Research Questions in Linguistics

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Chapter outline

This chapter takes as given that research questions, appropriately designed and worded, are the key to any good empirical research project. Starting with why we need research questions (as opposed to *topics* or even *hypotheses*), I explore where they might come from, and propose different types of research questions. Research questions of course need to be operationalized, and the chapter explores the implications of different types of research questions for data, data collection and analysis. Equally importantly, research questions need to be explicitly documented, in terms *inter alia* of their origin, rationale and implementation, and the chapter looks at how (and where) this might be done. Research questions are discussed throughout with a specific eye on linguistic studies, exemplified using linguistic research, and there is a focus on linguistic data and analysis.

> [Research questions] are vehicles that you will rely upon to move you from your broad research interest to your specific research focus and project, and therefore their importance cannot be overstated.
>
> (Mason, 2002: 20)

1.1 Why do we need research questions?

Research questions are, I argue, the key to any empirical research project. Without research questions, you will flounder; with them, you will be guided in terms of data needed, data collection methods and data analysis. Ask yourself, 'What data do I need?' The answer is 'That which best enables me to

answer my research question(s)'. 'How do I analyse it?' 'In a way which allows me to address my research question(s)'. And so on. This is because a piece of empirical research is normally *designed* to address one or more research questions – the answers to which should constitute a 'contribution to knowledge'.

In the social sciences, empirical research very often employs *explicit* research questions. If you are about to conduct empirical research, first ask yourself, 'What am I trying to find out in my research project?' If you can answer this, you have the basis for a research question.

Many of us go into a research project with our ideas in general, and our research questions in particular, rather broadly formulated. Alternatively, our research questions may be precisely formulated, but, we may discover, erroneous (not amenable to investigation, or otherwise inappropriate). At the start of a project, neither may be too much of a problem, because a research question should not straightjacket you. Rather, you can see it as an initial direction – like a compass point, whose needle is swinging. Further down the line, you may find that issues come up which are interesting and relevant but which do not address your research question(s), that is, which answer questions you have not asked. If these do not require new data, you may wish to consider adding a new research question. At some point, however, your research questions need to stabilize (although there is room for getting their *wording* accurate right up until the end of the research project).

You may be used to the term *hypothesis* rather than *research question*. Hypotheses are more characteristic of the natural than the social sciences. While hypotheses and research questions are related, hypotheses tend to be more precise. A hypothesis is conventionally worded as a statement, which is to be investigated and proved or disproved through empirical study. An example would be 'In terms of school library use, boys in Year 6 of UK Primary Schools borrow (a) more works of non-fiction than fiction, and (b) more works of non-fiction than do girls.' Hypotheses are also perhaps more characteristic of quantitative than qualitative research (see Chapter 3). Research questions, accordingly, are characteristic of *qualitative* research, and are likely to be both broader and more exploratory than hypotheses, for example, 'What are the borrowing practices of UK Primary School Year 6 girls and boys in terms of fiction and non-fiction?'

A set of research questions should be formulated in ways which allow the identification and investigation of further issues that only doing the research can bring to light (i.e. that could *not* have been included in a hypothesis). In her own research questions checklist, Jennifer Mason (2002: 19) includes

the following: 'Are they open enough to allow for the degree of exploratory enquiry I require? Will they allow me to generate further questions at a later stage, in the light of my developing data analysis, should I wish?' (see also Andrews, 2003). Of course, a set of research questions should not be too general, vague or multidimensional, and below I show how these pitfalls can be avoided through the use of different *types*, *sequences*, *combinations* and *hierarchies*.

1.2 Where do research questions come from?

One broad answer to this question is 'the literature'. In the process of reading and of writing a literature review around your topic:

- you may come across a suggestion for an (unanswered) research question; however, do check that it has not, in fact, been addressed, and, indeed, that as a question it is both worthy of investigation (is it still interesting and original?) and operationalizable (see below)
- you may decide to replicate someone else's work, perhaps to challenge it, perhaps within a different or particularly interesting context, or perhaps to use a different form of analysis on the same or related data
- you may identify a 'niche' in the research literature, that is, something related to your topic has been asked, but something else has not.

