

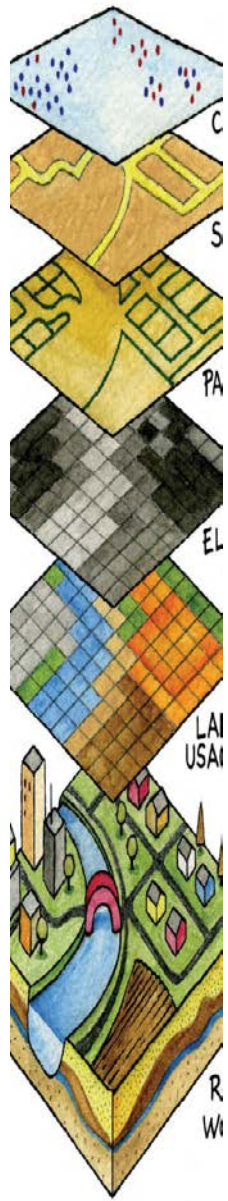
Developing Geographical Understanding through GIS: Supporting Trainee Teacher Practice with GIS

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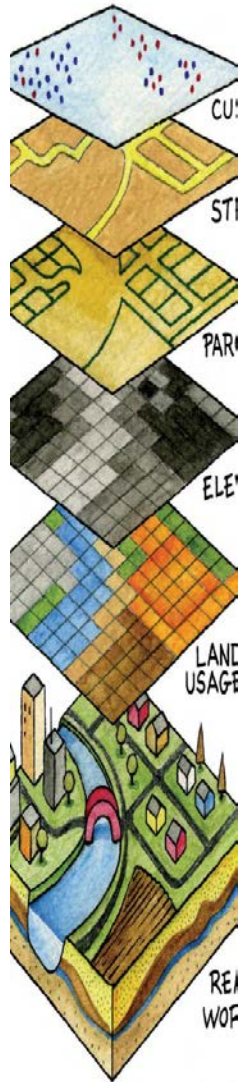
University of Cambridge

Project Rationale



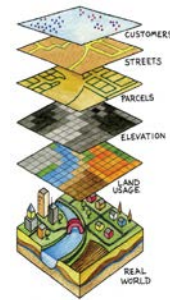
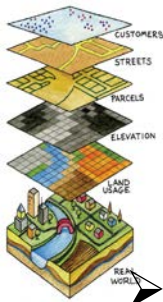
- The use of GIS in schools offers students the opportunity to engage with a new way of seeing, thinking and interacting with the world around them.
- GIS can develop a numerate and geo-literate workforce in a digital world in which almost every industry sector now utilizes GIS.
- Government policy places an emphasis on the use of GIS in Geography across KS3, 4 and 5.
- Geography teachers often shy away from engaging with GIS in the classroom; GIS provision in schools is patchy, at best.
- There is a lack of detailed, research-based evidence for the use of geospatial technologies, including GIS, to support geographical learning.

Project Aims



- To consider how to best support trainee teachers with developing their practise using GIS (specifically ArcGIS Online);
- To explore how an in-depth programme of GIS training across a PGCE Course develops:
 - trainee understandings and perceptions of GIS and its place in the geography classroom; and
 - trainee practice with using GIS in the geography classroom; and finally
- To begin to evaluate the impact on school students' understandings of GIS and geographical learning.

GIS Training Programme



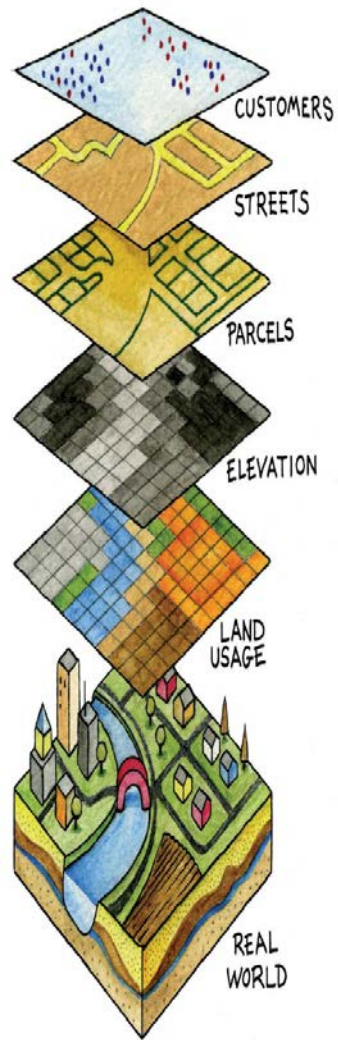
- September Introduction to ArcGIS Online
- November FSC ArcGIS Online and field work
- w/c 16th November GIS Day / Week Activities in PP1 school
- December ArcGIS Online training day
- January Story map activity in PP2 school
- March Advanced ArcGIS Online analysis
- May ESRI Conference, London
- June Advanced training and reflection
- June Dissemination / celebration event



CamGIS teacher support group

Other mechanisms of support.....?

