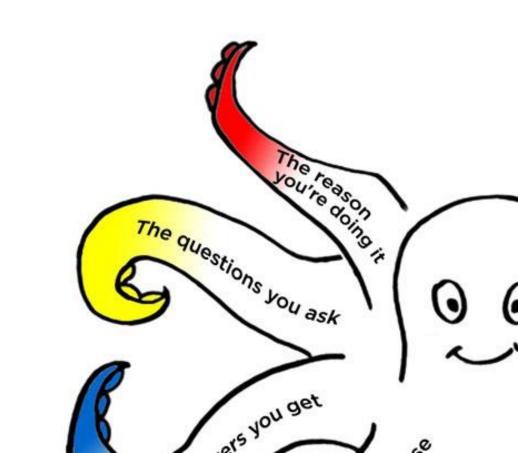
Surveys that work

Session 2 of 3

An introduction to the Survey Octopus and Total Survey Error

Caroline Jarrett
@cjforms
#surveysthatwork2022



Yesterday included representativeness (and this)



Opening page of the survey, no comment

Calling all UK Designers, Architects, and Engineers

Design Economy 2021 is Design Council's most ambitious research project to date. This three-year programme – with its interactive, digital format – will be a growing resource for policy makers, business leaders, public sector professionals, architects and designers.

As well as assessing the **current state of design in the UK**, Design Economy 2021 will explore the role that design can play to 'build back better' and create a more just, healthy and regenerative world.

Over the months ahead, Design Council will be curating new data, evidence, stories and toolkits to champion design and further its use. **Readers will be invited to become co-researchers and collaborators**, rather than simply recipients of the research.

We'll have an ongoing **focus on equality, diversity and inclusion**, encouraging questions about how well design is responding to people's different wants and needs, its vital role in levelling up the UK's regional economies, and the changes needed to ensure that design works for everyone.

We want to make the Design Economy as representative of every designer as possible. Unfortunately, national datasets aren't always as inclusive as they could be. That's why we have decided to launch a new survey, to better understand who is a designer today, what their personal and professional backgrounds are, and what kind of design they practise.

Some of these questions are quite personal, and you are able to skip any that you would prefer not answering.

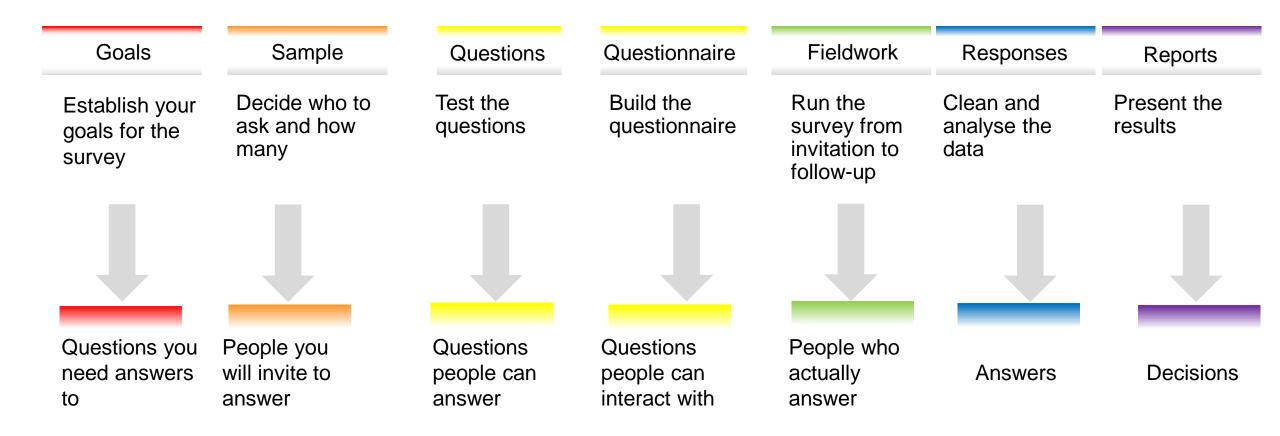
IT TAKES ONLY FIVE MINUTES TO COMPLETE.

We will share all results of this survey in May 2022.

When you've finished, could you forward this to other designers you know? We want to get as many responses from as many different designers as possible.

All the information we collect will be anonymised before data analysis, and will be kept confidential and secure in line with GDPR and our data privacy policy. If you want to get in touch with us about the survey, please contact research@designcouncil.org.uk.

Here are the 7 steps as a linear process



Today is questions day

Goals Sample Questionnaire Fieldwork Responses Questions Reports Decide who to Test the Build the Run the Clean and Present the Establish your ask and how questionnaire survey from analyse the results questions goals for the invitation to data many survey follow-up Today **Tomorrow** Yesterday

