

Vlasenko L., Trygub I.

National University of Food Technologies (Kiev, Ukraine)

USING QUESTIONS, DIALOGUE AND DISCUSSION TO FACILITATE AND EXPLORE STUDENTS LEARNING

During a professional career, the number of questions asked by a teacher runs into tens of thousands. Indeed, there can be no other profession where one asks so many questions that one already knows the answer to! Over the years a great deal of attention has been paid to the effective use of questions as a key teaching skill (Hayes, 2006; Walsh and Settes, 2005). What makes questioning such a useful but complex skill is that it can be used in a number of different ways, ranging from a simple and quick check that a particular student has been paying attention, to an integral part of developing a dialogue and genuine discussion with a student about the topic in hand.

With regard to the types of questions teachers use, one first needs to consider the type of thinking that the question is designed to promote. For example, in terms of Bloom's categories of cognitive processes, it might be knowledge, comprehension, application, analysis, synthesis or evaluation (Bloom *et al.*, 1956). One important distinction in categorising question types is between those that require the recall and reporting of facts or information (lower order questions) and those that require some manipulation of information, such as reasoning about, evaluating or applying information (higher order questions). Whereas lower order questions tend to have answers that are clearly right or wrong, higher order questions tend to be judged in terms of general qualities related to the thinking involved. A second and related distinction is that between 'closed' questions, which only have one right answer, and 'open' questions, where a number of correct answers are possible.

Studies of teachers' use of questions indicate a much greater use of lower order and closed questions, rather than higher order and open questions. Given that the latter are seen to be more intellectually challenging than the former, it is important for teachers to use a good mix of both. However, given that the teacher's use of questions

to promote thinking among students is inter-related with its use for other purposes, particularly of a social and managerial nature, it is perhaps not surprising that lower order and closed questions are used more frequently.

The reasons given by teachers for asking questions are various (Kerry, 2002; Wragg and Brown, 2001c,d), and include:

- _ To encourage thought, understanding of ideas, phenomena, procedures and values.

- _ To check understanding, knowledge and skills.

- _ To gain attention to task, enable the teacher to move towards teaching points, as a warm-up activity for students.

- _ To review, revise, recall, reinforce a recently learnt point, remind of earlier procedures.

- _ For management, settling down, to stop calling out by students, to direct attention to teacher or text, to warn of precautions.

- _ Specifically to teach the whole class through student answers.

- _ To give everyone a chance to answer.

- _ To prompt bright students to encourage others.

- _ To draw in shy students.

- _ To probe children's knowledge after critical answers, redirect questions to student who asked or to other pupils.

- _ To allow expressions of feelings, views and empathy.

In looking at the skills underlying effective questioning, five key aspects stand out: quality, targeting, interacting, feedback and extending pupils' thinking. The *quality* of the question itself, in terms of clarity and appropriateness for meeting its intended function, is clearly of importance. In part, this depends on the teacher's ability to take account of the student's perspective when asking the question.

The *targeting* of questions refers to the way in which teachers select students to answer.

Of major importance here is the need to distribute questions to as many students as possible, and certainly not to focus on volunteers. At the same time, targeting also involves matching the question to the target students.

Interacting refers to the techniques used by teachers to deliver questions and to respond to students. They involve making use of eye contact, the manner and tone of voice used, the use of pauses to give pupils thinking time, the use of prompting to help students in difficulties, and using follow-up questions or points to enable and encourage pupils to elaborate or improve the quality of their initial answer. Teachers' use of questions often involves stringing together several questions to develop a particular theme or explore the issue in hand. This technique of sequencing can be a very effective form of dialogue, particularly when the teacher is sensitive to and takes account of students' responses.

The greatest danger in sequencing is that of sticking too rigidly to a pre-planned sequence, so that students' responses are largely ignored or regarded as incorrect simply because they do not fit the teacher's intended sequence.

The role of *feedback* concerns the effect on students of the teacher's use of questions.

Answering questions is often a high-risk and emotionally charged activity, in part because it is usually public and in part because it usually involves explicit teacher judgement. The teacher's use of questions can thus have a profound influence on the whole tone of a lesson and on the rapport that develops between the teacher and pupils. In order to protect a student's self-esteem and develop students self-confidence the teacher needs to ensure that questioning takes place in an encouraging and supportive atmosphere. In particular, this requires praise and encouragement to develop students' answers and to convey the message that all attempts to answer will be respected and valued. A teacher should certainly avoid scorning an answer or allowing other students to do so. Students are very sensitive and alert to such aspects of interaction in forming their views of the teacher's expectations of their efforts. Teachers also need to be aware of the many unintended consequences that may follow from their reactions to students' answers. For example, if a teacher frequently

corrects the language used by pupils in answering, these students may feel reluctant to contribute answers in future because of their perception that ‘correct language’ is as important to the teacher as the meaning of what is said.