The advantages of arriving at research questions through a literature review are, as Andrews (2003: 17–18) points out, 'that the question(s) will be well-grounded in existing research (assuming the literature review is a good one); there will be a coherence between the literature review and the rest of the thesis (again assuming the rest of the thesis is driven by the questions)'.

A second broad answer is 'a pre-existing topic' (which then drives the literature review). For example:

- you may have identified a recent and unpredictable political, social or natural event, which sheds light on our understanding of a particular social concept; for example, Hurricane Katrina in the United States or the Summer 2007 floods in the United Kingdom might provide 'sites' for studying the sociolinguistic/ethnographic notion of 'Community of Practice', or the 2008 American Presidential elections a site of 'modern political rhetoric'

- you may have identified an interesting linguistic phenomenon or development (e.g. use of the phrase *what's with* . . . to enquire about something unusual; blogs would be another relatively recent example, illustrating the affordances of a particular medium and a new form of communication).

A third possible source of a research question, more controversially, is that it comes out of your own findings. Your data may suggest answers to research questions that you didn't ask; hopefully you will be able to ask them now, of that data – as long as this does not destabilize, divert or unacceptably increase the workload of your entire research project. If it can be addressed *without* dilution or compromise, then there is no reason why a new research question cannot be introduced, and its genesis incorporated into the 'story' of the research project in question.

We can also consider the possibility of some data being 'hypothesis-generating' and some 'hypothesis-testing' (a distinction introduced by Allwright (1983), in which 'hypothesis' can be replaced by 'research question'; see also Salmani-Nodoushan (n.d.)). Diary studies, for example, may be 'hypothesis-generating' (let us imagine a group of students writing about their experience with a new language), in that the preoccupations documented in the diaries may suggest/generate research questions (e.g. 'What is likely to cause anxiety in novice learners of a foreign language?' – see Schumann and Schumann, 1977). These research questions can then be 'tested', or at least empirically addressed (e.g. 'Does reading or listening to words in a new language constitute a greater source of anxiety for novice learners of a foreign language?').

1.3 Research questions, topics and puzzles

When asked what their research question is (e.g. on their Ph.D. proposal form), it's surprising how many novice researchers actually provide a *topic*. In the area of language education, your topic might be, say, 'Teacher beliefs', in particular 'the beliefs of UK primary school teachers about foreign language teaching and acquisition'; or 'Language testing', in particular 'testing foreign language use in genuinely communicative situations'. A research question however is a *question*, and should be worded as an interrogative (see below). It is not a topic, although it grows out of a topic.

Alternatively, some people might consider an *intellectual puzzle* as a basis for their research, for example, 'Why is it that foreign language teachers tend to see girls as almost automatically better language learners than boys?' (see Allwright, 2003; Mason, 2002, for more on intellectual puzzles). Here, you may be drawing on your own experience and (informed) hunches. For example, as a teacher, you might feel that exercises from a certain textbook almost always go down better with the students than exercises from a different textbook, and you are curious to find out why (addressing such puzzles has been conceptualized by Dick Allwright as 'Exploratory Practice' (http://www.prodait.org/approaches/exploratory/)). The answer to this particular research question would have implications for classroom texts and pedagogy beyond the particular teaching situation.

Both topics and puzzles need 'translating' into appropriate research questions, that is, though careful formal expression, including in terms of accurate, appropriate and productive interrogative wording. But to look at wording, we also need to look at *types* of research questions.

1.4 Types of research questions

To illustrate some possible 'types' of research questions, let us take the topic of 'beliefs of UK primary school teachers about foreign language teaching and acquisition'. Within this, your research question(s) might be one (or more) of the following:

- Do French teachers working in UK primary schools agree with the teaching of French to Year 6 primary school children?
- What reasons do French teachers working in UK primary schools give for including the teaching of French to Year 6 children in the curriculum?
- What reasons do French teachers working in UK primary schools give against the teaching of French to Year 6 primary school children?
- How do UK primary school teachers of French believe Year 6 children best learn French?
- What is the range and diversity of beliefs of UK primary school teachers of French in relation to the teaching of French to Year 6 children?
- Why do UK primary school teachers of French hold these beliefs?

