

ScotCen

Social Research that works for society

Designing effective survey questions

Cognitive testing and the Scottish Social
Attitudes survey

Annie Wild and Anna Marcinkiewicz
ScotCen Social Research

SRA Evening Seminar - 15 October 2014



Contents

- What is cognitive testing and why do it?
- Methods for doing cognitive testing
- Cognitive testing in practice: how it is done on SSA
- Exercise and discussion



What is cognitive testing and why do it?



Cognitive testing

- Technique to test and improve survey questionnaires
 - Qualitative method but used in order to improve quantitative surveys
- One-on-one session with respondent, going through questionnaire but focus is on mental process used to come up with answer
- Developed in 1970s as part of the ‘cognitive revolution’ and has been used within NatCen for over a decade

Why do we need to test survey questions?

- Respondents must be willing and able to answer the questions
 - Understand all concepts
 - Feel comfortable answering the questions truthfully

Why do we need to test survey questions?

For good questionnaire design, questions must be:

- Valid
- Reliable
- Unbiased
- Sensitive
- Complete

‘Standardisation’ of Meaning

- Ambiguity of natural language
 - Intent and meaning of questions may not match respondent’s understanding of that intent and meaning
- Question testing can help detect where questions are interpreted differently by different people
- Occasionally, we find there are concepts that simply that will not ‘work’ as survey questions

Methods for doing cognitive testing



Think Aloud vs. Probing

Think Aloud	Probing
Respondent lead Less interviewer bias/ reactivity	Interviewer maintain control Less interference with task Can systematically cover all areas of interest
But: Not all respondents take to this technique High respondent burden Could interfere with task... Areas overlooked...	But: Greater potential for bias Greater potential for 'artificial' findings Interviewers need more training so they are aware of testing objectives

Concurrent vs. Retrospective Probing

Concurrent

- Breaks up flow of the questions (less like a real interview)
- More likely to capture what respondent is thinking at the time they answer the question

Retrospective

- Doesn't break up the flow of the interview
- Respondents can forget what they were actually thinking about at the time
- Respondents can 'invent' problems they did not have

Mode in cognitive interviewing

- Questions should usually be administered in the same mode
- Exceptions to this:
 - Financial or time constraints
 - If you are not yet sure what mode will be used to administer the question
- Even if using different mode, you should try to keep other aspects the same

What cognitive interviewing can reveal...

- Can detect problems that would remain 'hidden' otherwise
- Comprehension difficulties– task, words
- Recall difficulties
- How the response options work
- Layout issues

What cognitive interviewing *cannot* do...

- Indicate size or extent of problems
- Guarantee that all problems are mapped
- Guarantee that problems identified are 'real'
- Replicate exact survey conditions (context, order of questions, sometimes mode)
- Necessarily allow us to say whether the new version is better than the old

ScotCen

Social Research that works for society

Scottish Social Attitudes survey



Scottish Social Attitudes - origins

- SSA established in 1999
- Probability sample of adults aged 18+
- 1200-1500 interviews annually since 1999 (except 2008)
- Modular structure – multiple funders
- Computer-assisted face-to-face survey + self-complete section



Scottish Social Attitudes - aims

- Provide high quality, robust, independent evidence on what the Scottish public thinks
- Track and understand change over time
- Enable comparison with views in the rest of Britain (and further afield)

Scottish Social Attitudes – funding

- Scottish Government currently funds 1-2 modules every 2 years
- Other funders include a range of academic, charitable or research organisations such as ESRC, Nuffield Foundation, NHS Health Scotland, Leverhulme Trust, Edinburgh University



Scottish Social Attitudes – Examples of topics

Devolution and constitutional reform

Discrimination

Drinking, smoking and drugs

Police

Sectarianism

Violence Against Women

Gaelic language

Dementia

Families

National identities



SSA – question testing

2 stages of question testing:

- Cognitive testing
 - 15 interviews
 - research team
 - specialist cognitive interviewer

- Interviewer pilot of 50 interviews conducted by 5 interviewers

Cognitive testing on SSA

Selecting questions for testing

Cognitive stage	Response errors/question problems
Comprehension	Unknown terms, Ambiguous concepts, long questions
Retrieval/recall	Recall difficulty, no prior knowledge/experience
Judgement	Question biased or sensitive, Estimation difficult, Impact of social desirability on judgment
Response	Incomplete response options, Response options don't fit with understanding of question, Unwilling to answer.

Interview probes

- Aims for each specific question:
 - What do we want to find out?
 - What should the interviewer focus on?

- General probes to aid the interviewer:
 - *Can you tell me in your own words what the question was asking?*
 - *How easy or difficult did you find this question to answer?*
 - *What does the term x mean to you?*

The interview

- Usually around 15 interviews each taking approx. 1 hour
- Quota sample
- Testing in different modes (face-2-face, self-completion)

Conducting the interview

- Start with easy background questions and example question
How satisfied or dissatisfied would you say you are with public transport in Scotland nowadays?
- Probe either after each question (concurrently) or after a set of questions (retrospectively)
- Observation (e.g. look out for signs of delay, uncertainty and probe around it e.g. “ You look puzzled?” “Why did you hesitate here?”)
- End on positive and completed note
 - Suggestions, missing areas, thoughts about survey or topic

Preparing for the interviewer debrief

- Record responses to the survey questions during the interview
- Listen back to the recording and make detailed notes of their responses to probing
- Useful to transfer to single electronic copy of the questionnaire that shows answer and comments to each question

Interpretation

- Based on the researcher's judgement
- Look for trends across interviews
 - May uncover important problems with question
 - May uncover a problem expected to be fairly frequent in actual survey
- Look for trends within groups
- Don't ignore discoveries (even if they occur in only one interview)
 - Why has a problem occurred? How serious is it?

Example question – Attitudes to alcohol

Question for cognitive testing

How strongly do you agree or disagree that getting drunk occasionally is all part of what it is to be Scottish?

Question testing probes

SUGGESTED PROBES:

- Could you tell me, in your own words, what you thought this question was asking you?
- What did the phrase 'all part of what it is to be Scottish' bring to mind?
- Would your response would have been different if the question asked about 'drinking regularly'?

Post-cognitive testing changes

Some people say that getting drunk occasionally is all part of what it is to be Scottish. Other people disagree. How about you? Which comes closest to your view?’

(In self completion section)

Thank you

Anna Marcinkiewicz, Researcher

E. anna.marcinkiewicz@scotcen.org.uk

Annie Wild, Researcher

E. annie.wild@scotcen.org.uk

T. 0131 228 2167

Visit us online scotcen.org.uk

ScotCen

Social Research that works for society

ScotCen
Social Research