How to... ask the right questions

Asking questions in research is an art. When are questions used, what are the main types of questions, how should you sequence them and which questions should you avoid? Caroline Sharp outlines some of the things to think about when using questions in practitioner research.

What is this article about?

This guide is about using questions in different ways throughout the research process. It aims to provide:

- an overview of the uses of questions in research
- different types of questions and how to use them
- questions to avoid or use with caution
- guidance on question wording and sequencing
- links to further sources of information.

Why focus on questions?

I know that many readers will be contemplating their School Evaluation Forms and wondering what evidence to provide. Gathering the views of pupils and parents can be particularly challenging, and a good quality self-evaluation depends on asking the right questions. This article aims to help you think about some of the issues involved in asking questions, whether for self-evaluation or a broader investigation.

Doing research is a wonderful excuse for nosiness: it gives you permission to ask questions of complete strangers and their answers provide a fascinating insight into another world. But asking questions is an art-form in itself. There is nothing more frustrating than getting to the end of a research project and realising that you asked too many of the wrong questions and not enough of the right ones. It is for this reason that I thought it might be useful to focus on questioning as a fundamental part of the research process.

When do you use questions in research?

The most obvious use of questions in research is during data collection. But questions provide the key to every stage of the research process, from deciding what you are going to research, right through to sharing your results (see Table 3.1).

As Mark Rickinson pointed out in the first HOW TO contribution, once you have decided what you want to research, the next step is to identify your key research questions. In many ways, your research questions form the backbone of the research, as you should return to them to help make decisions about your design, sample, data collection and analysis.

Figure 3.1 shows how research questions influence decisions taken at different stages of a research project. For example, the questions you ask during data collection should be strongly influenced by the research questions, as should the process of analysis and reporting. Of course, new questions sometimes occur during the research process – especially during data collection and analysis. It is important to take account of these and make a decision about what to do – can you include them in your current analysis and reporting; can you investigate them in a new enquiry?

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Table 3.1 Using questions at different stages of research

Stage of the research process	Asking questions
Planning phase	Establishing your research questions and making sure they are clear, practical and useful. Selecting your sample (which pupils, staff members, parents etc?). Asking 'What other information/research/expertise already exists to help us?'
Investigating phase	Devising your data collection strategy and designing your 'instruments' (e.g. questionnaires, interview questions). Checking whether your questions are suitable. Using questions to help in analysing your data.
Interpreting phase	Using questions to interpret your data. What does it mean? Why have we got these results? What are the key messages from this research?
Influencing phase	Reporting outcomes. What do we want to say to whom? What is the best method of sharing the results of this research? Who needs to do what in order to improve practice? How will this be achieved?

What are the main types of question?

Six main types of question form the basis for most of the others you might wish to ask. These are shown in Box 3.1.

Box 3.1 Six questions according to Kipling

Rudyard Kipling memorably identified six types of question in the following poem, which appeared in the 'Just So' stories:

I keep six honest serving men
They taught me all I knew:
Their names are What and Why and When
And How and Where and Who.
(Kipling, 1902)

These questions can be used at different stages of research. They can help in initial planning and also to define questions for data collection. Here are some examples of the six types of questions applied to research.

Research planning stage	Data collection stage
What do we want to investigate?	What is your role?
Why do we want to know?	Why did you apply for this post?
When should we start do the research?	When did you work here?
How should we do it?	How do you plan your work?
Where should we look for information?	Where do you hold sports events?
Who should be part of the research team?	Who receives this newsletter?

When devising your research questions, such as questionnaires and interview schedules, it can be helpful to consider how you expect people to answer. For largely factual questions, a closed-ended question (i.e. one with a limited and predictable number of responses) may be suitable. This is particularly appropriate for simple factual questions, of the 'what, when, where, who' variety. Examples of closed-ended questions include:

- Do you have a teaching qualification? (Yes/No)
- When do you usually leave for school in the morning? (Between 6.00 and 8.15am)
- Do you usually sit next to a boy or a girl in class? (Boy/girl/no usual pattern).

Open-ended questions are more suitable for exploratory or explanatory questions, like 'why', 'how' or 'in what way'. These questions usually require some reflection from the respondent and are likely to generate a variety of answers. Examples of open-ended questions include:

- How do you adapt your teaching methods when working in a larger class?
- Why do you think children performed less well in reading this year?
- What do you feel are the benefits of adopting this method?
- Occasionally, questions that seem open-ended are actually quite 'closed':
- How would you rate the quality of this instruction manual?

Bear in mind that closed questions take less time to answer, whereas open questions are more time-consuming but are likely to result in a more satisfying experience for the respondent.