Note that these research questions are formulated as *interrogatives*: *Do*, *What*, *How*, *Why*. Other research questions might start with *Is/Are*, *When*,

Where, *Who* or *To what extent*? These interrogatives suggest different sorts of research questions: whereas *How*, *When*, *Where*, *What*, *Is/Are*, *Do/Does* and *To what extent* may be descriptive,[1] *Why* is clearly explanatory.

You need to consider carefully what you want to ask (often more than one question), and the sequence: it may not be possible to address one research question without having answered a previous one. For example, in many research projects, research question 1 is *descriptive* (*Does . . .?*) and research question 2 *explanatory* (*Why does . . .?*) (I return to the question of 'explanatory' research questions below.)

Novice researchers often wish to address an 'evaluative' research question, such as 'What is the best method of teaching listening in [context X]?' or 'Should EFL teachers be discouraged from using the students' L1 in [context X]?' The difficulty with such research questions, aside from the problem of 'operationalizing' them (see below), is that they tend to entail something like 'According to who/what' or 'If Y is to be achieved . . .', or even a particular desideratum (see Litosseliti, 2003). My feeling is that evaluations, coming out of the findings of descriptive research questions, are best expressed in the form of recommendations (or implications), perhaps in a Discussion section or chapter. For example, the question 'What is the best method of teaching listening in [context X]?' might be addressed not through a research question *per se* but rather through a discussion of findings of research questions such as (a) 'What different methods of teaching listening are employed in [context X]?', (b) 'What are teachers' and students' views?' and (c) 'Is there any correlation between method and test results, here?' Recommendations however still need to be expressed with caution, in part because of the problem of establishing causality (e.g. between use of a new method of listening and improved results in a listening test), and the issue of test validity (i.e. here, of that listening test).

In addition to a categorization of research questions as descriptive, explanatory or evaluative, cutting the research cake in other ways allows still other distinctions to be made, and referred to explicitly in the dissertation or thesis. These include the following:

Primary/secondary   Quite simply, some research questions might be more important than others, in terms of the focus of the study, or simply the quality and/or quantity of data collected, selected or elicited to address a given research question.

Main/contributory   It may not be possible to answer your main research question until an earlier ('contributory') research question has been answered.

For example, a contributory research question such as 'Does X happen . . .?' allows two further (alternative) main research questions to be addressed, for example: 'If X happens, why might this be . . .?' and 'If X does not happen, why might this be . . .?' (see also Andrews, 2003).

Overarching/subordinate   Two or more research questions might be grouped hierarchically under a 'higher' one, which together they address; for example,

Overarching research question:	What are some differences in the way [a given political event] is reported in newspaper X and newspaper Y?
Subordinate research question 1:	How are the 'social actors' in each newspaper report nominalized?
Subordinate research question 2:	Which report uses the greatest proportion of agentless passive verb constructions?

The 'overarching' question cannot be 'operationalized' (see below) as it stands, but *can* be operationalized through the two subordinate research questions.

Empirical/methodological/theoretical   While your research questions will probably be largely aimed at producing empirical findings (concerning, for example, part of the language system, an aspect of language use, language learning/teaching), you may also be interested in the investigative (methodological) process itself. An example of a methodological research question might be 'Are fieldnotes made by the researcher an effective way to investigate code-switching in workplace talk by migrant hotel workers?', and a second: 'What might effectiveness depend on, here?' Another possibility might be 'Can Critical Discourse Analysis (CDA) be usefully applied to the talk of pre-school children?' Don't feel that you *must* have a methodological research question. However, if you are doing something innovative or otherwise interesting methodologically – for example, combining two approaches which are not usually combined – this could constitute an 'intellectual contribution' of your study. If so, it may be worth 'promoting' this aspect of your methodology to the status of a research question.

Theoretical research questions are likely to refer both to theoretical concepts and their deployment in empirical research. Andrews' (2003: 23) illustration of a theoretical research question is: 'What is a theoretical framework within which Hong Kong children's writing [in English] can be analysed and described?', though he does not label this as such.

