

Geographical Inquiry Process (Quick Summary) - Elaboration on Pg 2

↳ Process of geographical investigation

* Hypothesis is an educated guess on how things work.

- Think of 1 core question to ask
- Rephrase into statement

* There should be an assumed relationship between the two variables.

① Formulating the geographical investigation question

- What questions should I ask to understand the focus of the investigation?

Hypothesis:

- **SWIH**
- **Patterns/Processes/Interactions**
 - What impact does... have on...?
 - Why did... take place?
- **Problems**

How to Construct a Hypothesis:

- The **Question**: Do PG students who go to Math tuition do better in PSLE than those who don't?

- **Dependent & Independent variables?**
- **Statement version**

Reliability Check!

- Date of publication of source (is updated)
- **Credible source?**
- **Reputable source?**

② Gathering Data

- What data do I need?
- How/where can I get this data?
- ⇒ **FIELDWORK!** (or get Secondary Data)

Types of DATA:

Primary

- Original data, collected by the investigator himself.
- From **FIELDWORK**
- **Raw, unprocessed, uninterpreted** (yet) data

Secondary

- Already collected & processed by other people
- for another purpose/to use
- On selected topics
- Usually from published sources.
- eg. books/ brochures/ films

- eg. Experiments/ data/ surveys

Steps to present DATA:

① Categorize Responses

- ↳ A) # # 1
- B) ||
- C) # # # |||

② Collate/tabulate Data

③ Put data in graph

④ Analyze trends/patterns/ changes etc.

⑤ Conclusions. (is the hypothesis true/false?)

③ Presentation & Analysis

- Interpret Data
- Present data using ?? (graphs/ pie charts etc.)
- How can I analyse this data to come to a conclusion?

④ Reflections

- What have I learnt about (topic) from this investigation?
- How can I improve my methods of investigation?

What did you find out from your fieldwork and data collation??

→ Is your hypothesis true/false?

Conclusion Template:

- Indicate if Hypothesis is true/false
- Support with evidence.

↑
from the data in steps 2-3!

Types of DATA

① Qualitative vs Quantitative

QUALITATIVE → Open-ended (ish), involves opinions, descriptions and observations
eg. interview / sketchy non-participant observation
NO numbers.

QUANTITATIVE → Objective, involves numerical, mathematical data. Statistics.
eg. counting people at -, traffic counting

Types of Questions

Close-ended → Likert Scale → Yes/No, MCQ, Ranking, checkbox
forced to choose presets.
Open-ended → free answer.

★ Avoids:

→ **Sensitive**: Age, Personal Info, salary, academic/work info etc.

→ **Bias**: don't give them opinions - they are the ones to give opinions.

→ **Redundant/Irrelevant** qns.

★ **Order questions chronologically** in a **logical order**.

→ **familiar to less familiar**

→ **Sensitive/hard questions in the middle**, easy ones at front & back.

→ **FIRST** qn must **link to purpose & intro**.

★ Pilot Survey

→ **Test on a smaller sample** to check for **flaws/AQIs**.

→ **Revise questions** if they seem to be unclear to pilot survey participants.

SURVEYS

↳ a way to collect information directly from people about their views and beliefs.

Types of surveys : Prompts

- Questionnaire
 - interview
 - bipolar survey
- Prompts:
- **Purpose of survey** - what do we need to find out?
 - **Questions to ask**
 - **What will we use the results for?**
 - **Who will we survey, and why them?**

Questionnaires

★ **Who to sample?**

How many people to sample?

★ **How long will it be?**

MCQ, OEQ, Likert scale, etc. **Types of questions**

→ **opinions** of people from them personally (ask them info tt)

→ This kind of info **isn't** available elsewhere

⚠ Avoid **SENSITIVE, BIAS, IRRELEVANT, or DOUBLE-BARRELED** questions

↓
more than 1 point in 1 question.
→ Use **standard English**.