Start with why and who; end with the number

Why you want to ask

Who you want to ask

The survey is a process for getting answers to questions

The number

Yesterday we looked at numbers of people

Why you want to ask

Who you want to ask

Asking one person the right question

is better than

Asking 10,000 people the wrong question

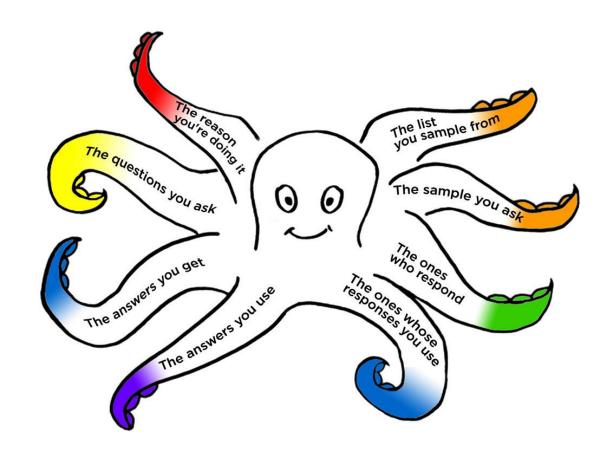
The number

Today we'll think about questions

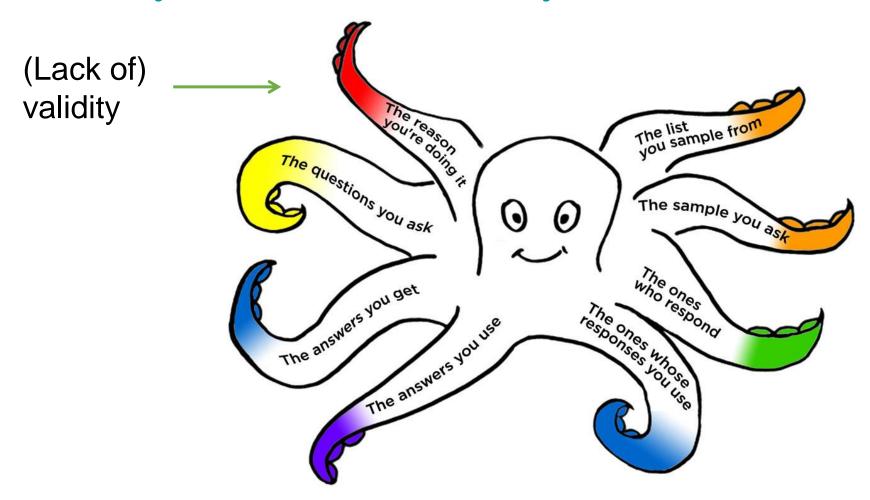
Asking one person the right question

Questions relate to the reason you're doing it

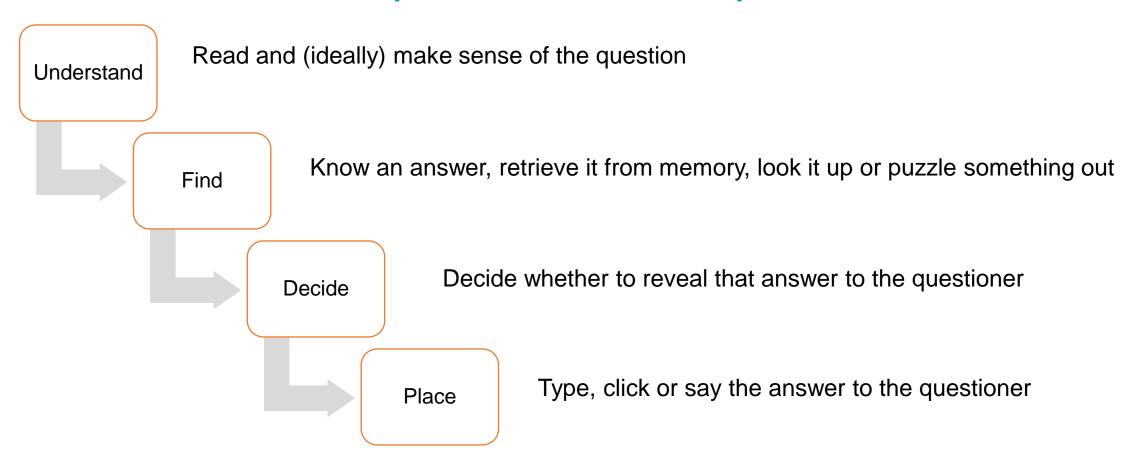
Questions:
What are you asking about?
How many questions?



Lack of validity is a mismatch between what you ask and what you need to know



There are four steps to answer a question



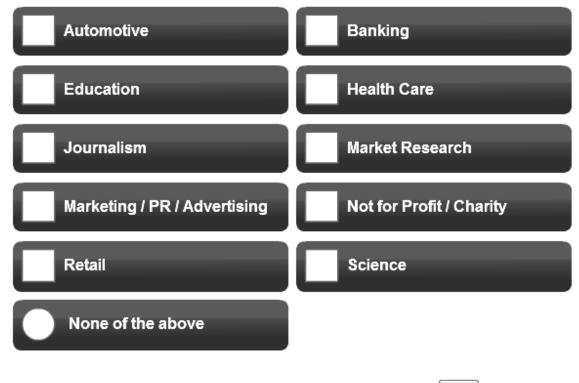
A good question is good in four ways

Step	A good question				
1. Read and understand	is legible and makes sense				
2. Find an answer	asks for answers that we know or can find easily				
3. Decide on the answer	asks for answers we're happy to reveal				
4. Place the answer	offers appropriate spaces for the answers				

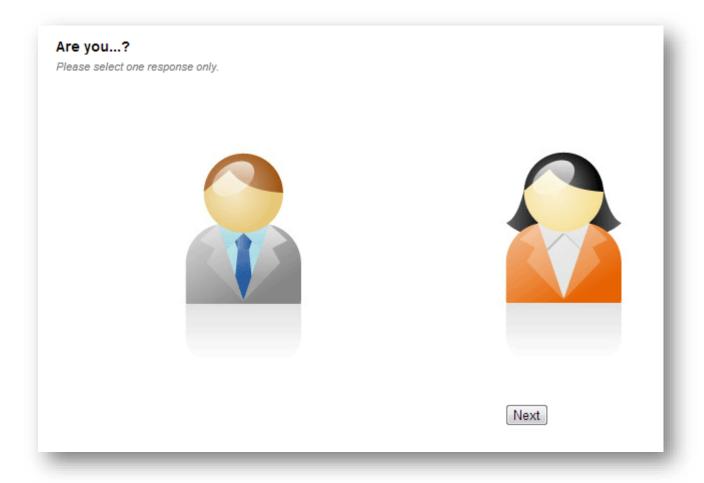
Four step examples: 1: read and understand

Sometimes we look for people who work in particular industries. Do you work in any of the following?

Please select all that apply.



