

# Advanced Ideas in Data Collection

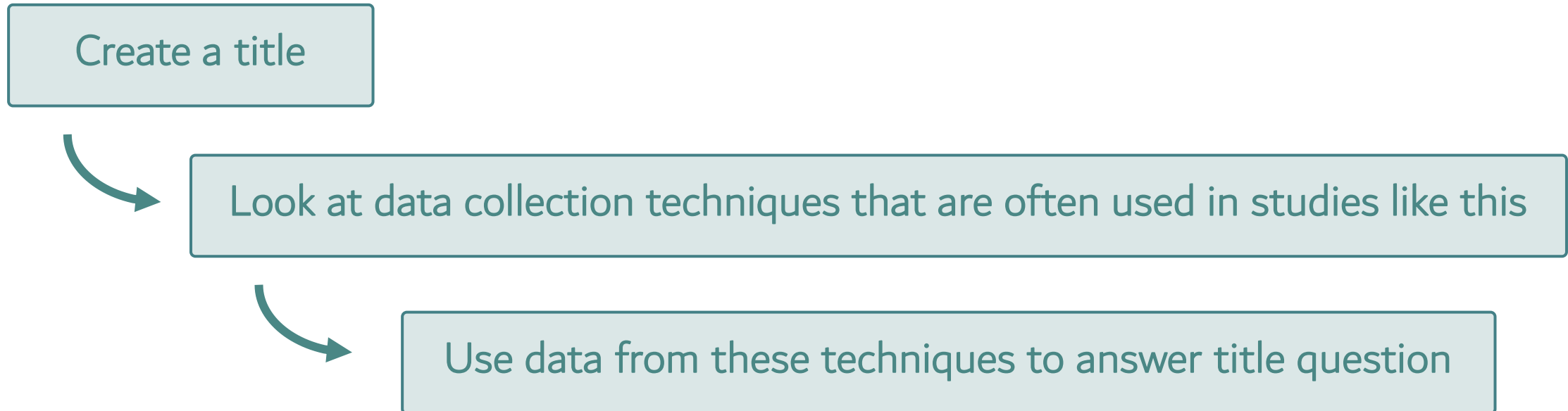
Chloë Searl

# Introduction

- Data led rather than method led research
- Questionnaire design
- Sampling
- Pilot studies
- Secondary data
- Using GIS

# Data-led and method-led data collection design

The typical flow of ideas:



## Data-led and method-led data collection design

**Me:** “Tell me what you’re studying”

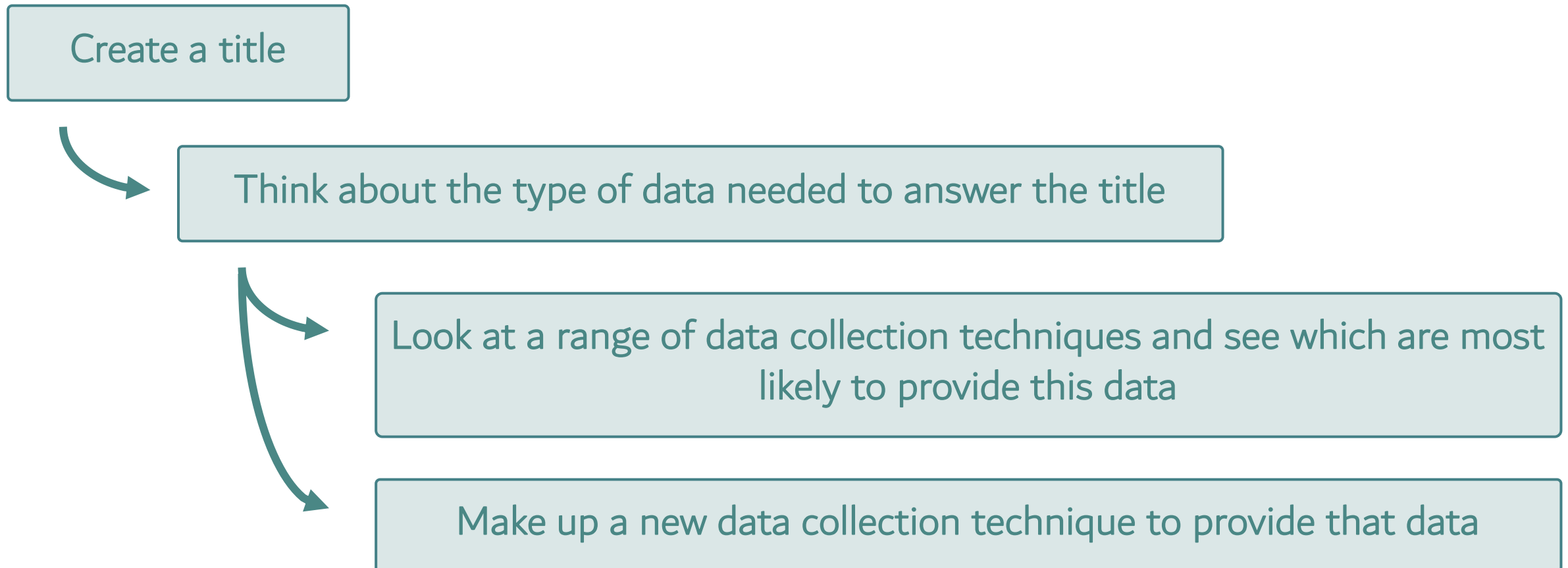
**Student:** “I’m looking at how people feel about [the regenerated place]”

