

Slide 1



Welcome to this short video lecture on survey methodology. I'm Dr Ben Silverstone and I'd like to share with you some of the experiences that I've had with using surveys for research.

Slide 2




Within this presentation we're going to have a look at what surveys are, we'll explore some of the benefits and drawbacks, and we'll also consider some of the important considerations that you need to make before you apply the methodology in your research.

Slide 3



So let's start by exploring exactly what surveys are and how they work.




What are Surveys?

- Self administered questionnaires (Bryman 2008)
- Not going to focus on researcher administered instruments
- Battery of questions on topics
- Closed and open questions
- Variety of approaches – multiple choice, matrix, rankings, open

- Postal – expense and control
- Online – cheaper, control issues
- Paper with a return box – control

- 10% (2%)



So surveys are essentially self-administered questionnaires and we're not going to focus on research administered instruments, you'll find that in the interview methodology lecture, but crucially what we have is a battery of questions on a specific topic. So a researcher would think about everything they want to know about a topic from an individual and they will craft questions in order to get the information that they want, and these can be a mixture of closed and open questions. So a closed question is one with specific response categories, they limit what a respondent can say, and these types of questions are used very widely because they allow us to undertake elements of statistical analysis on the results.

Open questions on the other hand, allow for respondents to put whatever they want as part of their answer, and this means that the results can be more difficult to analyse, however they can be coded and then analysed statistically afterwards. So a coding exercise is where we look for common themes within a given longer answer set, but often we use the open questions in order to provide us with some justification for the responses provided in earlier questions.

Essentially if we think that 8/10 cats prefer Whiskers, then an open ended set of questions would allow us to explore what it is that those cats like or perhaps what it is that the two cats that don't like Whiskers, don't like about it.

Now there are a variety of different approaches to these questions. We have multiple choice questions, which can simply vary from Yes/No questions to more thorough and in depth multiple choice questions. We can have matrix questions where respondents can choose more than one thing that's relevant to them. We can get respondents to rank things, and we've also then got the open ended question.

Now, what's crucial here is that a variety of question types make for a more interesting survey and therefore it is more likely that participants will complete it, and it also allows us to undertake a wider variety of statistical testing and comparative analysis between questions. So I'd encourage you to think about variety within a survey rather than simply taking something like a scale question, which as you can see we're not going to discuss here, because I'd like to encourage you to think more broadly.

But there are different ways that surveys can be administered. Traditionally and up until the advent of modern internet technology, we've used postal surveys. So, we would either send surveys out to people who we've identified are potentially interested in our work, or just simply to as many people as we possibly can, and there are issues around the expense of this and also control. So, it's very difficult once we've sent them to guarantee that we're going to get responses.

Online survey methodology is a lot more widely used now and companies such as Fluid Surveys and Survey Monkey make it very, very easy to deploy a survey that can be filled in online and can also then have some kind of analysis undertaken very, very quickly. This is a lot cheaper. A small monthly subscription can give us access to as many respondents as we want and analysis tools and the opportunity to download datasets. However, we still have the same control issues, in terms of getting people to do it.

That said, with an online system if we input the email addresses of people that we want to send these surveys to, it does actually generate individual links per email address, so we can actually track those that we've had responses from and send reminders to those who haven't responded.

Now there are certain issues associated with that in terms of the anonymity of results, but it does help us to improve our response rates.

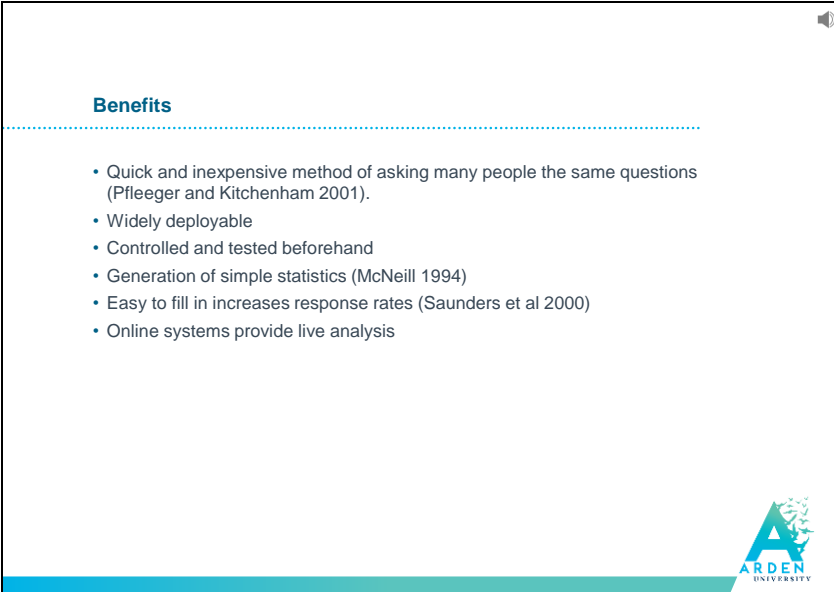
And finally then, the paper survey with the return box, again an old fashioned way of doing it where we have a survey on paper and a box for people to put it in. It's less expensive than a postal survey because we're not having to include things like stamped addressed envelopes, but again we do have certain control issues associated with it.