Four step examples: 1: read and understand



Four step examples: 2: find the answer

Question 25

In your **last five days at work**, what percentage of your work time do you estimate that you spent using publicly-available online services (not including email, instant messaging, and search) to do your work using a work computer or other device?

Do you say your name differently?

"What is your name?"

- In a formal context applying for a job
- In a social context meeting the friend of a friend
- On the phone getting a delivery sorted out



Four step examples: 3: decide on the answer

- **★11.** I think it is safe to challenge the way thing are done in
- Strongly agree
- Agree
- Neither
- Disagree
- Strongly disagree

Four step examples: 4: place the answer

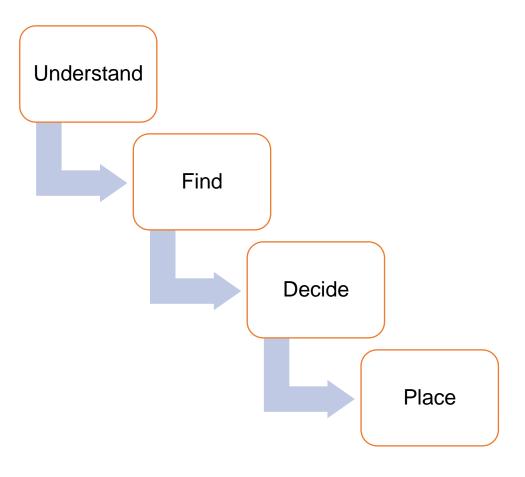
Where do you currently live?

Questions

Please make a selection on the map.



We've looked at four separate steps



The steps can happen instantly

- What is your name?
- Can we ask you a few questions today?

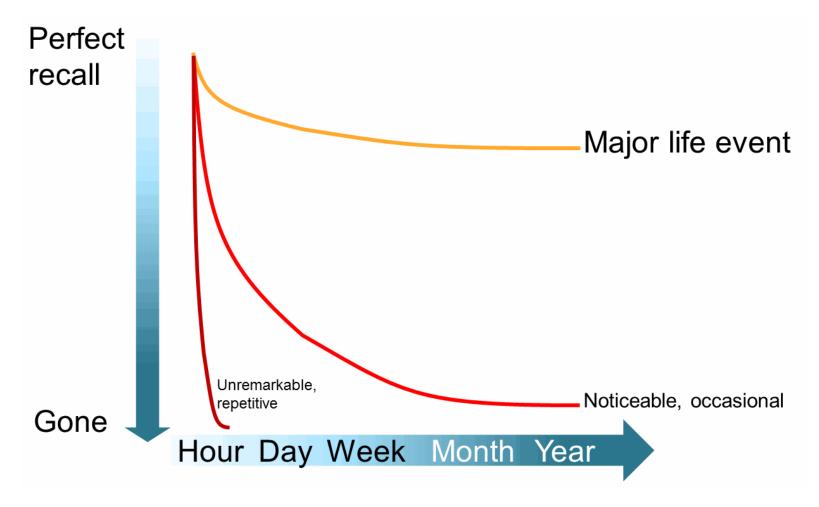
Sometimes the four steps take a long time

- Tell us why you are a good candidate for this job
- Report your full taxable income
- Provide us with a cash-flow analysis for the next five years

Estimating routine work tasks is really difficult

In your last five days at work, what percentage of your work time do you estimate that you spent using publicly-available online services (not including email, instant messaging and search) to do your work using a work computer or other device?

There is an approximate curve of forgetting



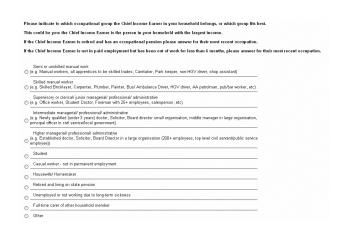
Let's practice finding problems at each step

I've chosen two examples from my library

Have a look at them in your groups on Mural

Make notes about any problems you spot at each of the four steps:

- Understand
- Find
- Decide
- Place
- 5 minutes







What did we think of this one?

Please indicate to which occupational group the Chief Income Earner in your household belongs, or which group fits best.

This could be you: the Chief Income Earner is the person in your household with the largest income.

If the Chief Income Earner is retired and has an occupational pension please answer for their most recent occupation.

If the Chief Income Earner is not in paid employment but has been out of work for less than 6 months, please answer for their most recent occupation.

_	g. Manual workers, all apprentices to be skilled trades, Caretaker, Park keeper, non-HGV driver, shop assistant)
	Skilled manual worker .g. Skilled Bricklayer, Carpenter, Plumber, Painter, Bus/ Ambulance Driver, HGV driver, AA patrolman, pub/bar worker, etc)
	Supervisory or clerical/ junior managerial/ professional/ administrative .g. Office worker, Student Doctor, Foreman with 25+ employees, salesperson, etc)
(e	Intermediate managerial/ professional/ administrative .g. Newly qualified (under 3 years) doctor, Solicitor, Board director small organisation, middle manager in large organisation, incipal officer in civil service/local government)
(e	Higher managerial/ professional/ administrative .g. Established doctor, Solicitor, Board Director in a large organisation (200+ employees, top level civil servant/public service nployee))
	Student
_	Casual worker - not in permanent employment
	Housewife/ Homemaker
	Retired and living on state pension
	Unemployed or not working due to long-term sickness
_	Full-time carer of other household member

I got almost the same question last week

Please indicate which of the following best describes the current, or most recent, occupation of the main income earner in your household.

If the main income earner is retired and has an occupational pension, or if they have been out of employment for less than 6 months, <u>please answer for their most recent occupation</u>.

