

In this section we will provide some answers to the questions at the end of each chapter.

Questions and answers for Chapter 1

1. Gender (male/female) is not a quantitative variable. Can you think of any ways you could study gender in quantitative research?

If we wanted to study gender, we would have to give the categories of the variable a number rather than a name. For example, by giving men the code 1 and women the code

2.

2. Attitudes to school (e.g. I like school, I think school is boring) is not a quantitative variable. Can you think of any ways you could study attitudes to school in quantitative research?

When we try to measure an attitudinal variable like this, we first need to think of some good questions to ask, that can be indicators of the attitude we are studying. An example of an item like that could be 'I think I learn a lot of useful things at school'. To quantify the answers to that question, we will typically use a rating scale, for example giving respondents the choices:

- I agree

- *I neither agree nor disagree*
- *I disagree*

We would then give each of these responses a numerical code, for example '1' for 'I agree', '2' for 'I neither agree nor disagree' and '3' for 'I disagree'.

3. What is your worldview (epistemology) with regards to research? Do you think it is compatible with using quantitative methods?

Epistemological positions that lend themselves to quantitative research are positivism, post-positivism and pragmatism.

4. Can you think of a research question you could study using quantitative methods?

A wide variety of research questions can be studied quantitatively. To find some inspiration, why not have a look at some academic education journals, like the British Educational Research Journal, School Effectiveness and School Improvement, or the American Educational Research Journal.

5. What kind of research question would you study using a mixed methods design?

Mixed methods research designs lend themselves particularly well when we want both statistical generalizability and in-depth understanding on a phenomenon. For example, we might do a survey on boys' attitudes to maths, and then follow this up with interviews

with a group of boys to look for some further explanation of the findings from the survey.

6. What are the main distinctions between post-positivism and positivism?

According to positivism, the world works according to fixed laws of cause and effect. The goal of science is to uncover these laws, and so get to the truth. We can do this by measuring and observing as accurately as possible. In this way we can collect objective information. Post-positivists don't believe we can observe the world we are part of as totally objective and disinterested outsiders. However, they do believe in the possibility of there being an objective reality. While we will never be able to totally uncover that reality through our research, post-positivists believe that we should try and approximate that reality as best we can, all the while realising that our own subjectivity is shaping that reality.