

Research design: selecting and combining methods

Linda Woodhead

It is pretty obvious that any research project has to be planned in advance. Indeed, the external pressures to plan are multiple these days, and include the need to secure funding and ethical approval for a project. One result is the increasing elimination of risk from a research proposal. Thus there is currently more danger that research will be designed too rigidly than that it will be unplanned. Here I give some guidance on how to plan research in a way which has appropriate flexibility but remains rigorous. I explain why that may often entail using a combination of methods, and how what that involves.*

9 ½ elements of research design

A research design is a guide to how a piece of research will be undertaken. It outlines how a project will get from (A) the research question/issue to (B) a conclusion. That does not mean that the conclusion can be known from the outset, nor even that it is necessary to spell out a list of hypotheses to be tested (though you can), but it does mean is important to think about what would count as an answer(s) to the research question, and to check that the methods proposed are adequate to getting there. For example, if the question is 'are congregations of less than 50 people more likely to decline over time than congregations of 100 plus, and if so why?' then a comparative ethnographic study of one large and one small congregation may be very interesting, but will not answer the question (to answer the first question would require access to longitudinal data relating to a much larger sample of congregations – though some ethnographic research in different sized congregations could certainly help answer the 'why' question, and oral history interviews could complement the longitudinal data).

As this example shows, methods are an essential element in the research design. However, they are subordinate to the research question. It is best to think about the question first, and then how one would go about answering it. That should help to determine what methods one uses, and what resources one needs (in a larger project, resources might

include other researchers who have expertise one lacks). However, if the methods which are needed to answer a question go beyond the resources which are available, then it will be necessary to go back and modify the question. A key resource is access to good data – where data can mean many things, including archival materials for historical research or a good research site for an ethnographic study. To continue the above example, a PhD student may decide that she has found two fascinating congregations to study – a small one and a large one – and has gained such willing co-operation from them that she feels she should modify her question in order to make the most of this opportunity. The question, however, cannot purely revolve around her interest in the two congregations (e.g. ‘What is the difference between congregation X and congregation Y?’) because that is not an interesting question for the wider academic community. The reason it is not interesting is not only that it is too local and specific and lacking in clear wider implications, but because it does not relate to theories and academic debates (whereas a question about congregational growth and decline does). Therefore, the researcher will either have to find a question which *does* make the research able to contribute in this way, or think again about whole research design.

These make it clear that theory is integral to research design from start to finish. Some research questions are explicitly theory-driven (e.g. the main aim may be to test a theory, or some aspect of it). Even the most apparently simple questions usually trail a host of theoretical associations. For example, the question whether larger congregations are more likely to succeed than smaller ones seems an ‘obvious’ one to ask to sociologists of religion because theories of secularisation have been dominant in their field for so long, and a longstanding interest is in congregational decline and its causes. Sometimes it is not just theory, but wider social, ethical, cultural and policy debates, assumptions, concepts and even prejudices which shape research questions. Even the way in which the term ‘religion’ is understood and operationalised, or the choice to study congregations, carries a whole host of assumptions and choices. It is not possible to be free of these, but it is essential to be aware and critical about them. Such awareness makes it possible to make choices which one can justify to the academic community (e.g. as it is embodied in examiners or reviewers). It also makes it possible to make a contribution to theory, whether by confirming,

disconfirming, criticising or – even more exciting – by offering some innovation and fresh insight.

Thus even though research design is a map of a journey from A to B, the points in-between are as important as the start and the destination, and flexible research design requires one to be open to modifying A and B in the light of them. So we can also imagine it as a circle of interacting elements, with feedback running in both directions between them. Figure 1 illustrates this. A mark of a good research design is that it is well-integrated. That is to say, each element fits well with the others, and together they make up a harmonious whole, rather than fighting against each other. But to get to this point, as the next section shows, is not quick or easy. It is very unlikely to happen from the start: rather, the design needs to be flexible enough to be open to continual adjustment throughout the research process.