**Me:** “Great – how are you going to do that?”

**Student:** “Well, I want to do a questionnaire but I’m not sure what my questions should be.”

# Data-led and method-led data collection design

A better flow of ideas:



# Data-led and method-led data collection design



What other key data considerations are needed before you design your data collection method?

Hint: Think about the data presentation and data analysis stages

# Questionnaire Design

There may be a more suitable way of asking (and answering)

Covert observation

Fixed category response

Ranking

Likert scale

Semi-open response

Open response

- Answering a question yourself by simple observation of the person in question
- E.g. gender, age, intention



Any issues with this?

# Questionnaire Design

There may be a more suitable way of asking (and answering)

Covert observation

Fixed category response

Ranking

Likert scale

Semi-open response

Open response

- There are a strict number of options that the respondent can choose.
- These are given to the respondent.



Any issues with this?



# Questionnaire Design

There may be a more suitable way of asking (and answering)

Covert observation

Fixed category response

Ranking

Likert scale

Semi-open response

Open response

- Respondents are asked to place options in an order of preference.
- These options are often found on a separate handout.



Any issues with this?

# Questionnaire Design

There may be a more suitable way of asking (and answering)

Covert observation

Fixed category response

Ranking

Likert scale

Semi-open response

Open response

- A statement is read out and then respondents are asked to what extent they Strongly agree, Agree, Disagree, Strongly disagree or Neither agree nor disagree.



Any issues with this?

# Questionnaire Design

There may be a more suitable way of asking (and answering)

Covert observation

Fixed category response

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Semi-open response

Open response

- Respondents can answer with relative freedom but with a small constraint – e.g. “What three words would you use to describe...?”
- **Or**, they answer completely openly but the interviewer then categorises the response



Any issues with this?

# Questionnaire Design

There may be a more suitable way of asking (and answering)

Covert observation

Fixed category response

Ranking

Likert scale

Semi-open response

Open response

- Respondents can answer in any way they choose, usually in complete prose.



Any issues with this?

## Pilot studies

- Essential in many data collection techniques.
- Don't hide the fact you did one!
- Pilot every aspect:
  - location
  - time of day
  - sampling strategy
  - survey in more than one format

# Sampling

Maybe go beyond Systematic, Random and Stratified

- Opportunistic sampling
- Cluster sampling / Target sampling
- Snowball sampling
- Combination

## Secondary data

Comes in different forms:

- Adds context and background information that informs the design of the rest of the study
- Mimics the primary data being collected (so is comparable with it)

Remember:

- It doesn't have to have been collected by an 'expert'



# GIS

Two methods to think about using ArcGIS (free school account)

1. Create an excel (.csv) file of the relevant data and upload this to a GIS map. [\[Guide 25\]](#)
2. Create a blank layer on a map, and take this into the field on which you can record data. [\[Guide 37\]](#)



## In your own time...

- Imagine you need to gain a picture of public opinions on something from members of the public. Then design a questionnaire (using one of each of the question styles) where every answer would get you that type of data.
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- Imagine you need a large number (100+) samples of beach sediment. Using each of the sampling strategies mentioned, design a sampling method. Decide which one is most effective.



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An opportunity for questions...

## The next session...

Monday 23<sup>rd</sup> January      5pm-6.30pm

### Data presentation techniques

- Understanding 'appropriate'
- Presenting spatial data
- Qualitative presentations
- Combining methods
- Using GIS