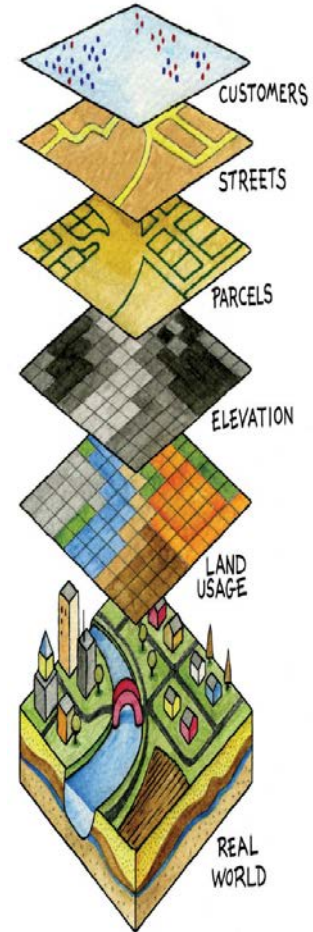
Research Programme



- Questionnaires (paper) with trainees and mentors after key training
- Interviews with trainees and mentors after key training
- Online blogs across the year
- Lesson observations
- Interviews and questionnaires in school with students taught by trainees



The Trainees

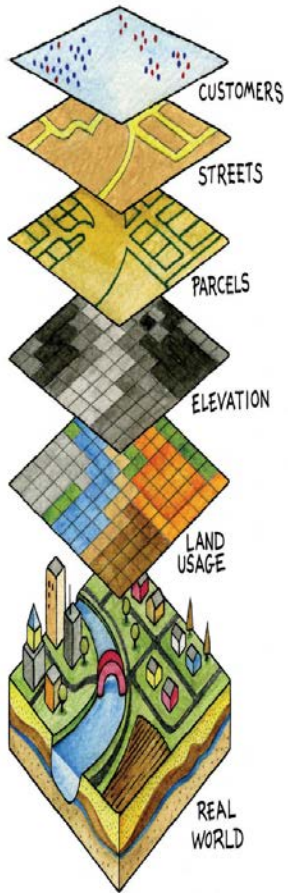


- 16 Geography PGCE trainees
- A range of undergraduate degrees (e.g. Geography, International Development, and Environment and Sustainability)
- Two PhDs
- A range of prior teaching experience
- Generally positive attitudes towards technology
- A range of experience with GIS

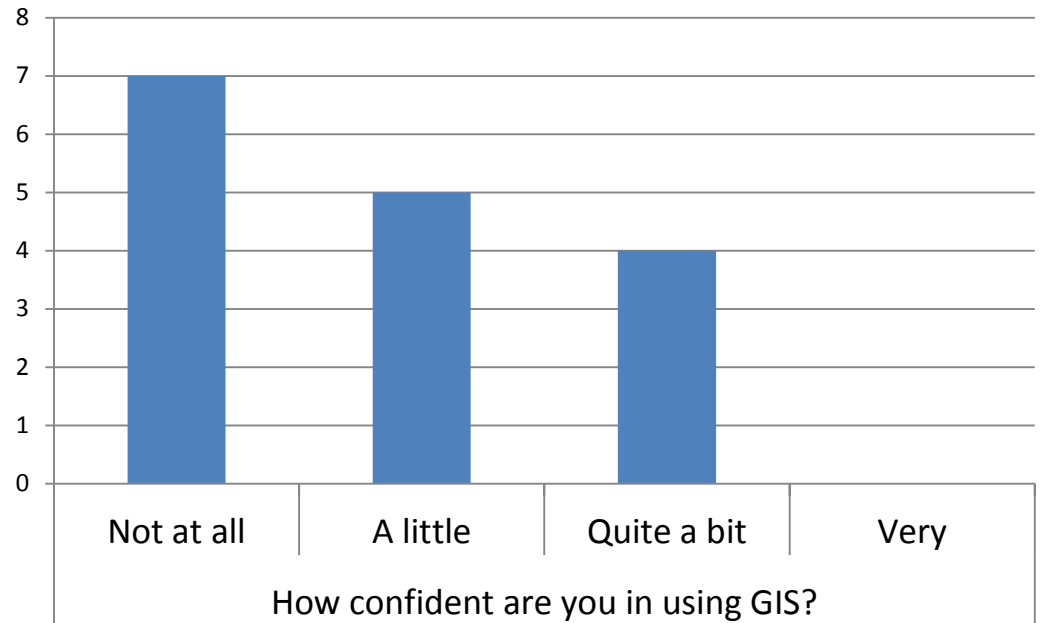
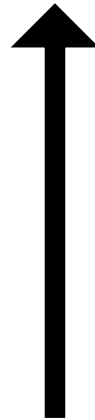