Researcher-generated/participant-generated   Of course, almost all research questions are researcher-generated. But this begs the question of the role of your research participants (assuming you are not doing text-based research). Are you, as Cameron et al. (1992) pointedly ask, doing research on, with or for your participants? Relatedly, Cohen et al. (2007: 88) propose that the researcher asks not only 'What are the research questions?' but also 'Who decides what the questions will be?' and 'Can participants add their own questions?' Someone doing research for their MA dissertation or Ph.D. thesis may have less space to explore the possibility of 'research for' participants than a researcher who has received a grant to do exactly that. However, MA or Ph.D. researchers are often not accountable to a grant-awarding body, and this may be precisely the time when they *can* consider how to work with research participants, and perhaps how to address those participants' own concerns.

Empirical/speculative   Some research questions – the *Why* questions above, for example – may need to be speculative, rather than empirical, perhaps informed by the 'answers' to empirical questions (in combination with your own professional or other insights).

As the above set of distinctions suggests, your research questions can and should constitute a coherent whole, that is, be explicitly related to each other. Both sequence and hierarchy are important here. Most obvious, as suggested, might be two research questions, the first (research question 1) being descriptive (e.g. 'To what extent . . .?'), the second (research question 2) explanatory ('Why . . .?'). Alternatively, as shown, an overarching question (research question 1), may not itself be operationalizable, but may be operationalized via two or more subordinate research questions (research question 1a, research question 1b). The relationship between the research questions should be clear, to allow a reader to see what it is you are trying to do in your research project. But this sort of organization is also important for you. Once you have created this coherent structure, you will be able to see if some of your research questions are basically the same (and hence should probably be combined), or if one is in fact a sub-research question of another. Andrews makes the useful suggestion here of writing each research question on a separate strip of paper and organizing them accordingly:

> Experiment with moving the questions so that they seem to make sense in relation to each other. Does one of them seem like the main question? Are some more general or more specific than others? How do they stand in relation to each other? Can some of them be omitted, or fused, or added to?
>
> (Andrews, 2003: 39)

Two final points about the *wording* of research questions. First – every 'content' word in a research question matters. To operationalize your research question, you will need to know *exactly* what each word is to mean as far as your research project is concerned (a 'working definition', that is, 'for the purpose of this dissertation/thesis'). Secondly, and more generally, Mason (2002: 19) reminds us that we should ask of our research questions, 'Would anyone but me understand them?' It is crucial that the answer is 'Yes' – especially if aspects of your study are to be *replicable*. If others cannot understand your research questions, it is worth considering whether they are, in fact, formulated in a way which is clear enough for *you* to address them properly.

1.5 How many research questions?

This question, inevitable after considering the wide range of types of research question, is, however, like asking about the length of the proverbial piece of string. Broadly, most research projects use more than one research question, often of different types. Mason (2002: 21) notes, 'In the early stages, it can be helpful to generate a lot of research questions.' Ultimately, however, the rule of thumb is to ask only as many research questions as can *satisfactorily* be addressed. The issue is not the number of research questions, but what is needed (in terms of data, analysis, time and effort) to answer a given research question, that is, the scale of a given project. Some questions are bigger than others. Andrews (2003: 4) cites 'What is the impact of communication technologies on learning worldwide?' as an unanswerable research question due to its level of generality; other research questions may be unanswerable (especially in postgraduate research) because they require a lengthy longitudinal study (e.g. data collection over five years), or more interviews than the researcher could conduct and analyse. In Mason's (2002: 21) words, 'you will quickly need to focus to ensure that you are designing a manageable project'.

It may be necessary to 'sacrifice' a research question if it cannot be done justice to (see, for example, Sunderland, 1996a). Painful though this may be, it may ensure that you avoid producing a superficial and diluted piece of work – remind yourself that sacrificing a research question and all that goes with it often strengthens the study *and* provides material for a later piece of work (a publication in-the-making). In my own Ph.D. thesis, on classroom interaction, I originally included research questions on wait-time (e.g. the amount

of time a teacher gives a student to answer a question before answering it him/herself) and interruption. I abandoned the wait-time question because it would have required special timing equipment, and the interruption question because of its conceptual complexity (which I could not have embraced within the scope of my thesis). These sacrifices entailed a sense of loss but enabled me to address the remaining research questions more fully.