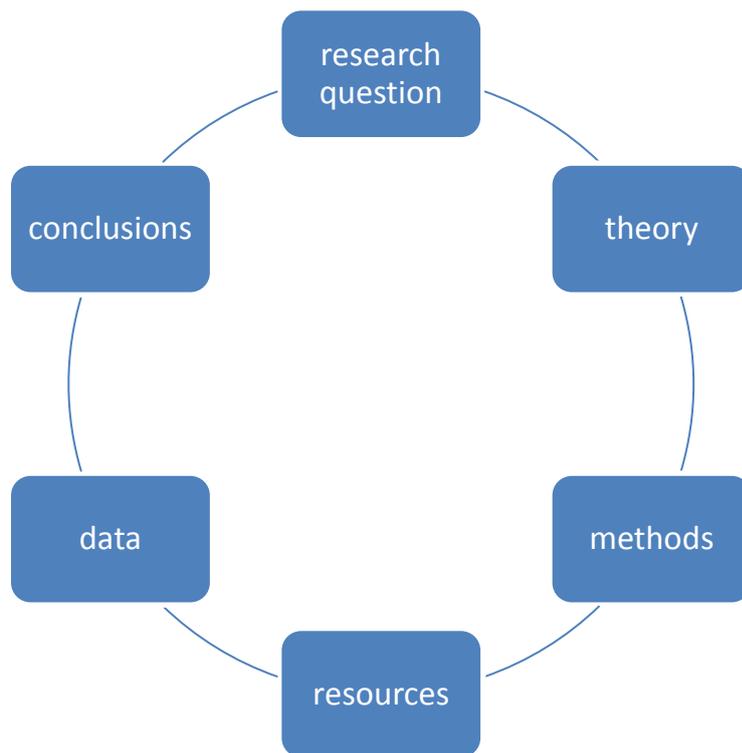


Fig 1 Six elements of research design

Before moving on to look at how to achieve such flexibility, it's important to mention three additional elements which need to be thought about in a good research design. First,

concepts. This is implied in much of what has already been said, but is worth considering separately. Our concepts – like ‘religion’ – are not neutral, timeless, ahistorical and transparent in their meaning. Normally, the more abstract they are (like ‘religion’ or ‘politics’ or ‘society’), the more freighted they are. Good research design requires that we are critically aware of the most central concepts within it, for they will be doing a lot of work. Once we have identified them, we need to be clear about how we are using them. The danger is that we just take over their meaning without questioning it. But as Kim Knott’s discussion shows in her exercise on ‘conceptualising religion’ on this site, a concept like ‘religion’ has many different meanings and uses, and each one often fits into a much wider context of use, and often into a theoretical school (and sometimes, a political cause as well). Even survey items which aim to be as neutral as possible, are always ‘loaded’ in some way: to ask whether a person is ‘religious’ or ‘spiritual’ or of ‘no religion’ can mean many different things to respondents, as can questions about ‘belief’ in a ‘personal God’ or a ‘spirit or life/force’. So it is vital to be aware of the way in which key concepts are being used in one’s own research, as well as how they are being used and understood by informants in that research. Moreover, it is dangerous to pluck terms out of a theoretical context to which they belong and to use them without adequate reference to that context, and in ways which were not originally intended, and are not explained and justified (e.g. ‘social capital’ means something different in Bourdieu and Putnam, and ‘faith’ means something different in the Roman Catholic catechism and in recent policy documents issuing from UK government bodies). It is also dangerous to combine terms plucked from a wide range of often incompatible theories (e.g. ‘social capital’, ‘rational actor’, ‘discourse’, ‘civil society’, and ‘superstructure’).

An additional element in research design is epistemology (or ‘philosophy of science’). As with theory and concepts, every research design has an implied epistemology even when it does not know it, so it is better to be critically-aware of it. Epistemology simply refers to a theory or account (‘logos’) of how we know something (‘episteme’). The theory, or theories, and methods selected in a research design all have epistemological implications. For example, if my question is ‘what do people believe?’ and I use a survey which asks questions like: do you believe in ‘a personal God’, ‘a higher power’ etc. that implies an epistemology which assumes that there is direct fit between concepts and facts, that individuals have

clear and direct access to their beliefs, that they can articulate these clearly, and that they are truthful. If, instead, I chose to use a mixture of different methods including not only questions but observation of choices and behaviours and third-party reports, that assumes a rather different epistemology in which, for example, people are not always able to articulate their deepest commitments, how they do so depends upon the context they are in and who they are speaking to, and concepts mean different things in different settings. A research design can be seriously flawed if its methods contradict its theoretical foundations (e.g. using an attitudinal survey alone to collect data, but depending on Judith Butler's theoretical work.)

