

The eLearning Coach Podcast

ELC074: Creating Effective Surveys for Instructional Design

A Conversation with Caroline Jarrett

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Connie: Hello learning people and welcome to episode 74 of the eLearning Coach podcast. When you're doing an analysis or an evaluation, you may be using surveys as one of your tools.

There's a large body of knowledge surrounding survey creation that can help you achieve cleaner data and more accurate results. In this episode, I explore the best practices for creating surveys with Caroline. Caroline is a forms specialist and the author of *Surveys That Work* and co-author of *Forms That Work* and of *User Interface Design and Evaluation*.

She has an MA in Mathematics and an MBA and Diploma in Statistics. And in our entire conversation, we never did any calculations. You can find the show notes with links, to all the books Caroline mentions, and a transcript at thelearningcoach.com/podcasts/74. Here's our conversation.

Hi Caroline. Welcome to the eLearning Coach podcast.

Caroline: Oh, thank you. It's delightful to be here. I really appreciate the invitation.

Connie: I so enjoyed your book, and it was kind of like the book I've always been looking for when it comes to surveys. It's very important in instructional. To get to know our audience, to get feedback on things. So, let me start at the beginning because everyone thinks they know what a survey is, but you differentiate between a questionnaire and a survey. Is that correct?

Caroline: It is correct. And it's just me being a little bit over precious, I suppose. In real life, we use the term surveying questionnaire interchangeably. Okay. And even the surveying methodologists will do. So, in the book, I try and meticulously draw the distinction between the questionnaire, which is the set of questions and answers that you actually put in front of the people who are going to answer.

And the survey as being the entire end to end process. Ideally starting with some goals, although real life is often a bit more messy than that. And we hope ending up with some sort of decision at the. But I think in our everyday lives sort of working business to business, or perhaps in instructional design where you might be trying to

gauge whether some training was effective or not, we generally want to make some decisions like, did that particular intervention go well or not?

Are we going to keep it the same? Are we going to tweak it? Are we going to chuck it completely out and start again? Because it was a disaster. We have some sort of decision at the end of the process. So, I try and use the term survey for that whole process. And I try and use the term questionnaire just for the questions and answers.

But in practice, I use them interchangeably myself and everyday discourse. And even the survey methodologists. We'll do that. So, one of the first books I really got into in survey methodology is the A.N. Oppenheimer book, which is called Questionnaire Design, but actually he means the entire process. And then, you know, one of the best books, in my opinion about questionnaire design is M Couper's book. He's an incredibly distinguished survey methodologist emeritus at the University of Michigan. And his book is called Web Survey Design, but it's actually about in my terms, questionnaires.

So, I wouldn't stress about it. It was more that in the book, I felt I needed to be pretty clear on my terminology because I think constantly swapping terms can be a bit confusing for the reader.

Connie: Right, right. That reminds me of the difference between font and typeface. They are different, but we use them interchange.

Caroline: Yeah, unless you are a typographer, in which case it really riles you.

Connie: Oh, I imagine. In instructional design, we frequently use surveys to better understand the audience. In light of that it does seem that descriptive surveys, as you describe that type, are best for our purposes. Do you agree? And can you explain what a descriptive survey.

Caroline: I think I probably agree. I mean, if I want to understand an audience, I think my optimum suggestion would be an iterative process. That includes quite a lot of interviewing and observation of the people that you are, you are working with or complimented by surveys, because really surveys are about counting.

How many they're not about finding out what's out. So, you need to do the finding out what's out there as a separate step and not expect the survey to do the heavy lifting of both accounting and the establishing what's there for you to count, not to say people do blur those very much a lot, but if we can be a bit purist, we tend to get better results.

So, for example, let me take a sort of perhaps trivial example, cause I'm not an instructional designer. And say, supposing I'm teaching a training course on surveys. I might want to know whether those people have attended the university of Michigan's excellent professional quality education programs on surveys, or whether their level of exposure to surveys is just, uh, I'm bombarded by the pesky things.

And I don't like them or somewhere in between. So, I need to have a kind of range of what I'm going to consider. And I need to know what the boundaries of those ranges are and where people, for example, when I say survey to them, they just look bewildered and, and don't know the term or whatever. So, there's a lot going on there.