Semi or unskilled manual work (e.g. Manual Workers, all Apprentices to be skilled trades, Caretaker, Shop Assistant etc.) Skilled manual worker (e.g. Skilled Bricklayer, Carpenter, Plumber, Pub / Bar Worker, etc.) Supervisory or clerical / junior managerial / professional / administrative (e.g. Office worker, Student Doctor, Foreman with 25+ employees, Salesperson, etc.) Intermediate managerial / professional / administrative (e.g. Newly qualified Doctor, Solicitor, Board Director in small organisation, Middle Manager in large organisation etc.) Higher managerial / professional / administrative (e.g. Established doctor, Solicitor, Board Director in a large organisation etc.) Student Casual worker - not in permanent employment Homemaker Retired and living on state pension Unemployed or not working due to long-term sickness Full-time Carer of other household member

Other

ВВС

OPINION SURVEY

You have completed 48% of the survey so far:

100%

For the following statements about the **Commercial Availability** site, please give a mark out of 10, where 1 indicates 'Strongly Disagree' and 10 indicates 'Strongly Agree'.

	1	2	3	4	5	6	7	8	9	10	know
It's the kind of website I would talk to other people about	0	0	0	0	0	0	0	0	0	0	0
I felt I learnt something new from visiting this website	0	0	0	0	0	0	0	0	0	0	0
This website inspired me to do something new	0	0	0	0	0	0	0	0	0	0	0
I found this website engaging	0	0	0	0	0	0	0	0	0	0	0
The website is up to date	0	0	0	0	0	0	0	0	0	0	0
The website is fresh and new	0	0	0	0	0	0	0	0	0	0	0
The website reflects British culture	0	0	0	0	0	0	0	0	0	0	0



Next



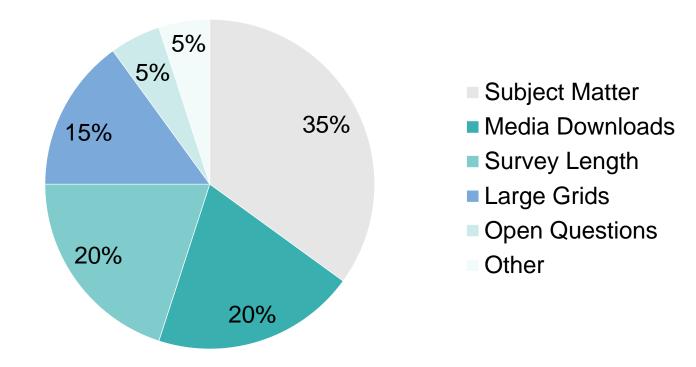
Click here to go back to bbc.co.uk

For any comments about the content of this survey, please contact bbc@edig* __earch.com
About any other issue, please contact the BBC via http://www __o.uk/feedback
If you would like further information please read the BBC's privacy policy at http:// __.obc.co.uk/privacy

And this one?

Grids are a major cause of survey drop-out

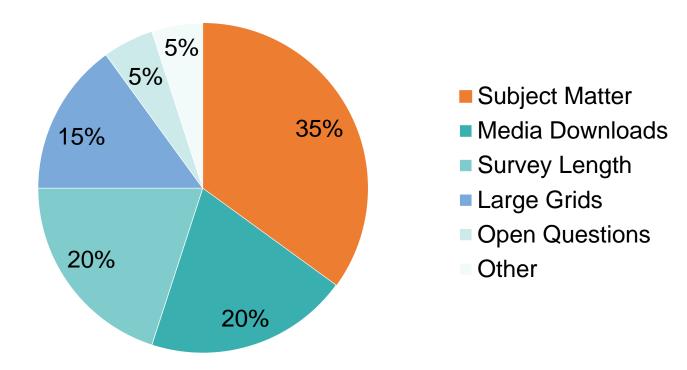
Total incompletes across the 'main' section of the questionnaire (after the introduction stage)



Source: Database of 3 million+ web surveys conducted by Lightspeed Research/Kantar From Coombe, R., Jarrett, C. and Johnson, A. (2010) "Usability testing of market research surveys" ESRA Lausanne

But it's the topic that matters most

Total incompletes across the 'main' section of the questionnaire (after the introduction stage)



Source: Database of 3 million+ web surveys conducted by Lightspeed Research/Kantar From Coombe, R., Jarrett, C. and Johnson, A. (2010) "Usability testing of market research surveys" ESRA Lausanne

A good question is good in four ways

Step	A good question				
1. Read and understand	is legible and makes sense				
2. Find an answer	asks for answers that we know or can find easily				
3. Decide on the answer	asks for answers we're happy to reveal				
4. Place the answer	offers appropriate spaces for the answers				

Try a person-led review to check your questions

- Very often, the survey process starts with a draft questionnaire
- I do a lot of person-led reviews with clients and colleagues

A "person-led expert review" starts with stories

Each attendee writes a 'once upon a time' story:

- Choose the name of a person
- Write:
 - something about them
 - why they are responding to this questionnaire

(optional: everyone shares the story that they wrote)

Now try answering the questionnaire

- Go through the questionnaire, answering ONLY from the point of view of that person
 - Keep notes!
- When all the attendees have completed the questionnaire, compare answers

Person-led

Expert review

Let's try it. First, the person-led bit.

Our stakeholders have said:

"We want to know what users think about our new funding application process"

They have brought a draft questionnaire to a meeting.

- Choose the name of a person
- Write something about:
 - Who the person is
 - Their experience with the funding application process

Person-led



Now note your person's answer to this question

Application Process - Feedback Survey

Section 1: About you

Thank you for taking the time to provide feedback on the application process.

Q1 Who submitted your application?

- o I did
- o Family member
- Paid professional, such as accountant

Note your person's answers to Q2 and Q3

Q2 Who is completing this survey?

- o I did
- o Family member
- Accountant or adviser

Q3 What motivated you to apply?



Section 2: The application process

Note your person's answers to Q4

Q4 How satisfied are you with the application process, on a scale from 0 to 10 where '0' means 'not at all satisfied' and 10 means 'completely satisfied'?