A final element to consider is ethics. Quite rightly, the ethical dimension of a research design has come to have more importance in recent decades. Consideration of the potential ethical impact of research should be an integral part of the design. This is not just a matter of asking what harm a piece of research may do and striving to avoid it, but also asking what good can come of it, and attempting to achieve it. Some would go so far as to say that the ethical should be the controlling element of research design. For example, some action-research suggests that research should always aim to improve lives and society and that close attention should be paid to whether research partners and agents are represented in a fair manner, obtain a better understanding of their milieu, appreciate their situation, are given fresh impetus to act, and are empowered in a tactical manner. Valuable though these considerations are they are somewhat captive to the investigated milieu. Researchers certainly have ethical responsibilities and loyalties to those who are generous enough to assist them in their work, but there are additional responsibilities and loyalties as well – including to the research funder (which in the UK is often ultimately the taxpayer) and the wider academic community. There is also an ethical imperative on the researcher to try to represent their data as truthfully as possible. Inevitably, these different loyalties, claims and responsibilities may often conflict with one another. Some of this can be thought through at the start of the research design, but some will have to be negotiated as it progresses. Ethical considerations *should* have an ongoing bearing on choice of methods, epistemological assumptions, and so on.

Ethics is not just a matter of how research is conducted, but also of how findings are used. This is now referred to as 'impact', where that has to do with the use of findings beyond the

academy itself – e.g. to influence policy or broaden cultural understanding. Some impact can be planned for (e.g. by establishing partnerships with potential ‘users’ of the research from an early stage), but other impacts may be unforeseen and not within the control of the researcher.

Once one has put all these elements together into an integrated design, it is also worth asking: ‘who cares?’ This is a question about the significance (and potential impact) of the research. If the answer is only: ‘my mum, my boyfriend and possibly my supervisor’ that should give some cause for concern. This does not mean that all research should be ‘relevant’ (which can mean captive to the latest fad, moral panic or theoretical fashion). But it does mean that one should be able to explain why it matters to someone who is sympathetic but detached from it, and that one’s topic should have some significance for people besides oneself.

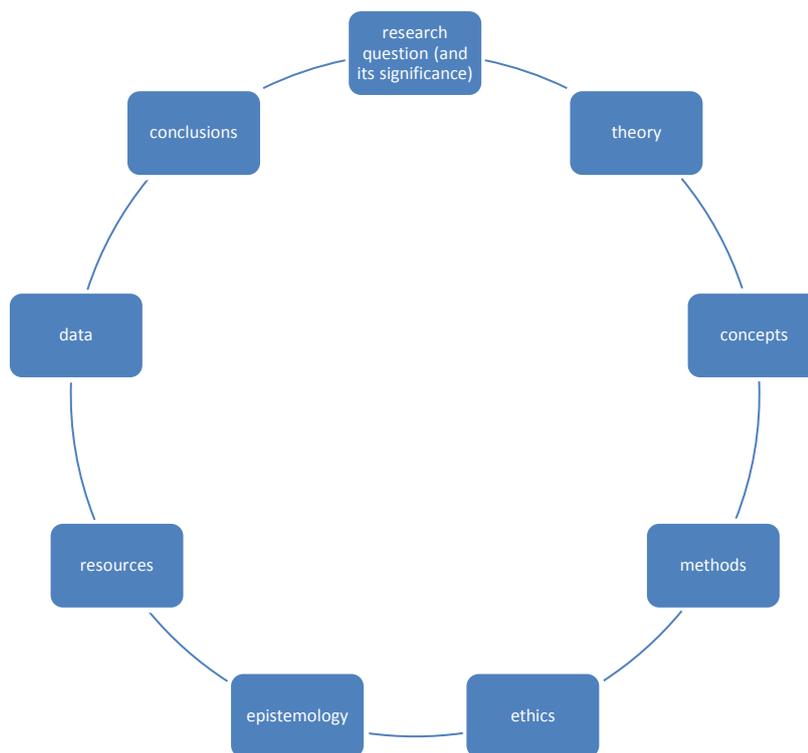


Fig 2 Nine (and a half) elements of research design

Keeping it focused and flexible

This discussion of the ingredients which go into a research design has constantly highlighted how each element needs to be open to feedback and adjustment from others. This is an ongoing process throughout the course of the research, during which unforeseen circumstances – including findings – nearly always call for adjustments in the design. This should not be seen as a flaw in the design which needs to be glossed over and hidden (too many ‘method’ sections in PhDs pretend that the research unfolded exactly as planned from the outset) but as a mark of good research which is innovative and capable of yielding surprises. The desire to control is a natural bulwark against anxiety, but it is important to live with a degree of openness in research, however uncomfortable that may be.