1.6 Research questions and linguistic data

You may have noticed that the research questions in section 1.4 on 'Types of Research Questions', despite being concerned with language education, could largely be addressed through data in which language *itself* was not to be analysed. In much linguistic and applied linguistic study, however, the majority of research questions will include a linguistic component. (Indeed, it is arguable that many research projects outside linguistics would benefit from at least one research question which is concerned with language – something that is actually happening, given the 'discursive turn' across the arts, humanities and social sciences (e.g. Billig, 2001).)

Let us consider a set of research questions from a research project in the field of sociolinguistics:[2]

1. Is the quotative use of *be like* in talk (e.g. *He was like 'I can't stay here'*) on the increase in British English?
2. To what extent (if any) does the quotative use of *be like* in British English vary with age?
3. Is the quotative use of *be like* a greater marker of male or of female adolescent speech in the United Kingdom?

The focus of all three of these research questions is language use. (This clearly guides the data needed, data collection methods, and data analysis – see below.)

However, language can be a focus not only in terms of occurrence, but also perceptions. Other research questions on the topic of the quotative use of *be like* might be

4. Is the quotative use of *be like* in talk in English perceived as gendered by users?
5. If yes, how?
6. If yes, why?

Research questions about language *use* and about *perceptions* of language use are both valid in sociolinguistics, and indeed complimentary in our understanding of particular linguistic phenomena.

A research study can also include linguistically oriented research questions to do with a specific linguistic code or use of that code. When I wrote my own Ph.D. thesis (Sunderland, 1996a) on gender and teacher–student interaction in the foreign language classroom, work had already been done on interaction and gender in classrooms, including a little in second/foreign language classrooms, but there was (to my knowledge, to date) no work on gender and interaction with regard to the foreign language classroom *as such*. This meant that I could ask research questions which had been asked of other classrooms but had not apparently been asked of foreign language classrooms. I could then consider the *special characteristics* of the foreign language classroom: in particular, that two languages (at least) would normally be in use there. This pointed to a need to design a range of research questions focusing on the 'codes' used in this foreign language classroom (the relevant languages were the students' L1, English, and the target language, German).

My empirical research questions asked about teacher talk and student talk. In terms of teacher talk, the *overarching research question* was

- Does the teacher use more or different language to/about boys and to/about girls?

The subordinate research questions were concerned with (a) teacher solicits (i.e. language used with the intention to someone to do or say something), (b) teacher feedback to students' spoken answers to her question, (c) teacher comments and (d) teacher responses to student solicits. The list of subordinate research questions was long, and I include just seven (!) of them here as illustration:

> (1) How many male or female students are named (or otherwise identified) in the context of a solicit?
> (2) How many words of a solicit are directed to a particular student?
> (3) How many solicits are non-academic, how many academic?
> **(4) Of the academic solicits, does the teacher direct more solicits to girls or to boys in either German, English or both?**
> (5) As regards the answer to the academic solicits
>   (a) does the intended language of response vary with sex of addressee?
>
>   ⇨

> **Cont'd**
>
> (b) does the intended type of response (predetermined or 'pseudo-open') vary with sex of addressee?
>
> (c) does the intended length of response (one word or potentially longer) vary with sex of addressee?
>
> (6) Does the teacher provide different types of feedback to girls' and boys' broadly 'correct' answers to her academic solicits?
>
> (7) Does the teacher provide different types of feedback to girls' and boys' broadly 'incorrect' responses, or lack of responses, to her academic solicits?