- \supset 0
- 0 1
- 0 2
- 0 3
- 0 4
- 0 5
- 0 6
- 0 7
- 0 8
- 0 9
- 0 10



Note your person's answers to Q5

25 Please use the box below to provide us with
our feedback on the application process.
Nax: 500 characters

Note your person's answers to Q6

Q6 Were you aware of, and did you make use of, the following: *Tick all that apply*

Questions

	I wasn't aware this was an option	I was aware of this but didn't use it	I was aware of it and made use of it
Content on our website	\circ	0	
Videos on our YouTube channel	0	0	
Q&A session	\circ	\circ	\circ
Customer Contact Centre	0	0	
Discussing with a colleague	0	0	
News media	\circ	\circ	
Talked to an adviser or accountant			

Let's compare answers

Were any of those questions problematic for your "person"?

Please discuss in your groups

You can edit / add notes / comment in the copy

Report back with your views

10 minutes



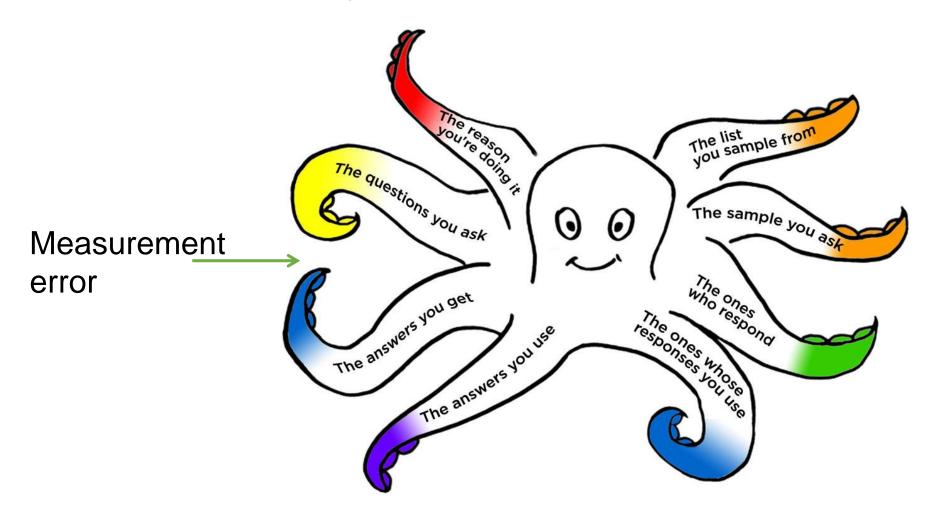


Workshops can go in different directions

- BACK to thinking about goals and sample
- FORWARD to understanding and drafting better questions
- SIDEWAYS to testing with real people

BREAK

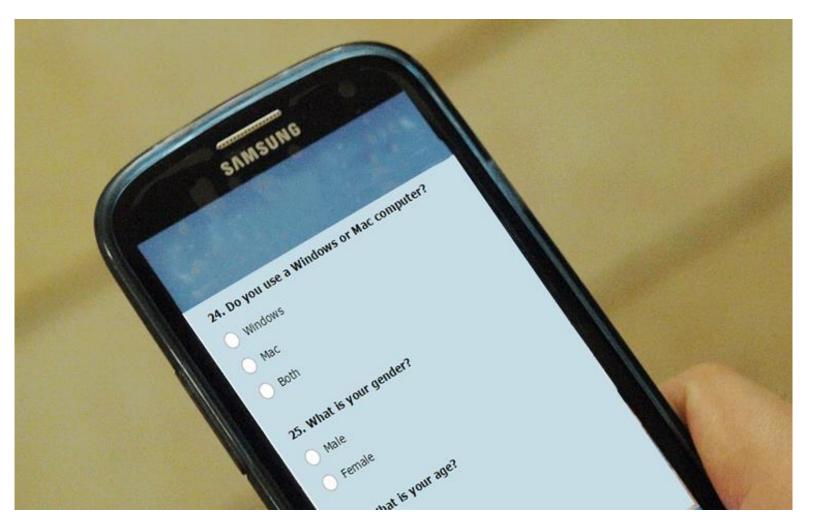
Measurement error comes from mismatches between the questions you ask and the answers that people give you



These two questions are quite common

24. Do you use a Windows or Mac computer?				
Windows				
○ Mac				
O Both				
25. What is your gender?				
○ Male				
○ Female				

One of them does not work in this context



"Phone photography" by Petar Milošević -Own work. Licensed under CC BY-SA 3.0 via Commons -

https://commons.wikimedia.org/wiki/File:Phone photography.jpg#/media/File:Phone photography.jpg

Modified by Caroline Jarrett

Takeaway

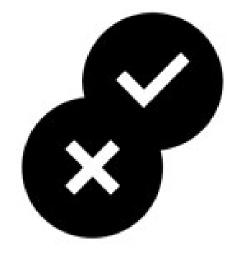
Always allow for something else



Aside: I'm constantly saying "No yes/no"

- The real world is analogue
- There are nearly always other answers
- Try spelling out what "yes" and "no" mean

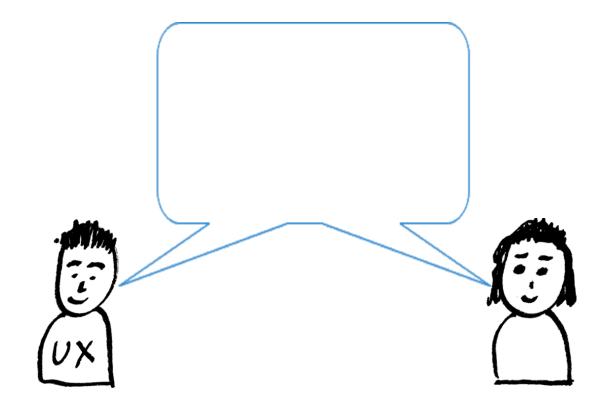
No yes/no questions - Effortmark



Created by HideMaru from Noun Project

Takeaway

Test your questions by interviewing in context



"Place the answer" is also about using the right widget to collect the answer

Use	For
Radio buttons	A single answer where you have researched all the possibilities (known answers)
Check boxes	Multiple known answers
Text boxes	Answers where you do not know all the possibilities Answers that the person 'just knows' and can type easily Answers where you hope that the person will want to write more

Open boxes often work better than bands

- If the answer is a routine one that the person 'just knows', it can be easier for them to type rather than hunt through options
- Examples of questions that have done better:
 - How old are you?
 - What is the size of your farm?
 - How much would you pay for this certification?