The advice to ‘keep it flexible’ depends somewhat on the nature and scale of the research. Research projects may raise several types of questions, each of which call for certain designs. An explorative question calls for a design which is very open and flexible, and carries a higher risk of failure. A question which asks about correlations between a limited number of relatively simple factors may, by contrast, adopt a fairly rigid design using tried and tested procedures. Scale also matters. Costly large-scale studies involving a team of researchers are subject to constraints which smaller-scale studies which involve one researcher or a small team are not. They are more likely to demand full and precise preparations, a strict plan for co-operation, and the use of some standardised procedures. When a project involves only one researcher, decisions can be made on the spot about the approach, and there is less accountability to those who have made a huge investment in a project. This does not mean that large-scale projects have to be rigid, only that the design must plan for well-coordinated changes.

Being flexible does not mean being completely open or having no plan of action at all. It means having a clear focus but being prepared to shift it and consider other perspectives. It may even mean changing focus completely. It is not normally necessary to abandon *all* elements in a research design, however. You might, for example, have as a research question ‘what are people doing when they pray?’ and decide to narrow it down because of available resources to ‘what are women in this particular prayer circle in Wales doing when

they pray?’ But when you undertake the research, you find that the formal prayer session is actually the least important part of what they do when they meet together, and so you decide to change your focus to what they get out of the rest of the time they spend together, which may shift you to another focus and research question and body of theory altogether. Or you may keep the focus on prayer, but find that it becomes equally important to study participants’ prayer lives at home and in annual prayer camps, which demands an expansion of sites, resources and possibly of methods.

Why combine methods?

There is no *a priori* reason for combining methods, and the decision should be integral to the research design. It is often useful to start with the research question and ask what – in a perfect world – one would have to do to answer it. What methods and expertise would be needed? Some questions really can be answered using only a single method – e.g. interviews or a survey could answer the question ‘what do middle-aged working-class white British men from Burnley say they feel about Muslims?’ But these questions are probably the exception rather than the norm. As soon as one asks a slightly more probing question – even ‘what do middle-aged working-class white British men from Burnley feel about Muslims?’ different methods are called for (because what people say they feel in an interview or on a survey may not be what they say in other contexts and relationships, and may not chime with their behaviours). It is also different if one asks what a particular organised group feels about Muslims, because groups have views which are not identical with those of their members (and which may be enshrined in texts, symbols, practices etc which need to be investigated with additional methods).

What is possible in practice – with the resources at one’s disposal – will always have to temper what blue skies thinking about combined methods might suggest, but it may be possible to scale down the question or project, and to retain at least some combination of methods. It is also sensible to take account of one’s own expertise and to play to that strength, but it is also possible to learn to use new methods and even to invent new methods. The metaphor of a ‘tool kit’ of methods from which one should draw the appropriate tools for the job in hand is a useful one. But it is unduly restrictive in implying

that there is a fixed set of tools from which one can choose, and that one cannot 'tool up' new ones if one needs them. Really innovative research may do just this, and in doing so it is often able to draw attention to whole aspects of life which scholars had previously downplayed (e.g. the rise of interest in visual and material culture, which is bound up with the invention of new methods for exploring them.) Academics have a natural bias towards reason and language – the tools of their trade – and this often leads us to neglect emotions, bodies, symbols, images, places, and so on (which can be especially problematic when studying religion). Inventing and using new methods can give us new ways to see.