And so doing a bit of interviewing or some sort of qualitative work to find out what things I want to count would be my first step. And only then when I know pretty much, most of the things I'm going to be encountering in the answers, would I do a survey to find out how many. So, that would be my general approach.

So, yes, it's a descriptive survey because I'm ending up with how many I'm, I'm saying, this is how many of these people are out there, for example, which is a descriptive thing. And I, I probably can better define a descriptive survey by contrasting it with the other types of survey that I talk about in the book.

In market research, for example, and indeed an impact measurement, which is also very relevant. I think to instructional design, people do a lot of before and after surveys. So, in market research, you might say, what was the awareness of lobby? Brand yogurt. Okay. And then we do a marketing campaign. What's the level of awareness now, so that that's a sort of before and after tracking survey.

Or in instructional design, we might say, well, we think these people will really benefit from learning this. So, what did they know about it before? What do they know about it after? Is there any change in that level of knowledge or is there any change in their behavior? What is the outcome we were seeking to achieve with that instructional design?

Let's do some before and after comparative or tracking surveys.

Connie: Okay, you are so right. Impact on an organization is one of the most important outcomes of workplace training. So, that's good to know about the tracking survey. What process do you recommend for designing, planning and writing a survey.

Caroline: So, one day I was sitting down for an editing session on my book, and I just felt tired. You know, I thought, oh, what, you know, there's all these words. And they were swimming in front of me and I thought, you know, I need a shortcut here. I need something that will let me get to the essence of it. And I'm privileged to know Steve Krug very well. Some of you may be familiar with his book, *Don't Make Me Think*, which is about designing websites for better usability.

And he has a mantra, which is 'the least you can do.' And I kind of waved at Steven and said, 'Hey, can I borrow your mantra?' And what is the least we can do? You know? So, I stuck a chapter on the end, which is like chapter eight. I also made the timetables and worksheets in it, downloadable from my website. So, people can get them for free.

You know, you can actually do a survey in a day. If you really move. You can do all the different steps pretty quickly if you need to. So, don't be too frightened by it. Just keep it small, keep it tight and just whip through it and try iterating.

So, the process I recommend in there is: think about why you're doing it, all that is the goals. Think about who you want to ask, which I call sample. Write some questions, test the questions, and make them into a questionnaire. Send it out, get some answers back, which I would call field work. Then have a little think about the responses that you get and then turn it into some reports. So, those are my processes, and you can actually do all of them.

You could spend an hour on each of those and still get something back pretty quickly. And you know, the other day for a client, it was actually a survey client, and they had a question in a questionnaire, which was in what way do you consume news? And I thought *consume* news. That seemed odd to me. I think I *read* news.

So, I thought, okay. So, I stuck a little poll on Twitter, which is incredibly unreliable, but I knew there was quite an overlap between my sort of people on Twitter and their audience. It wasn't crazy. Just put a little poll on there, ran it for a couple of hours. Found out that, okay. Two thirds of the people who answered my little poll said that they read the news, but a third said they consumed the news and some people commented they couldn't see the difference.

So, it wasn't scientific. It wasn't robust. It didn't matter. It was good enough and that consuming the news was a perfectly reasonable thing for them to ask. So, we can get too hung up on doing everything really perfectly, where sometimes good enough and quick enough is better.

Connie: So, some of this depends on your deadline, the money that you can throw at this process, so forth and so on. I do love your short-term process. So, let's say we need to discover the characteristics of a large audience. You recommend not sending the survey to everyone. Can you talk about the problems with sending a survey to everyone?

Caroline: Everyone sending it to everyone is a one-shot wonder. You get one chance to alienate people or engage with them. And so, you know, if something goes a bit wrong or you didn't quite ask exactly precisely what you needed, you've burned them. You can't ask them again. You've used them up. So, it's a very high-risk strategy.

Now our Office of National Statistics in your Census Bureau do a census once every 10 years. And they test that thing for more than 10 years. I mean, they tested every possible thing about it. And they still don't get a hundred percent response rate and they still have to do a lot of work on trying to work out how to reweight the data, because some people are more likely to respond than others and you get all sorts of complications.

We don't have the resources to do that in our everyday working lives. We can't spend 10 years on a census. We've got to probably get results in, you know, ideally 10 minutes, but certainly, you know, 10 days or 10 weeks is quite long in normal commercial life these days. So, we want to keep it simple for ourselves and also making smaller studies greatly de-risks it for us. If something goes wrong, you don't have that many people to apologize to. Haven't upset too many people.