Extending students’ thinking refers to teachers using questions as a means of developing higher quality dialogue in the lesson that extends students’ thinking. It is very important for the teacher to go beyond the traditional initiation-response-feedback (IRF) style of discourse interaction with a student, in which the teacher asks a question (initiation), the student responds (response), and the teacher then gives an evaluative comment (feedback).

In order to make use of asking questions to establish high-quality dialogue with students, the teacher needs to ask follow-up questions, such as asking the student to explain their answer, or using the students’ answer as a stimulus for asking another student to comment.

Going beyond IRF can help engage students in higher quality thinking and also give the students a sense of co-constructing knowledge and understanding with the teacher, rather than a sense of being a passive recipient to a teacher’s use of a transmission style of teaching. Alexander (2008a) refers to a type of use by teachers of teacher–student dialogue to promote pupils’ learning as ‘dialogic teaching’, which is characterised by:

- _ structuring questions to provoke thoughtful answers
- _ using students’ answers to establish dialogue
- _ developing a strand of thinking through the use of dialogue.

For Alexander, dialogic teaching offers a particular kind of interactive experience, which is characterised by five principles:

- _ *Collective*: teachers and pupils address learning tasks together.
- _ *Reciprocal*: teachers and pupils listen to each other and share ideas.
- _ *Supportive*: pupils express ideas freely within a supportive climate.
- _ *Cumulative*: teachers and pupils build on their own and each other’s ideas.
- _ *Purposeful*: teachers plan and steer talk towards specific educational goals.

Fisher (2008) has illustrated how the use of dialogic teaching, interspersing teacher– student dialogue with student–student dialogue that is characterised by intellectual challenge, creates a powerful learning environment for students, by actively engaging students in questioning and explaining.

Effective questioning overlaps with the use of discussion to explore the topic in hand.

In this section the focus is on teacher-directed discussion rather than the discussion between students that occurs in small group work, as the former can be regarded as an extension of teacher exposition. Numerous Ofsted reports have pointed to the need for teachers to make greater use of discussion to explore and develop student learning (e.g. Ofsted, 2008a). The skills involved in the effective use of teacher-directed discussion have received much attention (Walsh and Settes, 2005).

Overall, there appear to be two main skills involved. First, the ability to get as many students as possible to make a contribution. This means the teacher may need to be relatively less critical and less censoring of students' contributions in order to encourage their participation. Second, the teacher needs to probe and encourage students to develop their contributions. Such teacher-directed discussion most often occurs when teachers are exploring general aspects of a topic that are later to be shaped and refined. For example, in looking at a topic such as the advantages and disadvantages of family life, the teacher may begin with generating students' ideas on this before focusing on key themes in the subsequent work. Full discussion takes place when students are given more control over the course of their contributions and indeed when students begin to comment on each other's contributions. The teacher's skill in relaxing control over the direction of contributions, while at the same time retaining appropriate control over the nature and procedure of the discussion is important. Mercer (1995) refers to the teacher's role in such interactions as a 'discourse guide' and has illustrated how teachers can adopt this role. Mercer also advocates the use of 'exploratory talk' in which partners engage critically but constructively with each other's ideas. Mercer and Littleton (2007) have pointed out

that one of the key reasons why engaging pupils in ‘exploratory talk’ in the classroom is so beneficial is because of its collaborative quality in which partners can co-construct knowledge and understanding in a purposeful manner. However, for this to be successful, the teacher needs to adopt a more equal stance with students in respecting what they have to say, and being prepared to go with the student wherever the dialogue takes you.

The introduction of the National Literacy Strategy in 1998 and the National Numeracy Strategy in 1999 directed teachers to make use of ‘interactive whole-class teaching’ in order to promote high-quality teacher–student dialogue in lessons designed to encourage and support students’ thinking and intellectual engagement. Research studies of class-room practice indicate that teachers’ use of ‘whole-class teaching’ markedly increased as a result, but unfortunately the type of ‘interactive’ quality advocated in these strategies has not featured prominently. Indeed, whole-class teaching remained rather didactic, based on repeated waves of low level teacher–student IRF discourse patterns (Smith *et al.*, 2004; Webb and Vulliamy, 2007). This didactic style of teaching also seems to be evident when interactive whiteboards are being used, which in part were intended to introduce more opportunity for a more genuinely interactive style of teaching to occur.

Before leaving teacher exposition, a special note is required in relation to the teaching of a foreign language, where teachers spend a great deal of time demonstrating and repeating particular words and phrases with students, acting as a model for good delivery.

This type of teaching behaviour, called ‘modelling’, involves a mix of skills. Of particular importance for foreign language teachers is the need to be aware of students’ sensitivities to the demands of such oral work, and hence the need to establish a very supportive and encouraging classroom atmosphere, where students are happy to participate and can make errors and mistakes without feeling unduly upset by the experience.

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