An excursion into Likert scales

We've looked at a Likert item

Section 2: The application process

Q4 How satisfied are you with the application process, on a scale from 0 to 10 where '0' means 'not at all satisfied' and 10 means 'completely satisfied'?

- \supset \subset
-) 1
- \circ 2
- 0 3
- 0 4
- 0 5
- 0 6
- 0 7
- 0 8
- 0 9
- 0 10

A Likert scale has several Likert items

Likert scale

Statement

System Usability Scale

with this system

© Digital Equipment Corporation, 1986.

1	2	3	4	5
	2	3	4	5
1				.,
1				
	2	3	4	5
		<u> </u>	<u> </u>	
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
				Т
1	2	3	4	5
1	2	3	4	5
				Т
1	2	3	4	5
		L		5
1	2	3	4	3
		1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	1 2 3 1 2 3 1 2 3	1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4



Response points

Likert had three formats in his scales

1. Do you favor the early entrance of the United States into the League of Nations?

YES

(3)

NO (2)

13. How much military training should we have?

(a) We need universal compulsory military training. (1)

(b) We need Citizens Military Training Camps and Reserve Officers Training Corps, but not universal military training.

(2)

(c) We need some facilities for training reserve officers but not as much as at present.

(3)

(d) We need only such military training as is required to maintain our regular army.

(4)

(e) All military training should be abolished.

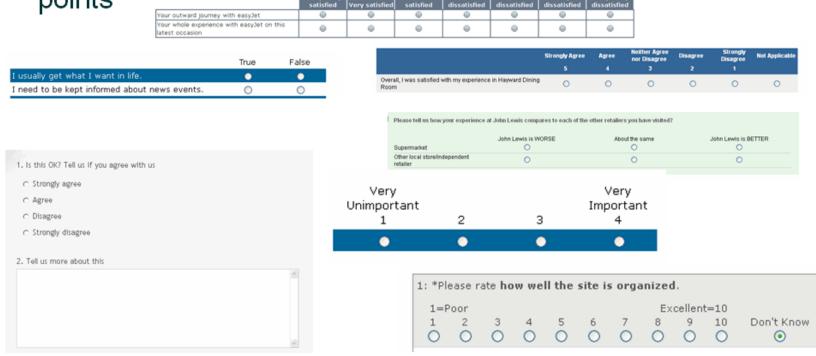
(5)

17. The United States, whether a member or not, should co-operate fully in the humanitarian and economic programs of the League of Nations.

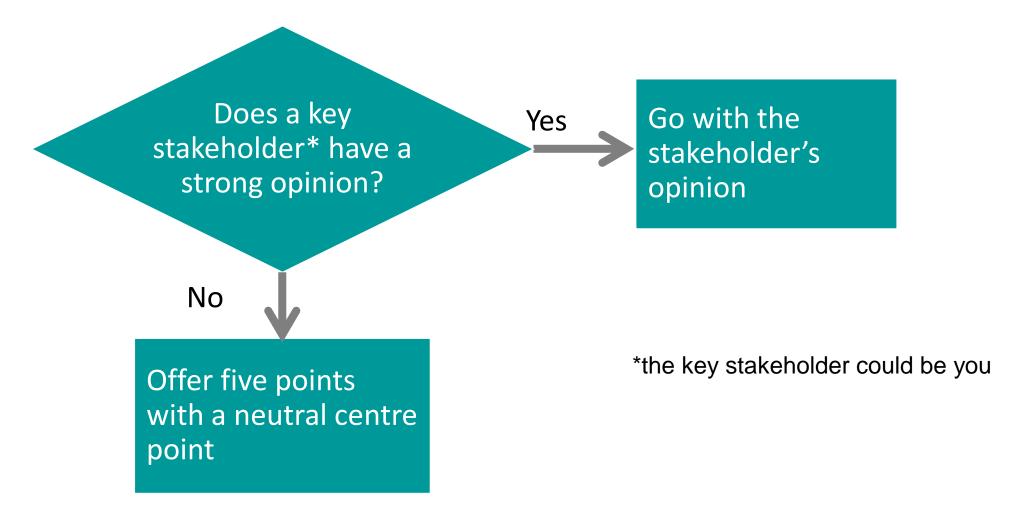
Strongly
Approve Approve Undecided Disapprove Disapprove (5) (4) (3) (2) (1)

You can find an academic paper to support almost any number of response points

Krosnick and Presser refer to ~87 papers on response
 points



I have a flowchart to help you to decide



Is 'satisfaction' the only relevant emotion?

Section 2: The application process

Q4 How satisfied are you with the application process, on a scale from 0 to 10 where '0' means 'not at all satisfied' and 10 means 'completely satisfied'?

The Microsoft Product Reaction Cards have lots more

Accessible	Creative	Fast	Meaningful	Slow
Advanced	Customizable	Flexible	Motivating	Sophisticated
Annoying	Cutting edge	Fragile	Not Secure	Stable
Appealing	Dated	Fresh	Not Valuable	Sterile

Microsoft Product Reaction Cards Unlock User Satisfaction - Part I (uxfirm.com)

Decide on which emotion(s) you might assess

Please discuss in your groups

Report back with your choice(s) – or decision to do none 5 minutes



Now it's time to make the questionnaire

- We have the draft that we reviewed today
- Let's think a bit about some topics from yesterday
 - Most Crucial Question
 - Burning Issue
 - Representativeness questions

The Most Crucial Question comes from goals

The stakeholder (me) has chosen the Most Crucial Question:

"What is your overall score for the application process?"