Of the above research questions, though all were concerned with language in the sense of 'teacher talk', research questions 4 and 5a (in bold) were also concerned with use of a particular *linguistic code*: here, German or English.[3] As all the questions were original in that they had not been asked before of the language classroom (most had not been asked of *any* classroom), I saw this particular focus on gendered use of *linguistic code* in the classroom as one of the 'intellectual contributions' of my thesis.[4]

1.7 Operationalizing research questions

For an empirical research question (the sort you can only answer through data) to be *operationalizable* (see also Cohen et al., 2007: 81–3), there must be a way of addressing it, in terms of identifying the appropriate data, collecting and analysing it (see section 1.8). Often there are indications of how to do this in the research question itself. For example, as we have seen, a research question like 'What reasons do French teachers working in UK primary schools give for the teaching of French to Year 6 primary school children?' suggests that the researcher would *elicit* data, for example, might ask teachers a set of interview (or questionnaire) questions which *together*, properly analysed, would address this research question. Note though that the words 'What reasons do [they] give . . .?' constitute an important reminder that we cannot get at people's *actual* reasons directly from what they say – at best, these are 'reported beliefs', the beliefs they 'give' (see also Chapter 8). This has implications for the interpretation of findings and the strength of claims that can be made. (Note that interview questions are not the same as research questions. It would be unreasonable to put your research question directly to a respondent.)

Also important in operationalization is defining key terms. For the set of research questions given earlier about the 'quotative use of *be like*', we would need to be clear about what we mean by this. It may seem obvious (as in the example in the research question itself, *He was like 'I can't stay here'*), but there may be cases where it is not clear whether *be like* is quotative or not, and parameters will need to be drawn. Also in need of a working definition (i.e. a definition 'for the purpose of this study') is the concept, in these research questions, of *adolescence* (who counts as an adolescent?). Of course, the terms in your questions will correspond to your theoretical and epistemological focus: this is very evident in words like *ideology* or *discourse*, but even the word *beliefs* in a research question indicates that you consider your research participants' understandings as important, interesting and epistemologically valid in a given research endeavour (see also Mason, 2002).

1.8 Implications of your research questions for data, data collection and analysis

Mason points out that your research questions should be clearly formulated, intellectually worthwhile, and researchable 'because it is through them that you will be connecting what it is that you wish to research with how you are going to go about researching it' (2002: 19). I have already pointed to the role of research questions in identifying appropriate data and accordingly data collection, elicitation (generation), or selection (e.g. when looking at a body of literary or newspaper texts). Of course, you also need to be sure that you can get the relevant data, and can get enough of it.

One example of a research question with clear methodological implications (for data collection, and research design more widely) is Nunan's (1992):

- Are authentic materials more effective in bringing about learning than materials written specifically for the language classroom?

In that this research question is *comparative*, addressing it would entail researcher intervention. The research project would require an experimental set-up, with materials (authentic/written specifically for the language classroom) as the independent variable, and 'effectiveness in bringing about learning' as

the dependent variable. Both 'authentic' and 'effectiveness in bringing about learning' would need to be defined. Of course, the teaching and learning conditions would need to be controlled as far as possible, so that the materials were used by students of similar levels and abilities, who would ideally be taught by the same teacher.

Let us take an example of a research question and work it through: 'How do white female British university students construct their femininity in informal situations in talk with their same-sex peers?' Our *data* might be transcripts of naturally occurring talk of such students in informal situations. (Note that if we elicited data, for example, through interviews, we would be answering a question about how these students *understand* or *report* their construction of femininity.) To *collect* this data, we would need to identify an 'informal situation' and then do some audio and/or video recording, either including participant observation (which might distort the data, and would indeed make the event less 'naturally occurring'), or recording without the researcher present, perhaps asking the students to wear radio-microphones and giving them control of the recording equipment. Alternatively, we might identify and use a corpus of spoken British English which included conversations between white female British university students. In terms of *preparing the data for analysis*, we would need to carefully consider how to transcribe the recorded data. This is not a mechanical procedure: on the contrary, again, it depends on the research questions. Let us say, for example, that we were interested in the role of overlapping speech in the construction of femininity, perhaps as a measure of articulated empathy and/or support (see Coates, 1996). In this case we would have to make an active decision to indicate overlapping speech on the transcript, and further to decide (and document) *how* to do this.

