



9:QUESTIONING SKILLS

What do we mean by questioning skills?

When embarking on any consideration of questioning skills in your school, first ensure that colleagues are agreed on some definitions.

QUESTIONING SKILLS

Here, the term questioning skills is used to cover:

- Teacher questioning of pupils
- Pupil questioning, in whole-class or group contexts – i.e. questioning of both the teacher and their peers.

Much writing on this subject focuses on whole-class or group sessions. However, the advice given can equally well be applied to exchanges between the teacher and an individual pupil, to exchanges between pairs of pupils, and also to pupil self-questioning. This launch pad does not explicitly cover the related issue of written question-setting, but again, much of its content will be relevant.

It should be noted that ‘statements’ may operate in the same way as questions, while not all ‘questions’ are truly educative questions (see below).

➤ **Exposition**

In exposition lessons (known as recitation in North America), pupils are exposed to some material, typically a summary or explanation from the teacher, a task or a reading, after which the teacher asks questions and pupils answer. This can be followed by individual or small group learning or investigations. There may be brief or longer sequences of questions and answers, but the teacher is generally ‘in charge of’ questioning. Exposition usually follows the pattern: teacher question, pupil answer, teacher evaluation and next question. The teacher often contributes at least two-thirds of the talk.

➤ **Discussion**

In discussion lessons, there is a mixture of statements and questions, which are generated by both pupils and teacher. The pace is generally slower than in an exposition lesson, with pupils contributing a noticeably higher proportion of the talk, often more than half. Turn-taking will follow no fixed pattern, e.g. the cycle may begin with a pupils and may continue with another pupil or the teacher; speaker, teacher or pupil may or may not ask a question, give a response or evaluate a previous contribution.

WHY ARE QUESTIONING SKILLS AN IMPORTANT FOCUS IN THE CONTEXT OF THE EDUCATION OF GIFTED AND TALENTED PUPILS?

- Submissions to the Education and Employment Committee for its Report on the Highly Able (1999) urged teachers' increased use of effective questioning techniques with gifted and talented pupils. These techniques, it was argued, would encourage pupils to take risks, and to think divergently and creatively. Evidence to the Committee implies that this should counter OFSTED's criticism of schools for using over-directed teaching with the more able, along with tasks that are too tightly prescribed.
- Current views on the highly able stress the importance of recognising their existing **thinking skills**, which are often sophisticated, and of developing them further. Questioning can:
- Develop their thought processes and guide their investigations
 - Stimulate and sustain their curiosity and motivation
 - Lead them to consider new ideas and take risks
 - Help them to clarify their ideas, structure their work and learn about things that interest them
 - Challenge their beliefs and prompt them to reconsider their current thinking
 - Provoke them to share and debate their ideas
 - Encourage them to ask their own questions and to welcome an ethos of enquiry, risk and challenge.

As Morgan and Saxton (1991) put it, 'We learn by asking questions. We learn better by asking better questions. We learn more by having opportunities to ask more questions.' Note that they refer to any learners here, not to teachers in particular.

- If **cultural issues** are a concern in your school in relation to the more able, it should be remembered that the style and type of questions asked in lessons can be value-laden (see below). You and your colleagues' choice of questions could be worthy of scrutiny.

WHAT ARE THE KEY ISSUES TO CONSIDER?