And the other thing is, the more responses you have, that's lovely, but it's also a lot more work for you. So, you know, I've had surveys where clients have said, we're really proud. We've got 19,000 responses now; will you help us analyze them? And I'm like, Hmm, I will. But do you really want to pay me that much money? And then I've done random samples of the 19,000 responses to say, you know, I've done samples of a hundred, I've analyzed a hundred responses. Is this good enough?

And they've said, yes. So, it was like, 18,900 people's responses didn't get the same level of attention, which is a pity, really, because those people have put effort into it and yet we've not fully respected all their efforts. We have to be careful about not burdening people.

And then the other thing is I'm sure many of us, I mean, I certainly have suffered from survey fatigue. We just get too many requests. So, trying to preserve the goodwill of the people you answer and helping them to recognize that you're not

going to bother them all the time. When you do talk to them, you are really interested. You're very respectful about it. That helps to preserve the karma, I suppose, of the people in your particular audience, the goodwill that they trust you, and that you'll be respectful of their time.

Connie: That all makes sense. And I guess I've always called those very small, almost test surveys, pilot surveys, where you're still testing the questions and you're seeing if you get quality responses. But when you're ready to send it out, you revised it and revised, and you're pretty sure that most people are going to understand it.

Do you have recommendations for picking out the subgroup of people? That you want to have in your survey? That's a pretty general question, I guess.

Caroline: I think if we go back to the sampling thing, you'll notice that, I mean, you might thoroughly dislike opinion polls and sort of things that grab headlines, you know, and they can be dubious in terms of some of the questions and not all they should be, but in general, the market research and serving methodology professionals.

in order to get a representative sample of the whole, for example, the whole us they'd be looking at no more than four to 5,000 people or your country where I believe the population is in excess 250 million. So, it, it shows that you don't need to ask that many people. Now it can get more complicated if you want to do a lot of subgroup analysis.

For example, if you particularly want to compare the attitudes of elderly people in Inuit communities in Alaska, with elderly communities in 10 other places within the, uh, continuous United States and Hawaii, you might be having to look at getting. Perhaps at least a hundred or 200 responses from each of those locations.

So, you've got something to play with. Mm-hmm and the more you want to separate it down, if it's extremely important, for example, for you to separate your results, according to female, male non-binary, then. These days, the number of people who are non-binary and willing to disclose that is quite small. So, you have to ask a lot more people in order to get enough people in that category.

Connie: Yeah. I mean, it really sounds like it depends on your goal and then you use your common sense. That's what it sounds like.

Caroline: Correct. I think I might have to make that into flow chart. Thank you for that.

Connie: What exactly would your flow chart say?

Caroline: It's going to say. Really think about the decisions you want to make and why.

Yeah. And then apply a lot of common sense, be resentful about it, and also, you know, iterate practice, do your pilot surveys. And sometimes the pilot survey is going to be good enough to make the decision. You don't have to go on to do the main survey if you've got enough information back from the pilot.

Connie: As in most design fields, we have to iterate like crazy. I don't think I've ever created a practice or an activity where someone was able to understand the instructions that I may have spent one hour writing. Simple instructions: drag A over to B and people say, I don't know what that means. You know, I'm so sure that it's very clear. You just have to run everything by other people.

Caroline: Absolutely totally agree. And you know, one of the things I end up doing in my everyday life, which isn't in the book really, is that technically this is known as the curse of knowledge and, and you can look up, uh, references on that basis. But I say, you know, it's really hard to judge whether something's both clear and correct.

If you know enough about it, to know that it's correct, you immediately know too much to know whether it's. And if you are new enough about it, to know whether it's clear, you don't know enough to judge, whether it's correct, it's not a criticism, it's just how brains work. And we absolutely need the experts to bring their expertise to whatever we are designing.

But we also need to test it a lot with the people who are going to use it because they're bringing that clarity of vision of not knowing enough about it, to know whether it's correct. We need to unite those two different viewpoints, because I know about you, but sometimes I can come across experts who are a bit grumpy that I want to test this stuff with users.