Religion research seems to call for a combination of methods more often than not. One reason is simply that religion is not a 'thing' but a word we use to name a complex phenomenon, or range of phenomena. Of course, it is possible to focus solely on religious beliefs, or a certain sort of behaviour, or an institution etc., but this may produce a very abstracted, one-dimensional account of religion. And good research on religion may not use the concept of religion at all (but, e.g., evangelicalism, spirituality, culture, the sacred, neo-Hinduism, holy wells, shamanism etc.). This points to a further reason why religion calls for a combination of methods, namely its embeddedness in a whole range of social domains – from politics to schools to healing and healthcare. The study of religion is necessarily multi-disciplinary, and methods forged in many different disciplines may be used by scholars of religion as they stray into the many territories in which religion is found.

It's not all up to me

At this point it is worth adding a comforting reminder that even though a combination of methods may be the best way to answer a research question, I do not necessarily have to do all the work myself. There is a temptation for researchers to feel they must carve out their own niche and do it all alone. But in fact research is a collaborative project which builds on the work of others, engages with it, and – if it is successful – contributes to it. It is better seen as part of an ongoing conversation than a monologue. This means that I can rely on what others have done as well as what I can do. For example, to return to the research question above about whether small congregations are more likely to decline than large ones, I may only be able to carry out research in a particular sample of six congregations,

but the large-scale data I need which reveals whether and how these are representative of congregations in the UK and whether there is a correlation between size and vitality is available from research already carried out by others. There is no need to replicate what has already been done, and it is always essential to know what *has* been done so that it can be integrated into my own design (part of the purpose of a literature review). In combining methods, it is a huge help if I can use methods which have already been utilised by others to garner results which can be drawn into my own project.

How to combine methods

Even after the decision has been made to combine x,y and z methods in a research project, it remains an open issue *how* they will be combined. Too often this remains unstated. Part of the question is temporal: will you start with x, then do y, then z – or some other sequence. Any why order your methods in this particular way? (There can be practical as well as methodological answers for this). It is also a question of mutual relation between the methods, and how they relate to data. Will they build on one another? Question and test one another? Are they all aiming to deliver the same kind of data, but coming at it from different angles? Or are they meant to yield different kinds of data and/or answer different parts of a research question? The *manner* of combination needs to be built into a research design from the outset, which can also make it easier to identify if a shift is needed.

Creswell and Clark (2007), who are interested in how to combine quantitative and qualitative methods, sort combined designs into three main types: triangulation, sequential methods, and embedded designs.

Triangulation is based on a design of concurrent quantitative and qualitative methods aiming at convergent conclusions. Such a combination may provide a mutual validation, where the qualitative design controls for internal validity (coherence) of the quantitative data while the quantitative design controls for external validity (generalizability) of the qualitative data. Here the combination of methods allows for testing the results yielded by a single method.

Sequential designs involve changing methods at specific stages of the research process. This may involve a pre-study followed up by a major study or a major approach followed up by a complementary one. For example, qualitative interviews and field observations can be used as a preparation which clarifies concepts and hypotheses for a major quantitative study, or a brief survey can be utilised as a preparation for selecting types of informants for in-depth interviews or for selecting cases for comparative in-depth observations. A sequential exploratory study involves a qualitative main study in order to coin sensitising concepts, and this can be followed up by a quantitative survey of the distribution of the characteristics. A sequential explanatory study involves a quantitative major study which corroborates patterns of correlations which are followed up by a qualitative study of causal mechanisms and processes.

Embedded designs imply a dominant design followed consecutively by supplementary approaches. Thus an experimental or quasi-experimental design can include embedded qualitative studies which control for the presuppositions and interpretations of the major study, or a correlation study can include embedded qualitative studies which control for how respondents interpret the questions and how they recognise the causal processes. Because quantitative designs often demand substantial resources, embedded designs are normally based on predominantly quantitative designs. However, it is in principle also possible to use an embedded design in a predominantly qualitative study. Thus, a field observation may call for quantified observations of the frequency of certain acts or the number of people involved or the time a certain process takes. Quantitative methods may also be embedded in a predominantly qualitative design as, for instance, when cases for in-depth studies are selected after a quantitative survey which indicates which types of cases may call for a deeper investigation.

In practice projects often mix some or all of these 'types' of combination. For example, large-scale funded religion research in the USA often uses interviews to establish concepts and questions, then carries out a large scale questionnaire survey, and then follows up on the latter with interviews of respondents who have self-identified as available on the survey. This is sequential and cumulative, but with elements of triangulation (adding more observational elements would strengthen this).