- Don't consider questioning skills in your school without also considering thinking skills; for more important than the precise questions asked in lessons, and how and when, is whether you and colleagues are committed to fostering a genuine community and spirit of enquiry in the classroom. An indicator of whether this is the case with you may be the format of talk predominantly used in class. Dillon (1988, 1994) urges teachers to shift their practice towards the discussion format; Brown and Wragg (1993), likewise, advise strongly against the sole or over-use of the alternative, exposition. Dillon (1994) describes in detail how to prepare for, and execute, a whole-class or group discussion. Discussion may well begin from a summary, reading or explanation or experience provided by the teacher followed by one sole question or statement for exploration. In this format, the teacher should not be afraid to 'step back', and to be primarily a facilitator and a reflector of the learning that is taking place. Other characteristics of a genuine climate of enquiry are:
 - questions being used only to demonstrate real, not pretended, curiosity (especially by the teacher);
 - active, responsive listening, e.g. a willingness to let talk change one's view;
 - the allowance of quality thinking time, including 'comfortable' silences;
 - signs of thoughtfulness when speaking, e.g. searching for the best wording, or giving answers in the form of further questions;
 - the use of questioning as part of an ongoing dialogue, not to stop and start dialogue;
 - and a lack of fear of raising puzzling questions (on the part of teacher and pupils).
- In studies, quoted e.g. by Brown and Wragg (1993), 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. Some teachers worry that a greater emphasis on thinking skills, and the typical kinds of associated dialogue and questioning, risk diverting attention away from the 'content' (knowledge and skills) required by the National Curriculum. They may regard such guides as Bloom's taxonomy of questions (1956) as a hierarchy through which pupils should 'travel' sequentially as they develop, i.e. from (lower-order) knowledge or comprehension questions to those of a higher order, such as synthesis and evaluation questions. Such a sequence may seem to them to secure 'content' for all pupils and to provide a safe structure from which teachers can plan. Morgan and Saxton (1991) however demonstrate, with examples, that well-chosen higher-order questions, if well developed, can also adequately assess, cover and extend pupils' knowledge, comprehension and application of facts and skills and well as extending their higher-order thinking skills. It is these higher-order questions, which are also, by definition, also open-ended questions (i.e. there need not be one particular answer), that are so essential for more able pupils' development. (Morgan and Saxton have a useful glossary of words associated with questioning.)
- Statements can be extremely effective as alternatives to questions. Studies have shown that pupil responses to teacher statements can be longer and more complex than responses to questions (Dillon, 1988). Morgan and Saxton (1991) and Dillon

(1994) list, and describe in detail, the following useful types. (Note that pupils could be shown how to use these, not just teachers.)

- Declarative statement. This expresses a thought in response to a pupil's; it may explore it or contain new information, e.g. in response to a pupil's 'X is the case' a teacher may say 'Y is the case.'
- Reflective re-statement. A repetition or summary of the teacher's understanding of what a pupil has said: 'I think what you're saying is...'
- Statement of mind. The teacher's response to a pupil statement: 'I'm not sure I understand/agree,' 'I feel the same about...'
- Invitational statement. The teacher encourages the pupil to say more about something mentioned, again in a non-question form: 'Tell me more,' 'I'd be interested to know...'
- Speaker referral. The teacher can compare or contrast two pupil statements, e.g. 'So Speaker 1 is saying X, Speaker 2 is saying Y' (again, avoiding the temptation to append a question or comment).
- Self-report. The teacher can make a relevant statement about his/her own experience, i.e. what is the case for them: 'Well, when I think about this, I...', 'I did that once, and I...'

With all these types, it is important for the teacher or group leader to 'chair': to invite, and/or wait for, responses, without saying more (unless to nominate a pupil to speak next).

➤ In research undertaken by Dillon (1988) in 27 upper classrooms in 6 secondary schools in the USA, he heard questions from only 1% of pupils. On the other hand, questions accounted for over 60% of the teachers' talk. Patterns in the UK are broadly similar. Yet questioning is essential to maximise the learning of all, including the more able. Such formats as the discussion format can help to redress this imbalance.

- If you still wish to examine questioning skills in particular, consider the cognitive taxonomy of Bloom (1956) and the affective taxonomy of Krathwohl *et al.* (1964) or the taxonomy of personal engagement of Morgan and Saxton (1987). Although it is an old book, and written for an international readership of trainees in education, Kisko and Iyortsuun (1982) have an excellent, detailed account of the two hierarchies of questioning arising from these publications. So, too, do Morgan and Saxton (1991), with material that is highly relevant despite its Canadian context. Kerry (1998) also covers some of this ground, i.e. Bloom's taxonomy and higher-order questioning, in detail. The cognitive taxonomy suggests that well devised questions can encourage learning based on knowledge, translation, interpretation, comprehension and application up to learning based on analysis, synthesis and evaluation. The affective taxonomy suggests that well devised questions can encourage learning based on interest, up to receiving or engaging, responding or committing, valuing or internalising, organising a value set or interpreting, and characterising by a value complex or evaluating. Kisko and Iyortsuun and Morgan and Saxton give many sample questions for each level, and useful lists of key words for each type of question. Note, however, that the cognitive and affective domains are

by no means discrete. Their outlines of lessons in detail using the headings 'Knowing', 'Engagement' and 'Controlling/Owning' are useful: they show how the teacher can chart the types of questioning and pupil-teacher balance being planned and used at different stages of a lesson. Be aware, too, that some cultural groups may value affective learning, or some types of cognitive learning, more highly than is usual in 'traditional' UK schools. This point may form a useful focus for attention if you school has identified cultural issues for further study.