As regards analysis, your research questions and data are likely to suggest a particular approach or framework related to the theoretical underpinnings of your work. For this example, we would probably decide on some form of discourse analysis (see Chapter 6), say, Conversation Analysis (CA) (Hutchby and Wooffitt, 2001), Critical Discourse Analysis (CDA) (Fairclough, 2001), Feminist Post-structuralist Discourse Analysis (FPDA) (Baxter, 2003), or perhaps a combination. Analysis is not however a self-evident or straightforward procedure based on, say, a decision to do with efficiency, but more to do with what we might call 'ontological alignment'. For example, not all researchers self-identify as feminist; and opposition to both CDA and CA can be ideological, based on views about the appropriate stance and role of the analyst. What is

likely is that your idea of your theoretical/analytical approach will in fact inform your topic and indeed your research questions, so that when you come to analyse your data, your analytical framework is, if not exactly 'waiting for you', a 'rational' decision which is theoretically consistent with your entire research project. If you are interested in language, power and ideology – and accordingly in CDA – your topic and research question(s) are likely to reflect this (you might be investigating the 'legitimation' of racism in talk, for example, or verbal dominance of one group over another in a public meeting), and you are likely to wish to analyse your data through one of the several versions of CDA (see Wodak and Chilton, 2005).

Let us now return to two of the language education research questions referred to earlier in this chapter:

- Do French teachers working in UK primary schools agree with the teaching of French to Year 6 primary school children?
- What reasons do French teachers working in UK primary schools give for including the teaching of French to Year 6 children in the curriculum?

and research questions 4 and 5 (above) about *be like*:

4. Is the quotative use of *be like* in talk in English *perceived* as gendered by users?
5. If yes, how?

For these research questions, you would need to *elicit* data, since you are dealing with (reported) attitudes, reasons, beliefs and perceptions. You could record people's naturally occurring talk, hoping that they would express their understandings of these very topics – but you might wait for a very long time. You would therefore probably consider using questionnaires or individual or group interviews (see Chapter 8).

In contrast, for research question 1 about the quotative *be like*

1. Is the quotative use of *be like* in talk (e.g. *He was like 'I can't stay here'*) on the increase in British English?

you would need a corpus of spoken English (with talk collected more and less recently), as this research question is about change, in actual language use, over time. And for the second *be like* research question:

2. To what extent (if any) does the quotative use of *be like* in British English vary with age?

you might, in addition to corpus data, use naturally occurring data, that is, samples from speakers of different ages.

Some research questions can be answered from existing data. Look again at the fifth language education research question (p. 13)

- What is the range and diversity of beliefs of UK primary school teachers of French in relation to the teaching of French to Year 6 children?

Here, the researcher needs to identify the range and diversity of beliefs from the total set of those s/he has already identified. This is important: a research question does not *necessarily* require its own specific dataset.

Finally, let's revisit the last 'language education' research question, and research question 6 about quotative *be like*.

- Why do UK primary school teachers of French hold these beliefs?
- If yes, why [is the quotative use of *be like* in talk perceived as gendered by users]?

These research questions are more difficult to address. In the social sciences, it is almost impossible to answer a 'Why' question in a way which is completely satisfactory. I have already mentioned the problem of establishing causality (as opposed to association). Of course, even without any data from the questions preceding each of these two research questions, it is possible (and may be instructive) to speculate about many possible answers. But even *with* data, a variety of explanations (answers to 'Why?') will suggest themselves, constituting what can be called 'competing hypotheses' (Dick Allwright, personal communication). And even if we ask teachers 'Why do you hold these beliefs about teaching French to Year 6 primary school children?', we cannot see the teachers' answers as 'truth' or 'facts'. While interview respondents may not be deliberately deceiving the researcher, or deceiving themselves, their responses are nevertheless 'co-constructions': jointly co-constructed with the interviewer, within the interview process itself (see Chapter 8). Put simply, a respondent might pick up on the words of the interviewer, might tell the interviewer what s/he thinks the interviewer wants to hear, or might construct an answer newly suggested to her/him by the interview prompt (see Litosseliti, 2003, for a discussion of types of prompts and questions typically used in focus groups). 'Why' questions thus have to be handled with a great deal of caution, and 'answers' expressed in a way which is neither overstated nor reductionist. For this reason, the (very important) question of 'why' is often addressed in the

discussion of findings, rather than asked through a research question 'at the outset'.

