

Lecture 8: Applying GIS & Project Design

GEOG413/613
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Project Design

- Scientific research involves the systematic search for information that is otherwise unknown
- Advances the frontiers of knowledge to explain the natural world and its properties
- It is an objective and controlled process
 - Not subjective and confidence/limits

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Project Design

- Research question
 - Leads to goals and objectives specific to your own project
 - Problem statement
 - Prince George is hosting the summer games and needs a new stadium
 - Research question
 - What is the most suitable site for a new stadium?
 - Research Objectives
 - Characters of suitable land sites
 - Traffic routing
 - Multi-criteria evaluation
 - ...

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Project Design

- Review of the literature
 - Supporting literature
 - Perspective of contradicting sources
 - Point of departure
 - Importance of research contribution

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Project Design

- Methodology
 - Logical flow of the operations required to solve the problem
 - Type of operations you will need to perform (e.g. spatial statistics, map algebra...)
 - Software and equipment used.
 - Sometimes your research could be proposing new methods

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Project Design

- Data
 - Collection
 - What, where, when...
 - Cross-sectional, longitudinal
 - Description

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Project Design

- Analysis
 - Application of GIS tools, functions
 - If you are proposing new GIS functions/tools you need an implementation section before analysis

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Project Design

- Presentation of the results
 - Discussion
- Conclusion
 - Summary

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Applying GIS

- GIS allows users to create, collect, analyze and visualize data for use in a wide range of disciplines

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References

- Journal
 - Applied GIS
 - <http://appliedgis.net/>

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