- If teachers feel they need to use the exposition method in lessons, Dillon (1988) outlines in detail two possible formats:
 - **Teacher-led:** The teacher prepares key questions in advance, writes them down to refine wording, arranges them in a promising order and, if possible, tries them on friends or colleagues. In class, s/he considers the appropriacy of the questions again: will they develop learning? If still relevant, s/he delivers each in an interested manner, at a measured pace, disciplining him/herself to avoid further talk and to wait for at least 3 seconds, if possible 5-10, for answers. (Research shows that the quality of responses tends to improve the longer the teacher waits; most teachers wait only 1 second.) Finally, s/he attends carefully to the answers, on the alert for the reasons behind seemingly wrong or misguided responses. S/he does not 'reclaim the control of talk' until all relevant comments have been collected.
 - **Exchange:** All pupils, as well as the teacher, prepare 5-10 questions on the subject matter in hand – either before or at the outset of the lesson. They also record the answers to the best of their ability. (Some will be more superficial than others. This does not matter.) In class, pupils orally exchange their questions and answers, with the teacher acting primarily as chair. S/he encourages pupils to see links between their contributions, to compare them and to help each other expand and clarify. The teacher then contributes his/her own questions and pupils discuss answers (many may already have been asked). Finally, there is an evaluation, by pupils and teacher, of the quality of the questions and answers.

The latter method, in particular, tutors pupils in effective questioning techniques.

- Dillon (1988) has many practical tips to encourage pupils to take charge of questioning in class and to improve their questioning skills. For example, after a reading, activity or teacher explanation, invite a pupil to devise a question about it; if a pupil is struggling with an oral contribution, ask them to relax and reflect for a moment and to formulate a question about it, move on, and return to them shortly; at the end of a lesson or block of work, ask individuals or groups to formulate a new question that has emerged from the work, or one that still remains. Morgan and Saxton (1991) suggest activities and games that can help develop pupils' questioning, e.g. hot-seating, question/question (pupils must sustain a dialogue only in questions), answer/question (the teacher provides an 'answer', pupils must think of as many possible questions for it as they can). When setting reading tasks, sometimes ask pupils to write their notes on the text in question form. The following useful advice is adapted from Kissock and Iyortsuun (1982):
 - Present key or focal questions at the beginning of a lesson or task, not the end. This concentrates pupils' thinking throughout.

- Ask questions at the point/s in the lesson where they can have the best effect, when pupils are interested and ready to answer or discuss.
 - First ask a question and only afterwards call on a named individual to answer it.
 - Introduce some questions by saying: 'Before answering, think about the question.' This will show pupils that the quality of their thought, more than first thoughts, is important.
 - Otherwise, use non-verbal signals or pupils names only as much as you can to 'orchestrate' pupil responses.
 - Encourage pupils to comment on or question other pupils' responses.
 - Respond to a wrong, 'stupid' or unwelcome contribution either: by inviting the speaker to think harder while you move to someone else; by exploring the reasons for the response given, if you think it may be based on a misunderstanding or a related line of thought; or by urging the rest of the class to compete by producing more thoughtful responses (i.e. valuing thought rather than devaluing a mistaken contribution).
 - Praise pupil questions that are well worded, unusual, interesting, challenging or that indicate reflection. You might want to repeat or be seen to record them as models of questioning.
- Questions should not stop once a question has been asked. Even if you are using the exposition format, draw on a repertoire of probing questions to extend pupils' thinking, e.g.: 'Can you be more specific?', 'Does that always apply?', 'What makes you think that?', 'How does that fit in [with]?', 'What about the other side?', 'What are the exceptions?', 'What is the idea behind that?' Fisher (1998) usefully categorises Socrates' probing questions in the following way: questions that seek clarification, probe reasons and evidence, explore alternative views, test implications and consequences and question the question.
- Be aware of which questions are not really questions used to promote learning, whether from teachers or pupils, e.g. rhetorical questions ('Haven't we covered that already?'), instructions ('Can we do that next please?'), exclamations ('Haven't you done that yet?'), procedural questions ('When do you want my homework?'), etc. If you are undertaking an audit of the types of questioning in use in class, these are of the lowest possible type. Similarly, as a teacher, avoid: asking questions to which pupils can't know the answer ('What do you think we're going to do today?'); inviting pupils to respond in chorus (rote learning); answering your own questions ('What will happen next? Well, the liquid will probably...'); moving on after only one pupil answer; pre-setting the answers to open-ended questions and waiting for your answer to come up; and asking questions too soon after an intense learning experience that may need time for absorption and reflection. None of these practices can be said to promote learning either. Finally, be careful not to answer a pupil's question with another question (unless you suspect him/her of intellectual laziness in asking it). This simply sends the message, 'I'm the one who asks the questions around here.' An alternative is to invite other pupils to help; otherwise, supply the answer!