- I want a number! That's my primary goal
- As questionnaire designers, you need to decide how to ask the question. You may be able to convince me that there is a better wording.

The Burning Issue question comes from users

- We haven't yet had the opportunity to interview any users for their Burning Issues
- You will have to choose or write a question that allows for unknown Burning Issues

The representativeness questions ought to come from your work thinking about who you want to ask

Here are some suggestions:

- Did you finish the application?
- What sort of work do you do?
- Is this grant for your own organisation / business or are you a professional helping someone else?
- You may think of others

Now create a questionnaire

- Write your version of the MCQ
 - "What is your overall score for the application process?"
- Decide on, or write, a question that allows for Burning Issues
- Decide on, or write, representativeness question(s)
- Decide whether to keep or remove any other questions in the draft
- Report back with your choice(s) or decision to do none
- 15 minutes



Break

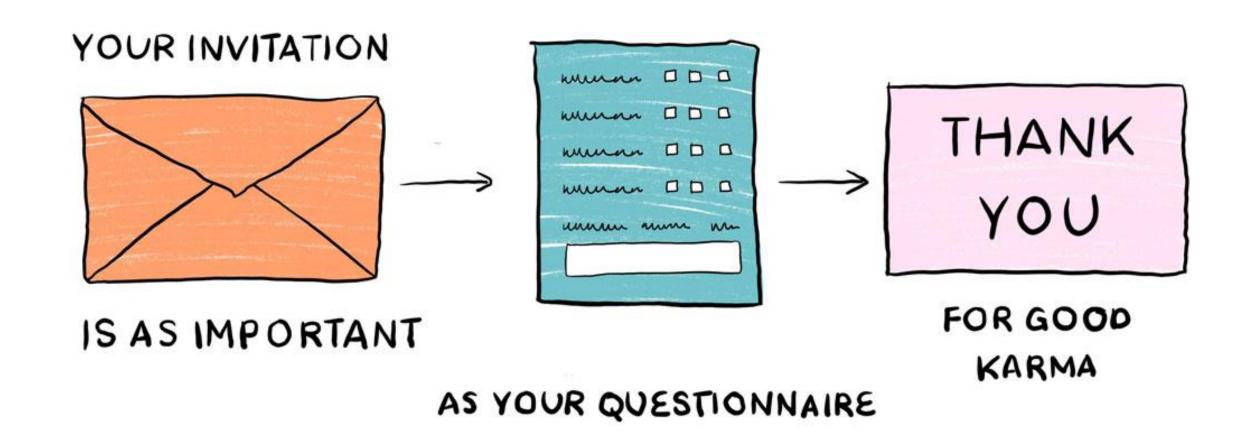
Fieldwork

Getting the questionnaire to people

Here are the 7 steps as a linear process

Goals Sample Questionnaire **Fieldwork** Questions Responses Reports Decide who to Test the Build the Run the Clean and Present the Establish your ask and how survey from analyse the results questions questionnaire goals for the invitation to data many survey follow-up Questions you People you Questions Questions People who need answers will invite to people can **Decisions** people can actually Answers interact with to answer answer answer

Create the right context for your questionnaire



Your invitation is important

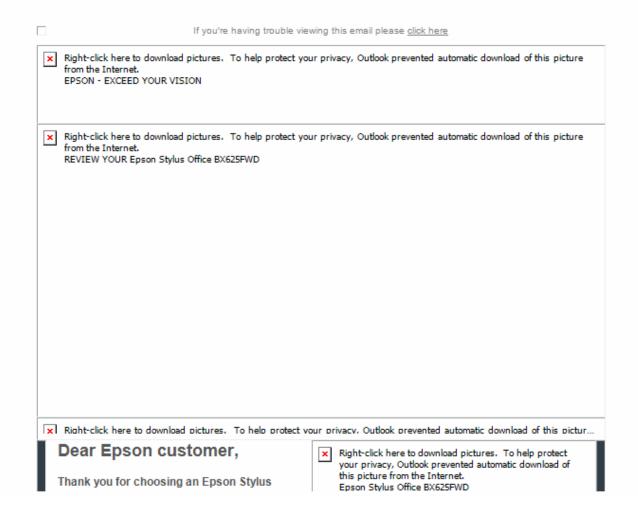
Dear Epson Customer, review your Epson Stylus Office BX625FWD

Epson UK <epsonnewsletter@info.epson-europe.com>

1 Click here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures in this message.

Sent: Fri 14/10/2011 09:29

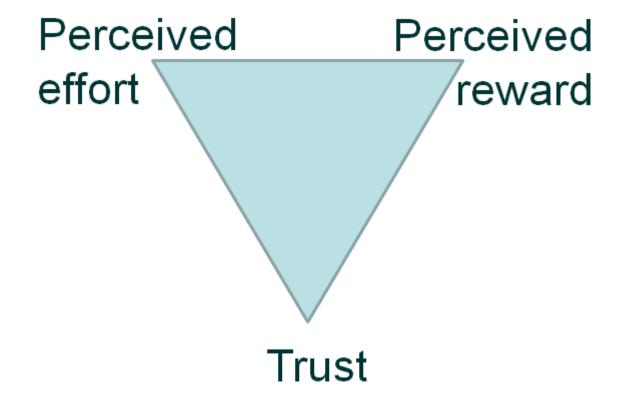
To: caroline.jarrett@effortmark.co.uk



I think this invitation is trying to sway the response



Response relies on effort, reward, and trust



A good invitation creates trust

- Consider whether your branding could sway the response
 - Are you a brand that has a high profile?
 - Are you likely to be known to the person who answers?
 - Can you get sponsorship from a trusted person or organisation?
- Say who you are
- Say why you've contacted this person specifically
- Explain:
 - Your privacy policy
 - Your approach to anonymity and confidentiality