It's like, well, I know about this. And it's almost as if they might feel I'm attacking their expertise, but it's precisely opposite. I'm acknowledging their expertise. I know they're expert. I know they've brought that expertise to what we're doing. It's precisely that which disqualifies them from being able to know whether it's clear.

Connie: Yes. It can be hard for an expert to understand why someone who is a novice is a better judge at whether something is clear than *they* might be. Let's turn

to writing questions. Can you give us your top three tips for writing survey questions? What are we doing wrong? What do we need to keep in mind?

Caroline: The model that I found the most powerful and really how I got into surveys altogether in the first place was that was the question that I had myself because in my work I help organizations to improve their forms and that's all about writing. Good questions. So, I exactly had that. What makes a question?

How do I write better questions? How do I write questions that get accurate answers? So, I started reading into the survey methodology literature, because that's also very much a concern of the survey methodologists and the model that I found the most compelling and useful is by Tourangeau, Rips and Rasinski. which I referenced in the book.

And it's a four-step model. Which I interpret a slightly differently to them, but I interpret it as understand the question, find an answer, decide whether you are willing to reveal that answer and then give the answer to the form or the interviewer. Okay. So, we've got that four step. So, to me, a really good question is one that you can understand that you can find an answer without too much trouble, that it's not too intrusive.

You're willing to give that answer to those that organization. And finally, that you can actually put that answer on the form. I mean, we're all familiar with the sort of web questionnaire, which asks your question says yes and no. And then our answer is maybe, or I don't understand the question, you know, so I rant on about no, yes, no questions.

So, often that I even have a blog post on my website about no, yes, no questions. It's always much more complicated. So, those are the four things. Understand it, find the answer, decide on the answer and put the answer or place the answer or give the answer. And then the other day I was teaching a workshop and I realized that I'd left out the fifth thing.

What makes it a good question, which is, is the answer any use? Is it something we need to know? Yeah. Right. If we can ask a lovely question, but if we're not going to make use of it, it's not a good question. So, that was interesting.

Connie: That is interesting. And that goes back to the goal.

Caroline: Yes. Right, exactly. So, thanks for that.

Connie: Now, what are some common mistakes you see people make when they're writing survey questions? You've probably seen it all.

Caroline: Basically, what happens to us these days is that we're all bombarded by surveys. These surveys that we're bombarded with tend to be pretty bad because a well-designed survey will be one that is asking the smallest number of people.

Is an appropriate sample to make the right sensible decision. So, these ones that just blasted out are all the ones where people aren't thinking it through, they're not being thoughtful. They're full of, you know, all sorts of mistakes. They could be just silly interaction, design mistakes, like packing loads of dropdowns into them, which are quite fiddly for people and annoying because you can't see what the options are before you get to them and have very poor accessibility.

Or they could be just like, how many times have we been asked, you know, your opinion is important to us and then actually, no, you don't want to know my opinion. You want to know how much I agree or disagree with your opinion? No, it's just a series of, do you agree or disagree with this statement? So, one of the challenges is that surveys are not an easy approach.

And there's so many ways that they can go wrong. You'll have seen in the book. The whole thing is based on a survey octopus, which is like crucial things that you have to ask and get, right. And they're all linked together. They're not independent. So, for example, getting people to answer is intimately related with why you do it.

They're not independent things. You have to think of them both together. I've just been talking about. That it's a good question. If the user can answer it and it has to be useful, they're intimately related. They're not independent. If you are thinking of doing a survey, one of the things I recommend to people is to consider just collecting every survey invitation.

You get answer every survey, capture some screenshot. If you can see what comes up and you'll rapidly, get a good sense of the things that annoy you and chances are they're annoying. Everybody else don't do that. good idea.

Connie: I wanted to talk a little bit about open ended questions and are those always more qualitative? The open-ended questions?

Caroline: Not really. So, one of my favorites and one of the things that's slightly irritating to people in their sixties is when we have to scroll back 70 years or 60 years

on a dropdown to get to our date of. I could have just typed my age in, you know, all the age. I want to tell you whatever it happens to be.

So, you know, giving me just a box that I can type in or not. If I don't want to tell you my age, I'll leave it blank. If I do want to tell you my age, I'll stick in my age. I don't need a closed dropdown in order to do that. Just giving people a box to type into for date of birth eliminates another problem, which is I saw a survey the other day where they thoughtfully provided them in age of oldest first.