- There may be issues of classroom organisation you need to consider. Are your classes set up in such a way that questioning is encouraged and maximised? Wragg (1993) quotes research by Torrance (1970), carried out with young children, showing that groups of four to six tended to ask more and better questions than did individuals or much larger groups. However, the traditional secondary school arrangement, desks all facing the front, promotes the model of teacher-in-control-of-questioning-pupils-individually; at best, pupils feel that they can question the teacher, but only the teacher. Consider whether seating could be more often arranged in groups or in circles to promote questioning skills.

WHAT MIGHT WE DO IN SCHOOL?

- **Audit some aspect or aspects of questioning methods in school.** For example:
 - Use the indicators listed above to establish the extent of a 'questioning ethos' in your classroom/s.
 - Tally how often you, and/or colleagues, question pupils of differing abilities in the course of a lesson. Do you perhaps unfairly advantage, or disadvantage, the more able?
 - Audit the frequency of exposition and discussion lessons in one or more classes. If exposition is typical, is Dillon (1988)'s second ('exchange') format ever used?
 - Audit lesson plans. Do you and colleagues write down key questions in advance of lessons? If so, do you use any taxonomy (e.g. Bloom, 1956) to help you? How often are key questions higher-/lower-order questions? How often are they open/closed questions?
 - Take one or more lessons. How many questions that promote learning did the teacher ask? How many, connected with learning (not procedural, or other), did pupils ask? Calculate the ratio of teacher:pupil questioning.
 - Categorise the types of questions asked in the course of one or more lessons. Analyse the proportions of, e.g. procedural to educative questions, lower-order to higher-order, open to closed.

The best method for such an audit is observation by a colleague; failing this, honest self-evaluation is essential!

- With colleagues, use Bloom (1956) and/or Krathwohl *et al.* (1964) and/or Morgan and Saxton (1987), or other sources of the two taxonomies of learning, either:
 - To write key or focal questions while planning future blocks of work; or
 - To script key or focal questions when planning a future lesson.
 Formulate them with care so that they allow for work on knowledge and skills but also sophisticated thinking. Compare and evaluate the success of the questions in practice. Bank especially effective questions for future use.

- Try at least one of the formats, techniques or pieces of practical advice included above, e.g. try following the discussion or 'exchange' format for a lesson; personally using statements instead of questions; rearranging the classroom to promote questioning; asking pupils to formulate questions; waiting longer for pupil responses;

or probing pupils more. Describe your experiences with the experiment to colleagues and make recommendations.

RECOMMENDED READING

Bloom, B.S. (ed.), 1956. *Taxonomy of Educational Objectives: The Classification of Educational Goals, Handbook I: Cognitive Domain*. New York: David McKay Company, Inc.

Brown, G. and Wragg E.C., 1993. *Questioning*. London: Routledge.

Dillon J. T., 1988. *Questioning and Teaching: A manual of practice*. London: Croom Helm

Dillon, J.T., 1994. *Using Discussion in Classrooms*. Buckingham: Open University Press.

Fisher Robert, 1998. *Teaching Thinking: Philosophical enquiry in the classroom*. London: Cassell.

Krathwohl, D.R., Bloom, B.S., The Cognitive and Affective Taxonomies, in Maker C.J. & Nielson, A.B. (1995) *Teaching Models in Education of the Gifted* Second Edition Chapter 3 Pro-Ed. (SEE CHAPTER IN LIBRARY/RESEARCH)

Morgan, N. and Saxton, J., 1991. *Teaching, Questioning and Learning*. London: Routledge

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Cultural issues

Thinking skills

