directed at individual students and are used both to check learning and to extend students’ understanding of the topic.”

“Many theory lessons are dull and uninspiring. For example, many teachers fail to use questioning techniques effectively to ensure that students are learning.”

“Teachers do not use oral questions effectively to test students’ understanding.”

“Questioning techniques are not used effectively. As a consequence, students have no opportunity to extend their thinking and many students remain passive.”

Let us know what you think

If you wish to give any feedback, make a contribution yourself or have a suggestion for topics of future issues then please contact Kit Jillings, Assistant Director Teacher Training at Kit.Jillings@lewisham.ac.uk or ext. 3271