1.9 Documenting your decisions in your article, dissertation or thesis

The many decisions described above are not a 'private' or implicit matter. When writing an MA dissertation or Ph.D. thesis, it is most important to document *all* your decisions, and reasons for them. Helpful here is to start by summarizing your methodology in a table such as this:

	Research Question	Data needed	Data collection	Data analysis
1				
2				
3				

Such a table will help you organize your thinking and documenting of decisions; it will also help those all-important readers of your thesis or dissertation. Things are, however, rarely quite so cut and dried. For example, one research question might require two sources of data; conversely, as suggested above, one source of data might address more than one research question – and therefore your table will need adapting. But if you find that you have an empirical research question lacking data with which to address it, or data with no corresponding research question, then you have a useful alert to the fact that you need to reconsider your research design.

Documenting your decisions around your research questions however goes beyond justifying their operationalization through associated data, data collection methods and analytical framework. You also need to show that the research questions *themselves* have not 'fallen from the sky'; each needs a rationale (see section 1.2 'Where do research questions come from?'). This is related to originality and your own 'contribution to knowledge'. It is worth indicating in what sense each of your research questions is original – for example, has it ever been asked? or has it perhaps been asked before, but of a different context? For example, while most of my own Ph.D. research questions had not, to my knowledge, been asked before, others had – but of a classroom other than a foreign language classroom.

Equally importantly, research questions can (indeed, *should*) be referred to throughout the work – especially if different parts of the study address different research questions. In terms of data collection, different data will probably be collected with different research questions in mind. And all the research questions should almost certainly be referred to in the discussion: not so much in terms of you having 'answered' each research question, but, having addressed it, discussing it, and identifying the implications of what has been found. Continuous reference to your research questions (e.g. in each analytical chapter, to those research questions you are addressing there) will not only help you stay on track and organize your thesis as a whole; it will also help the reader appreciate the reasons for what you are writing at all times.

Notes

1. Note also that these particular *Is/Are/Do/Does* questions 'expect' more than a Yes/No answer!
2. I am grateful to Kate Harrington (2008) for this example of a research topic.
3. I would not now necessarily employ (or recommend) a long list of subordinate research questions. Proper operationalization of an overarching research question should not result in what Cohen et al. call 'an unwieldy list of sub-questions' (2007: 89).
4. In many cases the differences were non-existent or statistically insignificant (by no means disappointing). In particular, girls and boys had an approximately equal chance of being asked a solicit by the teacher in either German or English. Findings of *gender differential* tendencies related to linguistic code included that (a) girls were asked a greater proportion of academic solicits to which they were expected to respond in German than were boys (near statistical significance at 5% level), and (b) girls volunteered more answers than boys in German (statistically significant at 5% level) and English (non-significant).

Further reading

Andrews (2003) – A useful book for different levels of students in Higher Education whose research has a social or (language) education focus. Using several actual case studies, Andrews looks at the genesis and types of research questions and methodological implications, as well as problems researchers may encounter.

Cameron, Frazer, Harvey, Rampton and Richardson (1992) – A thought-provoking book, which looks at the questions of research 'on', 'for' or 'with' participants, and, implicitly, at where the research questions for a given study come from.

Cohen, Manion and Morrison (2007) – An extremely substantial and comprehensive 'classic' work, which is relevant to research both within and outside education. Make sure you get the latest edition (currently sixth)! 'Research questions' are covered in chapter 3.

Mason (2002) – A very thoughtful book encouraging reflection throughout. Mason has always been something of a pioneer in the qualitative research field. Research questions are referred to explicitly in relation to different stages of research.

Nunan (1992) – Despite its relatively narrow research focus, a methodologically very useful book which includes a section on 'developing a research question'.

Sunderland (1996b) – This paper looks at the 'paring down' of chapters and words – a frequent characteristic of thesis-writing. Research questions are dealt with in the 'refining' section.

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