Considering whether you are asking a closed- or open-ended question is useful because it:

- ensures that you are clear about the kind of information you are seeking
- helps you to design an appropriate format for the question (and answer)
- can help you think about balance and sequencing.

Which questions should you avoid?

There are some kinds of questions that are best avoided or used only with caution. Be especially wary of asking any questions that are unduly complicated, leading or venture into sensitive territory.

Complicated questions

A question may be complicated because it is too long, contains too many parts or contains unfamiliar words. Complicated questions are likely to confuse respondents and make them feel ill at ease.

Solution: Revisit the question and decide what you really want to know. Avoid vague or complex ideas and cut down on the number of subordinate clauses. Make sure you are using simple, familiar language and consider breaking the question down into a series of shorter questions.

Original version of a complicated question

Please could you tell me when you started work, what was your experience of the hierarchy of management structure in place and are you of the same opinion now with regards to this organisation following the reorganisation?'

Revised version

As you know, this organisation has recently been restructured. In your opinion, what difference has it made to the management structure? How has it affected your line management?

Leading questions

Leading questions suggest that the questioner expects a particular answer. This is likely to make your respondent feel under pressure to give the 'right' answer and risks biasing your results.

Solution: Check whether your question is (or could appear to be) leading and find an alternative approach.

Original example of a leading question

1. I take it that you agree with the school's policy on behaviour management?

Revised version

1. How do you usually deal with the following aspects of behaviour management?

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a) Pupils who distract others in class
b) Pupils who are rude/abusive to you
c) Pupils who are accused of bullying by other pupils? (You can later analyse the responses to this question in relation to the school's behaviour management policy.)

2. Do you feel that the school's policy could be improved? If yes, how? (What type of improve-ments would you like to see?)

Sensitive questions

Sensitive questions ask the respondent to reveal something that they may feel uncomfortable about discussing. This type of question should only be used if there is a strong argument for collecting the information. An obvious area of sensitivity concerns someone's personal background, such as their ethnicity or religion. Such questions may be seen as unduly intrusive and unnecessary. On the other hand, studies of issues affecting minority ethnic groups or people from different religious affiliations can provide valuable information for research; in which case it would be important to find out.

It is also worth thinking about the potential sensitivity of other, less obvious questions, such as those concerning someone's age, qualifications, years of experience or even whether people are familiar with a piece of legislation. A respondent may suspect that there is a hidden agenda behind the question: 'They want to know my age – do they think I'm too young/old for this job?' or 'They mentioned the latest legislation – they must expect me to know all about it.'

Another area of sensitivity may be raised by asking people to reveal something about themselves that they feel may not be socially acceptable. This could apply to aspects of their behaviour or views about a contentious issue.

Solution: Be aware which questions are sensitive and avoid them if possible. If you really need to know, make sure you are behaving ethically, explain why you want the information and find an appropriate way of requesting it (you could offer people the option of not responding, if they do not wish to answer more personal questions). Rather than asking open-ended questions in areas of sensitivity, it may be appropriate to predict a range of answers and offer these to respondents for them to indicate their agreement or disagreement (this approach has been adopted in health education for the finding out about aspects of people's sexual behaviour that may put them at risk). While the above examples may seem obvious, it is not always quite so easy to distinguish the clear from the confusing, the unbiased from the leading or the fair from the insensitive. This is why it is important to draft, redraft and try out questions before you use them. For further advice on this process, see below under 'Have you asked the right questions?'

Original version of a sensitive question
What is your ethnic group?

Revised version
Previous research has shown that there is a low take-up of our services from certain ethnic groups. We are asking people if they would be willing to tell us their ethnic backgrounds so we can ensure our services appeal to everyone. This information is voluntary and will be handled in confidence. If you are willing to help us in this way, please tick the box which best represents your ethnic background:

Black, African ☐
Black, Caribbean ☐
Black, other ☐
Indian ☐
Pakistani ☐
Bangladeshi ☐
Mixed ethnicity ☐
Chinese ☐
White, European ☐
White, other ☐
Other ethnic group ☐
(please specify) .....

How should you sequence your questions?

Once you have compiled a set of questions, you will need to decide the order in which to ask them. It helps the recipient to follow your line of thinking if you put questions into a logical order and group them according to broad themes. Simple, introductory questions placed at the beginning will help your respondents to relax and encourage them to carry on to the end. Slightly more personal (potentially sensitive) questions may be best placed at the end of the sequence.

Once you have divided your questions into content areas, you can consider how to sequence them within each section. You may decide to put shorter, more factual (largely closed-ended) questions at the beginning. This can help to ease the respondent into providing information and can help you to establish the basic facts before asking broader or more opinion-based questions. On the other hand, you could decide to start with a broader question and narrow down into a specific area of interest, guiding the respondent onto a particular path or line of questioning. It may help you to visualise this by thinking about it as using a funnel, pyramid or diamond/hour glass shape.