A good invitation offers a perceived reward

- Explain the purpose of the survey
- Explain why this person's responses will help
- If there is an incentive, offer it
 - Incentives do not have to be financial
 - If the incentive is financial, make sure it is easy to get (otherwise you increase perceived effort)

A good invitation explains the effort

- Outline the topic of the survey
- Say when the survey will close
- Consider saying how many questions there are
- Do NOT say how long it will take
 - unless you have tested the heck out of it and are extremely sure that you know the answer

Write the invitation and thank-you

- Hints:
 - Consider your privacy policy
 - Decide on your approach to anonymity and confidentiality
 - The invitation can be part of the questionnaire
 - Thank-you is usually on a separate page

• 10 minutes



Testing your questionnaire

Testing with users is essential

Review with stakeholders

- Goals to decisions
- Person-led expert review

Testing with users

- Pilot study
- Usability test
- Cognitive test
- Cogability test

Test it: pilot study

- Run the survey from invitation to the follow-up
- Look for mechanical problems like:
 - wrong link in the invitation
 - no thank-you page
- Find out what your response rate is so that you can work out your sample size

"If you don't have time to do a pilot study, you don't have time to do the survey"

Do usability testing on your questionnaire

Get someone to answer your questionnaire while you watch

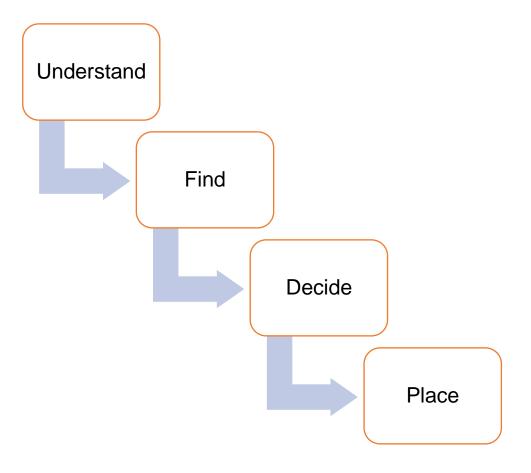


Do cognitive testing on your questions

Where did 'I'm not sure' come from? Was it an interaction problem? What is this person thinking?



You're looking out for problems at each step



Try this thought-process exercise

Answer this question:

"How many windows are there in the place where you normally live?"

Note your thought processes



Strategies can be in your head, elsewhere, ask

Typical strategies are:

- Mental walkthrough of the place
- Look on the receipt for the recent new windows (!)
- Ask someone else (!)



Cogability testing is a hybrid method

- Run a usability test in the usual way BUT
- Ask the person to think aloud as they work AND
- Interrupt them with cognitive probes
 - "Tell me about how you thought of that answer"
 - "Did you know that answer straight off or think about it?"
 - "Was that answer from counting or a guess?"

[&]quot;Cogability testing" coined by Laura Wilson and Emma Dickinson in "Respondent Centred Surveys" (2021)

Let's test a questionnaire

- Please volunteer!
- I have a test participant here ready to try it
- Everyone else: you are note-takers



If I can only do one, it's a pilot study

Review with stakeholders

- Goals to decisions
- Person-led expert review

Testing with users

- Pilot study
- Usability test
- Cognitive test
- Cogability test

Takeaway

"It's done when a real user has used it for something real"

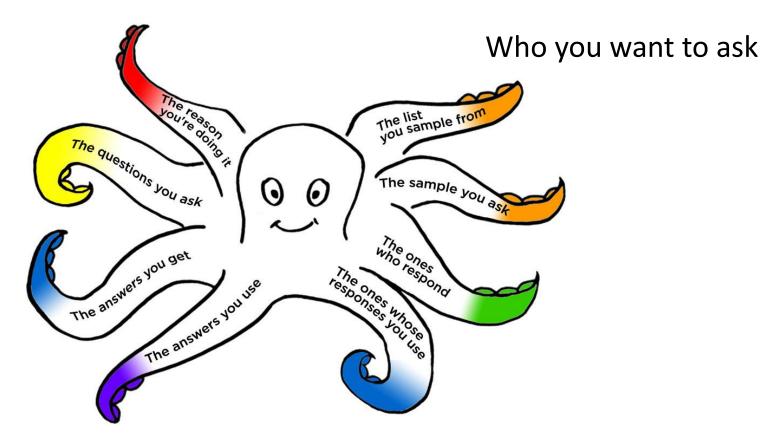
- By me

Think about the test and iterate

- Are the people you tested with representative?
- Did you test the whole survey
 - From invitation to follow up?
 - Including the analysis of responses?
 - Including finding out whether you can make the decision?
- What do you need to change for the next version?

The questions are linked with the ones who respond

Why you want ask

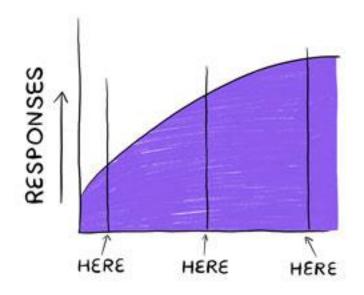


The number

Tomorrow we'll look at responses

Goals	Sample	Questions	Questionnaire	Fieldwork	Responses	Reports
Establish your goals for the survey	Decide who to ask and how many	Test the questions	Build the questionnaire	Run the survey from invitation to follow-up	Clean and analyse the data	Present the results
Yesterday			Today		Tomorrov	V

Start analysing when you have any responses



Please join my EasyRetro

You'll find columns for:

- Anything useful from today
- Not useful / confusing / could have skipped
- Want to know but hasn't yet come up
- Has come up but want more



Caroline Jarrett

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