Analysis of the Bad Questionnaire

So, is the questionnaire any good or not? Well, the next part discusses this, outlining problems and suggesting improvements (so that you can see how to make improvements in your own design too). Broadly speaking, there are problems relating to the questions and levels of measurement (though these are obviously interconnected). These will be dealt with systematically below to help your understanding of how to design questions.

# Problems with the questions

## Problem 1

The first problem starts with the research objectives. These are vague and so this makes the construction of the questions problematic. For example, the objective surrounding ‘variations in gender and any other related demographic characteristics’ is very broad. It is simply not clear what this means and so knowing which questions you need to ask at the start becomes tricky.

This is not a new problem for researchers, or isolated to this example. Very often we don’t really know what demographic characteristics to measure, because there are many things that could be important, but asking everything is impossible.

What we have to do in this (and similar) situations is **ask ourselves, what are we trying to find out?** Once we have decided this, next ask yourself, **what is it sensible to measure** when we take into account both the wider literature, and the size and scope of our project? **Remember, you cannot ask everything and some questions might not be necessary to address your research objectives.**

The key point to consider here is that whatever you do decide to measure in terms of demographic characteristics, you need to be able to justify these choices, preferably with evidence e.g. previous research has utilised a similar approach or structure, or the data is necessary to directly address the research objectives.

Returning to our example, let us try to decide between those questions that are necessary and unnecessary. First of all, it is probably sensible to measure religion due to its potential impact on the rest of our results. Similarly, it might be interesting to see if there any differences in alcohol consumption for ‘home’ and international students, the faculty the student is in, as well as the level of their programme. Due to the potential presence of mature students in our sample, age is probably a worthwhile measurement too. However, there is less justification to measure class, as the rationale doesn’t specifically mention it and the measurement of ‘class’ is problematic – particularly in student populations. Therefore, our questionnaire could become too lengthy and difficult to analyse if we were to include it.

Finding your Way: Also, consider how much time respondents can be reasonably expected to spend on it and prioritise the questions that are going to help you answer your study.

# Problem 2

Another problem with our research questions which hinders the design of questions within the questionnaire is the idea and measurement of the variable ‘academic practice’. This is problematic because the meaning is so subjective and therefore designing questions to effectively address this is difficult. For example, it could refer to a number of things: academic results, time spent studying, or attendance on the course. However, getting hold of academic results is likely to be very difficult—we would have to rely on self-reported measures, and many current results will be unknown at the time the person fills out the questionnaire.

To resolve this issue, go back to the research questions/aims and focus on the language and specificity of these. For example, both ‘time spent studying’ and ‘attendance on course’ seem to be sensible indicators of academic practice, so changing the wording to these ensures that the design is more straightforward.

So having considered the research questions, and after dealing with their ambiguity, it appears that the following variables need to be measured:

Age

Gender

Religion

Faculty

Level of Programme

Student Status (international or home)

Whether drinks alcohol

Self-reported level of alcohol consumption

Time spent studying

Attendance on course

Now we are sure of the variables we need, look again at the questionnaire example and use it to evaluate the items. If this is a good questionnaire, you should be able to infer what each of the items is measuring with respect to the variables we have derived from our research rationale.

# Problem 3

Within Problem 2, we identified a list of variables that must be measured in order to effectively address the research questions. Once this list is completed, we need to ensure that all of these variables are reflected in the questionnaire. To do this, you need to look closely at your questions, ensuring that they encompass all the variables we want.

Returning to the example questionnaire, a problem is that there is no question which reflects our interest in ‘student status’. This isn’t necessarily a huge problem, as it’s not a variable that’s integral to our study. However, to resolve this issue, it could be included as a new question as follows:

*Please indicate your student status:*

*International Home*

Finding your Way: Sometimes you need to add or remove questions once the pilot is completed.

# Problem 4

There are some issues here with the levels of measurements used. Question 7 on ‘self-reported alcohol consumption’ currently looks like this:

7) One unit of alcohol is equal to approximately:

1 shot spirits

1 glass wine

½ pint beer

 (1 bottle alcopop/ continental beer = 1.5 units)

On average how many units per week do you drink?

