A LEVEL GEOGRAPHY
Exploring analysis techniques for your investigation

Oxford Cambridge and RSA

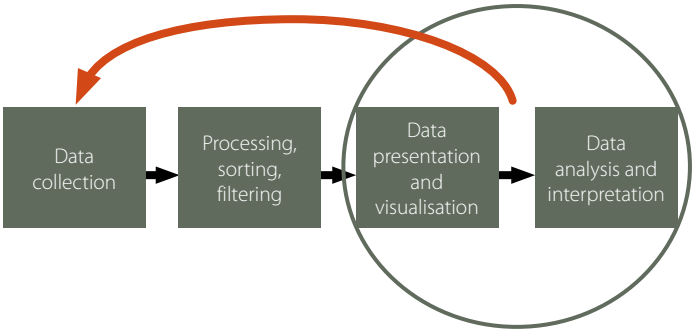
What's the purpose of an analysis?

Piecing together the story told by your data and information. You can:

- Drill down through your evidence to find meaning (explaining patterns).
- Make connections between data (patterns, trends, correlations and anomalies).
- See the bigger picture by looking at your data overall (interpreting).

Data analysis is part of a process

It's important to plan and carefully think through what data you will collect, how it will be presented and analysed.



How to approach your analysis

You can combine your data presentation and analysis sections which means you can think about how it all 'fits together' in relation to your title, aim, hypothesis or key questions.

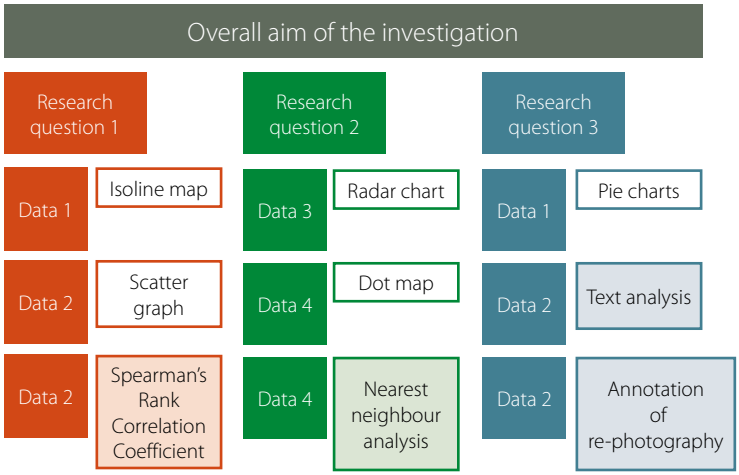
When you have presented your data/information if you explain what it shows, this is a form of analysis. Make sure you give reasons for the patterns, trends and/or anomalies.

Data analysis can be qualitative and/or quantitative and may include statistical tests, these are explored further in the next sections.

Make sure to synthesise your findings, this means you bring your data/information together (see the bigger picture) and make the geographical links. You can do this by presenting some of your data together, e.g. overlay a map with a graph(s) and image(s). To help you with this make sure to use your literature review. You can explain what the theory or models say compared to what you found 'in the field' (in reality) – why are they the same or different?

Link analysis to research questions

Research questions (or key questions/hypotheses) break down the overall aim of the investigation into manageable chunks. Link to these questions in your analysis.

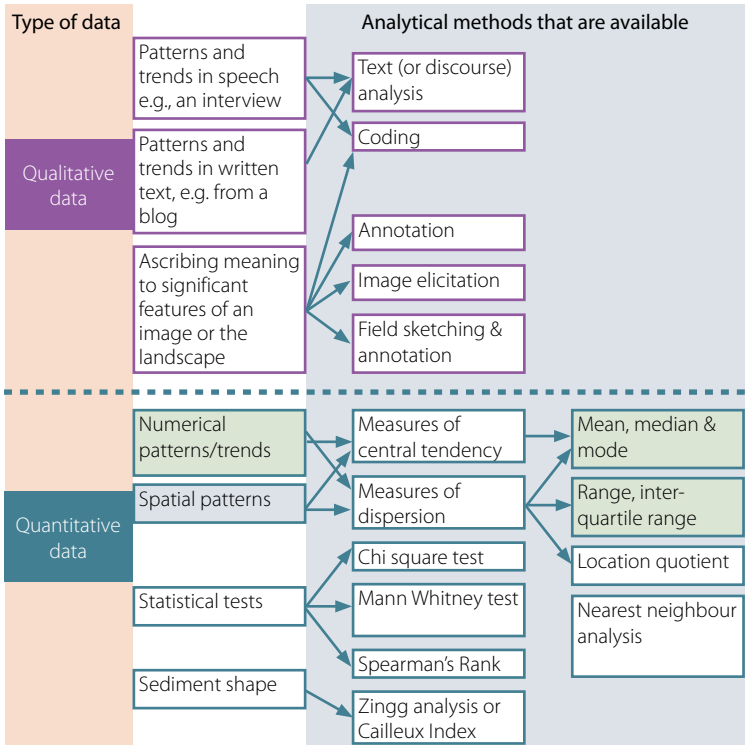


Source: Andy Owen (2019) *A Level Geography Independent Investigation*. Insight and Perspective

Analytical techniques

To help you decide on the analytical techniques to use with your data/information, explore our A Level geographical skills guide.

For an overview of ideas, this diagram will support your planning:



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Qualitative investigations

- *Thematic analysis* involves identifying key themes within data/information, common themes can be explored across different data sets.

- *Coding* can be done to varying levels of complexity but is a really useful technique when analysing qualitative data.
    - Codes can be developed pre or post data collection.
    - Concepts, ideas, themes, categories that help to organise and understand the data.

- *Frequency analysis* e.g. to explore the number/ proportion of people that provided a particular response (please note this is a quantitative technique).

- *Detailed annotations* e.g. of photographs or activity mapping, critical questioning of the data shown, reference to sampling techniques.

These are all explained in detail in our geographical skills guide (see the qualitative analytical tools p149-159).

Quantitative investigations

Having presented your data, you may want to carry out and include some of the analytical and statistical techniques listed below.

Remember you only need to include these if they are appropriate and relevant to your investigation.

Descriptive analytical techniques measures of central tendency (mean, median, mode), proportion (cumulative frequency, ratios) and of dispersion (range, inter-quartile range, standard deviation).

Inferential statistical techniques which explore relationships between sets of data. These include tests of difference (Spearman's Rank Correlation), tests of correlation (Mann Whitney U test and student t test) and tests of association (Chi-squared test).

These are all explained in detail in our geographical skills guide (see the quantitative analytical tools table p147).

Further support

To find out more about analytical tools and ideas for human and physical geography investigations see the two PowerPoints, listed under the Non-Exam Assessment (NEA) tab.

Explore ideas for data presentation and analysis for different Investigation themes, with the Field Studies Council

Field Studies Council geographical investigations

GIS for NEA – beyond the basics for data visualization with ArcGIS

Don't forget to check out the seven NEA candidate exemplars - you can see the different ways students have approached their analysis.