But the first dated birth they're offering was I think, 1892. And I just don't think the few remaining people who are 130 years older are going to fill in that survey and you might say, oh, well, you'll get some errors. And your answer is you will, but they're not difficult errors to sort out. And if someone wants to type my age as none of your business, that is in itself, quite useful to know, you know, And so, in that sense, I do use quite a lot of open boxes for things which are quantitative, but where it's just easier for the person to just type it in, then mess around with banding or some other thing.

On the other hand. Yeah. If you give people an open box, sometimes they'll write essays. That's okay. But then you have to deal with those essays. Um, sometimes they won't answer anything. That's okay. That tells you something about how important it is. And some people just find typing in stuff is laborious.

So, you want to use them judiciously, especially for things where you are asking people to put a lot of effort into finding an answer. What is your idea about how we could improve this piece of instruction? Well, that's not an answer I might immediately have in my head. I might have to put a bit of thought into it if I want to answer properly.

So, you are giving me more work. Probably if I've got Goodwill towards you, I want to answer, but don't give me dozens of them. One that's about something of your concern. Yes. One open box where I can express my concern. Yes. Once it gets a bit more than that. Mm. Maybe it's a bit too much.

Connie: I love those guidelines for when to use an open box or open-ended question, but let me ask you this, then let's say you have used one. How can someone take that information and code it so that you begin to actually collect some usable data so that you can see patterns?

Caroline: So, if it's the straightforward, I'm asking for some kind of number, and it's just easier for someone to type it in like the size of a farm, you just can quickly do a little bit of data smoothing on that.

Make sure all the numbers are numbers, make sure any facetious or difficult replies are separated out into their own category and you're done. So, you know, I would probably expect including data cleaning to be able to analyze a thousand responses like that in an. Now what we are thinking more of is where the kind of essays where you've asked a very open-ended question and you then have to think about, well, how do I allocate this into topics of some sort?

So, there I've learned quite a bit. I hope from the qualitative researchers, particularly an authorized, especially found very useful and interesting is Johnny Sal. I've learned a lot from his books, very practical and also very rigorous, which is something that really appeals to me as a combination. And he'll talk a lot about coding frames or doing first phase and second phase coding.

So, having some sense before you go into it, about what you're looking for. So, for example, do we want to know whether people are for, or against a particular initiative? Well, then we might be wanting to look at sentiment coding, you know, positive or negative sentiments. So, we're not looking so much for the detail as the subtext.

Okay. Or if it's after some sort of event, you might want to ask people, you know, is there anything we could have done better? In which case you might want to say, well, I'm going to code them according to the department. That's responsible for that topic. Is it event organization? Was it beverages? Was it the room was too hot?

Was it? I didn't understand the content, the instructor wasn't nice to me? You know, there are different departments in a lot of cases. So, then getting the stuff to that particular department and there's all sorts of other ways of approaching it. So, as we said before, and you'll tell me again, and I'll agree with you.

It goes back to your goals. You want to be thinking about how you're going to do the analysis and use the information before you even ask the question. And if you've done that properly, then the coding phase will be quite quickly. Mm-hmm in real life. I've never done the goals as much as I want to. I often have to make them up on the spot when I have the data.

And so having a few basic ideas about how to go about it, like, for example, the topics or those sentiment. Give me a sort of starter qualitative analysis is, is where I

come from. I'm not a quant person at all. And faced with all these lovely rich phrases and stuff. I want to start immediately cherry picking, you know?

Oh, what they said there was really interesting. Oh, that might go in the report. Okay. Cherry picking is fine. Getting nuggets for the report is fine. Think about whether the time you're putting in here is appropriate, given the goals and the time you have, could you be doing a simpler analysis, which would be quicker and just as good?

Connie: I know I've gone into looking at the data and trying to code it without anything ahead of time then after looking at it, and maybe that's what you were saying sometimes happens to you.

I'll come up with the categories because I didn't really know what type of answer people were going to write.

Caroline: Right. I do that all the time, to be honest, I do that all the time. And the thing that I try and discipline myself to do again these days is, I mean, if it's a fairly small survey and I've only got a hundred responses, it doesn't matter.