Now when planning a survey, it's worth bearing in mind that actually a 10% response rate to a survey is considered to be good, and in fact if the population is of a size and a sample size is big enough, you can get away with a 2% survey response.

Slide 5




So, let's explore some of the benefits of using the survey methodology. It's certainly one that I use a lot.



Benefits

- Quick and inexpensive method of asking many people the same questions (Pfleeger and Kitchenham 2001).
- Widely deployable
- Controlled and tested beforehand
- Generation of simple statistics (McNeill 1994)
- Easy to fill in increases response rates (Saunders et al 2000)
- Online systems provide live analysis



Now, generally speaking it is a quick and inexpensive method of asking many people the same questions. You'll see in interview methodology that we strive to ask the same people the same questions but interviews are so time consuming, whereas we can synchronously have hundreds of people answering the same question via a survey, and now with the advent of the internet they're very widely deployable, and it's very quick and easy to get a large sample size from various different sources. So a lot of surveys that are deployed through social media can reach a really wide number of people. In fact, I had a look at my LinkedIn profile and wider network and if I shared a survey with everybody within my network, and they all shared that survey with everybody in their network, then that would reach some six million people.

Now what we can do with our surveys, is we can control them and we can test them beforehand using things like face validity testing and trial groups to make sure that we are asking the right questions and that our questions are understandable so that things like that aren't getting in the way of our work while we're carrying out our surveys, and once we use our surveys and we use a variety of different questioning approaches, it allow us to generate statistics.

Now where we make a survey easy to fill in, it does increase response rates which again is where electronic surveys are so valuable, because they can be accessed on a mobile device or on a computer, they tend to be visually quite attractive and tend to be quite straightforward to use, but it's worth bearing in mind that deploying a survey through an electronic method, can actually alienate a very large proportion of the people you may be targeting, those who aren't IT users. And one of the things that we can do, is we can use online systems to provide live analysis. So logging into

something like Survey Monkey will provide you with statistics on questions, as the responses are coming in.

Slide 7




Now despite these benefits, there are significant drawbacks that we need to be aware of.

CB2

Drawbacks

- Potential for bias (Stevens et al 1993)
- Willingness and honesty (Stevens et al 1993)
- Satisficing (Tourangeau et al 2000) CB1
- Failure to recall (Conrad and Schober 2000)
- Layout of the items – laziness
- Fatigue – length of the survey
- Failure to complete
- Lack of prompts and probes (Bryman 2008)
- Alienation and lack of understanding
- Closed questions limit opportunities to gather useful justifications for answers
- Open questions can be off putting
- Have I considered the needs of the respondents?



There's always going to be the potential for bias, and this is going to exist everywhere. Within surveys the potential for bias comes from the questions that we ask and the response categories that we include. This is one of the reasons why I say we need to be very careful about the use of liker style questions.

So for example, a liker style question is generally not a question it's a statement which we then challenge a respondent to either agree with or disagree with. So, as an example of this, let's say that one of our liker style items is, IT services are excellent, and you're asked to strongly agree, agree etc. Well first off, we perceive that the bias of the researcher is that they believe IT services to be excellent already, and that what we're essentially being asked to do as participants, is to either agree with that, or to challenge that perception and it can be very difficult for participants to feel that they can challenge that perception.

There's also the willingness and honesty when it comes to people participating. Again like you will see in the interview methodology, this issues of satisficing or giving the answer that they think the researcher wants to hear rather than an honest answer, and also the willingness to fill in a questionnaire, and again this come back to my discomfort with liker style questions because if we have say a five point scale, if somebody simply isn't that interested, or can't be bothered but feels that they should fill it in, they'll just go middle of the road all the way, and that is worse than them not filling it in at all.

There are also issues around things like failure to recall. So the further back we're asking people to think, the harder it is for them to recall accurately what it is that we're asking them.

There's also issues associated with the layout of the items. We need to bear in mind that the participants, if we consider them to be inherently lazy and looking for the easiest way of doing things, if we provide a list of ten options in terms of answers for those questions, what research has shown is that people will either go for the first few or the last few. The middle options tend not to get considered at all, and one of the ways of getting around this is if we use an electronic survey, to set it to randomise the answers. So that different answers appear in different order depending on the respondent.

There are also issues associated with what we call response fatigue. So the length of the survey can impact on whether or not people actually finish it, and one of the biggest mistakes is to put the demographic information questions, so our independent variables, so things like age, gender etc, at the beginning of the survey. Now we quite often see them there, but actually they should be placed at the end of the survey so there's an easy way to finish.

Surveys also mean that we have a lack of prompts and probes. So if somebody doesn't understand the questions, they simply don't understand the questions. So we need to take greater care in the way that we plan our questions to ensure that people can answer them effectively.