 0–5 20–25

 5–10 25–30

 10–15 30–35

 15–20 other (please specify) ­­­\_\_\_

Currently, the questionnaire is measuring the variable at the ordinal level. The scale of the variable is the problem here. If you drink 10 units of alcohol per week, where do you put your mark? You could potentially put it in the ‘5–10’ range OR the ’10–15’ range. The scale isn’t consistent and as a result, it isn’t reliable.

To solve this problem, it may be preferable to use a ratio measure and simply ask respondents to insert a value that corresponds with their alcohol consumption. It would be possible to recode the variable into an ordinal variable later if required.

Finding your Way: Check that your scales are not ambiguous.

# Problem 5

Another problem that is immediately apparent when we compare our variables with those inferred from the bad example of the questionnaire is the self-reported ‘binge drinking’ variable. For example, Question 8 is currently phrased as follows:

8) Binge drinking is drinking more than half your recommended weekly intake in one occasion. Recommended weekly intake is 14 units for women and 21 units for men. Please tick the statement that describes you best:

I never binge drink

I binge drink 1–3 times monthly

I binge drink once a week

 I binge drink 2–4 times a week

 I binge drink more than 4 times a week

There a number of problems here. Firstly, binge drinking is an emotive topic and
one that is often perceived negatively. For example, people may not want to consider themselves ‘binge drinkers’. As a result, the inclusion of the variable on the questionnaire could influence how other questions are answered, thereby affecting the validity of some of the other items. This is particularly the case as the item actually defines binge drinking exactly. More problematically, there is no need to measure this at all! The rationale does not mention ‘binge drinking’ specifically and it doesn’t relate to any of the variables that we derived from our research questions. Hence, it is probably a good
idea to remove it completely.

Finding your Way: Be mindful of how some questions could be emotive and thus might influence the responses. If you think that your topic could be sensitive, talk about the construction of questions with your supervisor.

# Problem 6

Question 6 also raises an interesting issue and again leads us to ask ourselves whether all the questions are necessary. The question currently looks like this:

6) Do you drink alcohol? Yes No

If no, please briefly state why not.

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The inclusion as to the explanation of ‘non-drinking’ status actually negates the need for the religion variable altogether (Question 3). As we are not interested in differences in alcohol consumption by religion directly (this is not a research objective), and are instead trying to anticipate any potential skews in our data, there is no need to measure religion in its own question if it is already measured elsewhere. If students do not drink, then they can simply state the reason why here. This makes the religion variable redundant in terms of our research rationale.

Finding your Way: Always ask yourself if the question is completely necessary and avoid duplicating questions. Look at your list of questions and ask ‘does it directly help me to address my research questions?’. If the answer is *no*, let it go!

# Problem 7

Question 9 also raises a number of interesting problems. The question looks like this:

9) In the last 4 weeks have you missed any timetabled commitments due to alcohol consumption? (e.g. hangover!!!!!)

Yes No

The first problem here is that the wording isn’t very professional: ‘e.g. Hangover!!!!’.
By being so informal, respondents could question the extent to which any data they give
will be treated confidentially and, as a result, decide not to continue with the questionnaire.
To resolve this, ensure that the language you use is professional and clear.

The second problem is that it primes respondents to re-interpret the question as one
that is interested in sessions missed due to hangovers. In fact, hangovers are only one
of several reasons that someone might miss a timetabled commitment due to alcohol consumption. So make sure that your questions are not leading or limiting the responses.

Thirdly, the measure is currently constructed at the nominal level, but it could be more
usefully measured at the ratio level.

**So what can you do to make your questionnaire a good one?**

* You need to **ensure that your research questions are clear** in your own mind before you begin designing the questionnaire.
* **To** **work out whether your own questionnaire is good and how it might be improved, it is important to think about how well each question is constructed and how it may be interpreted.** In your own questionnaire go through each question carefully and think critically about the job it is doing and whether it could be clearer, or improved.
* Reviewing and **piloting the questionnaire** is important to check it works and make changes where required.
* Try to **avoid asking too many questions**, as respondents can get fatigued. So make each question count.

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