Interviews

★ **How to conduct?**
online / personally /

⚠ Don't try to influence answers with body language, tone/responses. Be neutral.

★ **Record answers.**

★ **Be polite/patient, straightforward.**

⚠ use simple phrasing when asking questions.

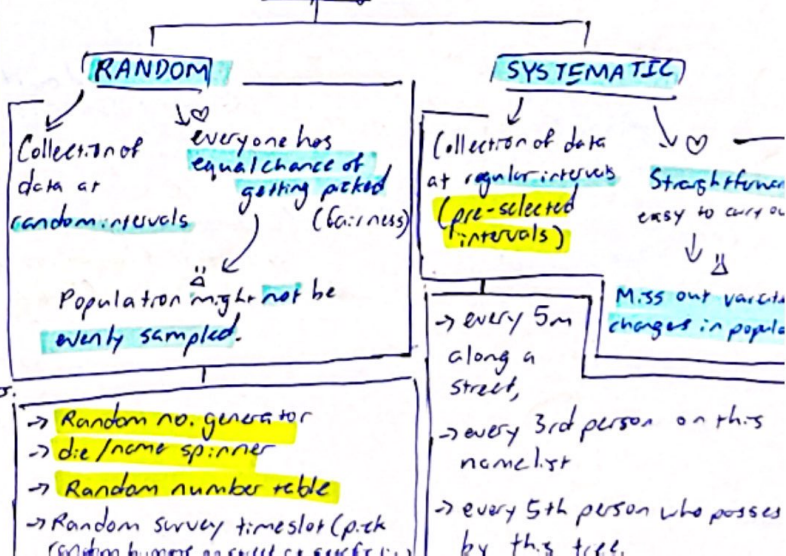
Bipolar Survey

negative	-2	-1	0	+1	+2	positive
poor condition	1	3	2	4	8	good condition

$$\leftarrow 1(-2) + 3(-1) + 2(0) + 4(1) + 8(2) = 15$$

★ Usually for **quality of environment**.

Sampling



Data Consolidation!

Steps

① Categorise responses

→ OEQ: Answers

- 'Approve!' |||| |||
- 'Not Approved!' |||| |||||
- 'Don't care!' |||

② Collate/Tabulate Data!

→ put into a table. Create your own categories.

③ Present Data

→ put it in an appropriate graph.

④ Interpret Data

→ Where are some patterns/trends/changes?

⑤ Draw conclusions

→ Is the hypothesis true or false?

(False ⇒ reform hypothesis & re-test!)

Data representation/Interpretation

Maps & Photographs

→ graphical representations of the Earth

Why?

- remember previously visited places / people we've met / events
- visual record of information about a place/area at a particular time.
- Useful for understanding physical/human features of a place/space.

Tabulation → slightly more organised pile of data

Yes	
No	
Total	= 23

← Options/Categories (Oz A)
self-made
total no. of responses

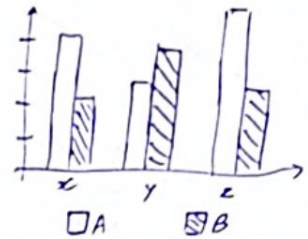
Graph types

① Bar Graph

→ Visually appealing
→ Easy comparison

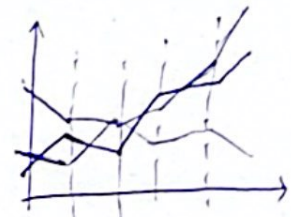


Comparative Versions



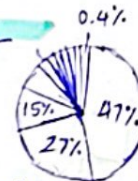
② Line Graph

→ Can see trends easily
→ Simple preferential comparison



③ Pie Chart

* percentage!
→ Usually clockwise:
b.igest → smallest slice!



→ Visually appealing
* Must have key/legend!
→ Good for showing proportion!

Types of photographs

- Political → marks country borders
- Physical → elevation of physical features (usually chloropleth / color coded)
- Aerial → wider range / field of vision
- Satellite images.