We've mentioned alienation in terms of the method of deployment, but also a lack of understanding is present within surveys, and what we need to do is we need to think about, and meet the needs of, our participant group by thinking about the level of language that we choose to put into our work.


Now, if we use a lot of closed questions, it does limit the opportunity to gather useful justifications for answers. Now a lot of researchers choose to use closed questions because it's easier to work with the answers, but actually the real value comes from some of those open ended questions, but having open ended questions in a survey can be off putting to people who fill it in. So we've got to be careful the way that we include them.

And finally here, have the needs of the respondents been considered, rather than just simply the needs of the person who's carrying out the research.

Slide 9




So let's look at some important considerations.



Important Considerations

- How long will a survey be?
- What kind of analysis do you want to carry out?
- How will the survey be deployed?
- Do the questions being asked actually relate to the overall topic?
- Sampling – am I asking the right people?
- Does my method introduce bias?
- Have I tested my survey beforehand?



Ask yourselves these types of questions; how long will a survey be? So how long should it take somebody to fill it in? Obviously the quicker the better, but it's always worth being up front with participants. Plan the analyses that you want to carry out before you design your survey. We don't want to leave it to chance that you'll have the data that you want to carry out certain analysis.

And consider how your survey's going to be deployed. Will you need to have additional options? So, for one of my most recent pieces of research, the primary method of deployment was online, but paper copies had to be made available in order to cater for people who weren't within that particular user group. I also had to provide the survey in more than one language to ensure that it covered the whole population.

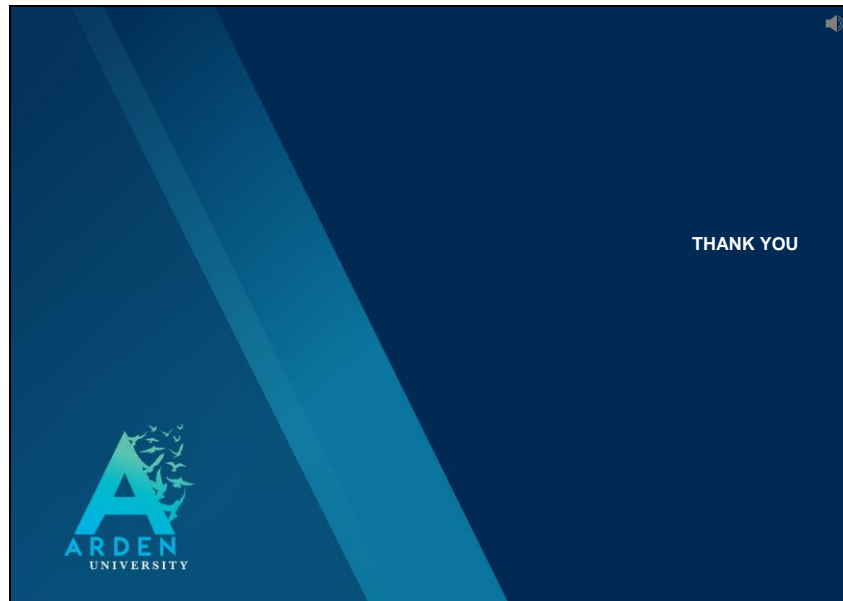
And do our questions that you were asking actually relate to the overall topic? Everybody puts into a survey demographic type questions, but actually are they needed. You've really got to think and plan carefully to ensure that you're only including questions that are actually needed.

And are you asking your questions to the right people? Have you sampled the right group of individuals? And has bias been introduced? So that's where you can try this out on other people, to see how they perceive your questions. And that links into have you tested it?

Now my personal preference is to do two pilots of a survey. So I will pilot it with an expert group who understand the subject and can give comment on whether or not the questions actually relate to the topic. I'll then pilot it with a non-expert group of people who are made up of specific types of individuals who can comment on things

like the understandability of the question and in one of my most recent pieces of work, within that group I included a lawyer because there were certain questions that could be sensitive and I wanted feedback on the wording of those questions.

Slide 11



So thank you for taking your time to look at this video lecture and I hope it gives you some thoughts in terms of how you may use the survey methodology as you move forwards with your research.

Reference List

- Bryman, A. 2008. *Social research methods, 3rd edition*, UK, Oxford Books.
- Conrad, F. Schober, M. 2000. Clarifying question meaning in a household telephone survey, *Public Opinion Quarterly*, 64, 1, pp1-28.
- McNeill, P. 1994. *Research methods, 2nd edition*. UK, Routledge.
- Pfleeger, S, Kitchenham, B. 2001. Principles of survey research, part 1: turning lemons into lemonade, *Software Engineering Notes*, 26, 6, pp16–18.
- Saunders, M. Lewis, P. Thornhill, A. 2000. *Research methods for business students, 2nd edition*, UK, Prentice Hall.
- Stevens, P. Schade, A. Chalk, B. Slevin, O. 1993. *Understanding Research*, UK, Campion Press.