Funnelling can be a useful questioning process to get from the more general to the specific. It begins with open questions and builds upon them with increasing narrowness.

1. Could I start by asking you to outline your main areas of responsibility at work?
2. Are there any areas of your work where you would welcome some additional training?
3. What did you think of the management training you recently completed?
4. Which parts did you find the most useful?
5. Have you found any of it difficult to apply in practice? If yes, Which parts have you found most difficult to apply?

The pyramid sequence begins with a more specific (possibly closed-ended) question at the apex of the pyramid and moves to a more general level of enquiry (providing a broader base). This can be used to ease people into the process of answering your questions.

1. Are you a member of the tennis club?
2. How often do you manage to play?
3. Do you always play with the same partners? (Which ones?)
4. How could the club's facilities be improved to encourage more social tennis?

The diamond sequence is a combination of the two sequences described above. It begins with a restricted question, moving to more open ones and then narrows down to more specific questions. **The hour glass** is another combination, but in the reverse order, starting with a broader topic, narrowing down and then broadening out again towards the end.

Have you asked the right questions?

Once you have a draft set of questions, it is worth checking whether you have asked the right ones. This entails considering relevance, question wording and sequencing.

First, you need to work out whether you have addressed your key research questions (it is all too easy to 'drift' away from answering your research questions when drafting research questions). Sometimes you will discover that you have asked a similar question but have missed out on a vital piece of information, so make sure you have included everything you need.

It might be helpful to use a simple grid to check the degree of overlap between the research questions/areas of interest and the questions in the interview schedule or questionnaire

Table 3.2 gives an example showing the main research themes for different groups of interviewees. The researcher has drawn up the matrix and then gone through the interview schedules noting the question numbers that address each theme. Question numbers in brackets indicate questions that are not specifically focussed on the theme, but the answers may provide some relevant information. Using a matrix like this will soon show up any discrepancies in the coverage of your main areas of interest.

A common pitfall when drafting research questions is to ask too many questions, so try to cut out any that are not strictly necessary. A good test of this is to predict the kind of answers you are likely to get from each question and then see whether the information is really vital to your research (where will it fit into your report or presentation of results?). You will probably find you have included a few questions you thought might generate interesting information, but are not strictly relevant to your current focus. If you don't edit them out now you risk wasting a lot of time in collecting and analysing information you may never use.

Once you have refined your questions, the best way of identifying problems with wording or sequencing is to conduct a trial run or 'pilot'. Ideally, this involves testing out your draft questions on a group of people who are

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similar to the people in your sample (e.g. if you intend to ask questions of teachers in your own school, you could pilot the questions on teachers at a neighbouring school). You should aim to administer the questions in a similar way to that you have planned for the 'real' study. If you cannot manage a pilot, you could attempt a simulation, by asking friends and colleagues to assume the identity of your respondent group and help you test out your questions. Look out for any questions that cause people to hesitate, ask for clarification or lead to misinterpretation. These problems may be due to difficulties with wording (see 'questions to avoid') or sequencing – your respondents may not be able to follow your structure. It also gives you a chance to assess how long it will take to complete the interview/questionnaire.

When you have completed your pilot or trial, you should be able to spot problem areas and make amendments before you use the questions with your intended respondent group.

What next?

This How To guide has outlined some points to consider when using questions in research. As mentioned above, the questioning doesn't stop when the data collection is complete. Questions are an invaluable tool for honing investigative skills. You can use them as a way of interrogating your data, deciding its implications (the 'so what?' question) and even in presenting the outcomes of your research. You could even try posing questions as subheadings in a report or presentation, as I have in this guide – it's a good discipline to keep you focused on the topic in hand.

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Table 3.2 Matrix of interview questions by research themes

	Relation to learning and teaching strategy	Development of teaching practices	Longer-term professional learning and progression	Value for money
Programme leaders	10, 11	7, 8	6, 9	12
Programme participants	9, 10	6, 7 (3, 4)	2, 8	11
HODs	7, 8	5 (2, 3)	6, (4)	9

References: Kipling, R. (1902). Just So Stories. London: Walker Books Ltd. ■ Bell, J. (2004). Doing Your Research Project: a Guide for First-Time Researchers in Education, Health and Social Science. Fourth edn. Buckingham: Open University Press. ■ Opie, C. (Ed) (2004). Doing Educational Research: a Guide to First Time Researchers. London: Sage. ■ Robson, C. (2002). Real World Research. Second edn. Oxford: Blackwell Publishers. ■ Patton, M.Q. (1997). Utilization-focused Evaluation: the New Century Text. Third edn. London: Sage.