I can do that level of attention on every response and that's not going to be too much of a problem. If I've got thousands of responses, I try and discipline myself. These. So, just taking a random sample of hundred, let the data, talk to me and establish my coding frame on a hundred. Maybe add another a hundred.

See if it stands up, maybe get a colleague to do a hundred. See if it stands up iterate, think about it and only then allow myself to be entranced by the other thousands of responses because I've wasted hours and hours, days, and days of my time doing too much analysis on launch data sets.

Connie: It does seem to be that way for testing and for surveys that you reach a point in which you just don't get really that much information.

Caroline: I think so. I think you can get to saturation pretty quickly and you can get bamboozled, particularly if you're qualitative at heart, you can get bamboozled by all the richness of the data and forget why you were there. And I find it a little bit of a change of pace to think. No, I've actually got 5,000 responses.

I'm going to honor all those responses, but I can't get every last drop of detail out of every single one. I have to be pragmatic. Mm-hmm about what makes sense.

Connie: One thing that people may not be aware of is that you're not just collecting this data for your own work. You almost always have to share it with the stakeholders who have hired you in the world of instruction design.

And I'm guessing in many other worlds, so that you're bringing them along with you on the path to designing a solution. And that gets into presenting the data to people. So, what are your recommendations for presenting the data that you've collected and analyzed to a larger.

Caroline: The thing that I don't do very often, but I always wish I did was to actually create the report or a draft report, right.

At the beginning to say, you know, it could go this way or this way, maybe you need two or three, you, this data might tell us this or this or this, but what are we actually expecting to see in that. Because in the book I talk about and the most crucial question, which isn't thing for the people who answer, it's the question that is most important for us as an organization or clients or colleagues or other stakeholders in a more complicated environment.

It's what is the commissioning group? What do they most want to know? And that can be tricky when sure. People listening to this podcast, people considerable expertise, when you are bringing your own expertise into the situation and you believe that they need this question answering, but they think they need a different question answering.

It can be easy to sort of forget. And on one occasion, the client was obsessed with what color would the form be? And I knew that they had far more difficult problems in the form. Like people couldn't understand it, they couldn't find the answers. It was completely confusing. And I kind of did the testing.

I found all that stuff out, which is what I thought the client needed to know. But I forgot to actually ask, do you like the color cause to me it was such a trivial question, and I was like, mm, shot myself in the foot there. You know, I needed to respect their desire to know about the color. And so that really led me to thinking about, find out what the most crucial question is.

Even if we can expand that or move it, but we need to know what that is. And then find out if we get this answer to the question, what will we do if we get that one, if we get that one, and that can even sometimes short circuit, the whole need to do a survey at, we can discover the survey wasn't even the right method.

So, I put the tip in the books that start creating your presentation straight away. Can't say I've ever done it very often, but when I have, it's been really valuable. Mm-hmm and, and the earlier I started to create presentation of better really, and thinking about why are they coming to that feedback meeting who will be there?

What are their concerns rather than do all the analysis and then think, what do the stakeholders want to know? That's that could just mean you have to read all the analysis. That's a waste of your time.

Connie: So, are you saying you're creating that draft presentation first just to keep you on track? Or are you saying you're creating an actual presentation to talk to them about the survey that you're going to do?

Caroline: I think the first one, I think more a draft to keep me on track, but there's obviously an overlap. Yeah, definitely. You know, don't tell anyone, but the number of times I've genuinely done that is small. The number of times I've regretted I haven't done it is large. So, it's a little bit of don't do what I do but do what I think I should have done in that answer.

Connie: Right. That's how I give advice. The best advice that I don't follow. Caroline, thank you so much for your time. And this was great. I have been wanting to get my hands on a really good survey book. I like your writing. I like the way you've presented everything. It's not like my educational statistics textbook at all.

Caroline: Oh, that's so kind of you, and it really means a lot coming from a professional instructional designer like you, because you are coming to it with your expertise. And for me to be getting a, a tick in the box of having done a good job really, really means a lot to me. So, I really appreciate it.

Connie: One of my favorite aspects to this conversation is that Caroline presents the ideal approach to things. And then how she really does it under the pressure of deadlines. I hope you found this valuable. As always you can find the show notes with links to all the books Caroline mentions, and a transcript at thelearningcoach.com/podcasts/74. Take care. And I'll talk to you next time.