Creswell and Clark's concern with combining 'standard' quantitative and qualitative methods by no means exhausts the possibilities of combination. There are many different ways of combining, and many permutations of different methods (and no need only to mix qualitative and quantitative – it just depends on the research issue). Here again, innovation is as possible and important as following an established *modus operandi*.

Being rigorous

Whatever research design one settles on, it is vital to test it to destruction. A good deal of research is much too uncritical. The terms 'reliability' and 'validity' can be used as shorthand to refer, respectively, to issues to do with whether the research has been methodologically rigorous (e.g. was data gathered correctly, not distorted, not misinterpreted?) and whether the research conclusions have been substantiated by the research carried out (do they flow from the evidence, have they been demonstrated?). In practice, the two issues are sometimes inseparable.

One way of demonstrating reliability is to present some of your data and make clear how you have analysed it. Then the reader can check for herself. This is part of the point of quoting from archival material and other texts, of including data tables, and of having appendices which include things like interview schedules and sample transcripts. This helps a readers satisfy themselves that you have not made up your data or misinterpreted it. It may also be necessary to find ways to show that you have not been unfairly selective in focusing on some findings to the exclusion of others – i.e. on that which supports your argument not that which undermines or muddies it. It is good practice to reveal the presence of counter-evidence, unwanted surprises, and unassimilated materials.

It is always important to give detailed accounts of how data was gathered – e.g. was a survey carried out by you or an agency? Was it done by phone and if so, how were the numbers selected? Was it done by face-to-face interview, and if so where was it carried out and by whom? It is also important to reflect self-critically upon the limitations which methods have imposed on one's study (e.g. if it was a postal survey, with no incentive to complete, what sort of people are most likely to have the time and skills – like literacy in English – to respond, and how might this distort the sample?).

As for validity, it is important to be equally self-critical about whether one's evidence and arguments can really support the conclusions arrived at. If small-scale qualitative research has been carried out, it is usually invalid to argue from the evidence gathered from a case study or small sample to a more general finding (e.g. the fact that a group of Buddhists in Cumbria display certain characteristics does not mean that all British Buddhists do, nor even all British Buddhists belonging to the same group – unless you can draw on other studies to show that it does). Sometimes cross-sectional data is available which allows one to test how representative one's findings are of a wider population. In the absence of such material, it is better not to claim more than one's own data can demonstrate (or to present additional claims as hypotheses for further research). This does not mean that small-scale studies may *not* be representative of much wider populations (given factors like modern communications, and common cultural immersions, it would be odd if such studies yielded findings that absolutely unique), only that this has not yet been proven. Some small-scale, intensive research may refer to special social types, which are only represented with relatively few respondents in large-scale surveys (e.g. a group within a minority religion). If the intensive material covers even a relatively small group, this may still represent a vast increase in knowledge. Small-scale studies are also able to generate fresh concepts, theories and interpretations, and to test existing theories – all of which contribute to their 'generalisability'.

For maximum rigour, it is also vital to consider counter-arguments to one's own. It is much better to raise these, to read alternative perspectives, and to engage with those who disagree, than to ignore them. It is always possible to interpret the same data in different ways, and the aim is to show why you favour your interpretation and conclusion over others and persuade your readers, rather than to pretend that there are no alternatives.

Conclusion

Religion research lends itself to flexible research design and combination of methods precisely because it deals with such a complex subject. In the quest for clarity and control it can be tempting to try to make it simpler by dissolving it into constituent parts which can then be interrogated using standardised research methods and procedures (e.g. interviews

with individual believers), but this can lead to a distorted and one-sided picture. Religion is not just an individual matter, it is also a social and 'material' matter, and is manifest in many different but equally constitutive forms and media (e.g. in symbols, rituals, religious and other institutions, texts etc.) Each may be amenable to different kinds of methods, but to capture their integration in real life, a combination is needed. This forms part of an appropriately flexible research design which is open to modification and innovation in the light of surprising findings which challenge existing procedures.

*This discussion is indebted to many conversations with Professor Ole Riis of Agder University in Norway, and to insights in his unpublished paper on 'Comprehensive Research Design' (the summary of Creswell and Clark is taken directly from the latter).