The Trainees: Existing GIS Experience

- Experience predominantly from undergraduate degrees
- Number of packages (ArcMAP, ArcVIEW, ArcGIS, Google Earth)
- 'Clickology'

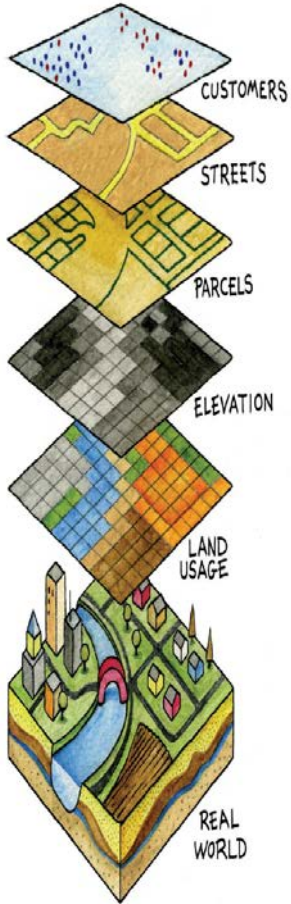


Number of
trainees

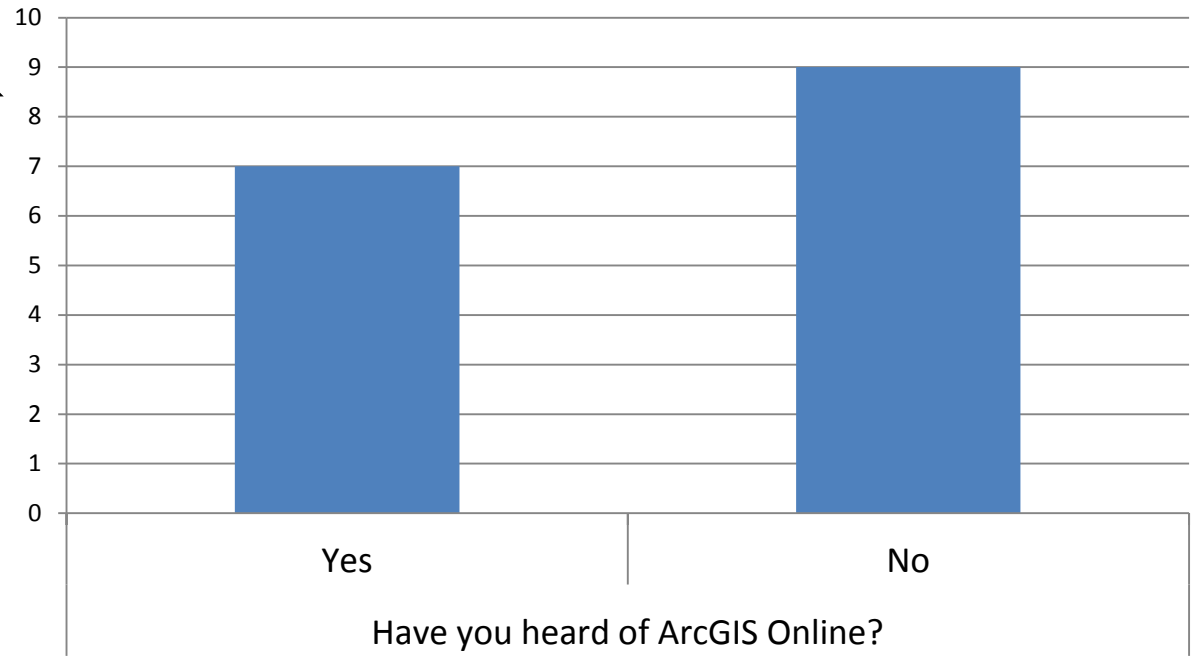




The Trainees: Existing ArcGIS Experience



Number of
trainees

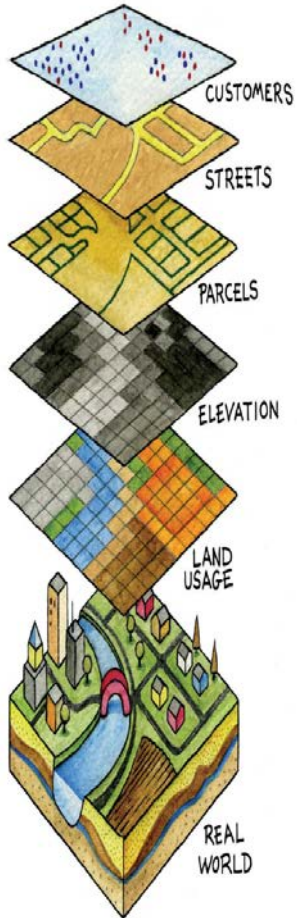


- Predominantly University-based
- Some familiarity (not expertise) with ArcGIS Online



The Trainees

How do they feel about taking part in this project?



anxious
petrified
terrified
excited
happy
nervous keen
concerned
eager

How can you get involved?

- Involvement in specific events:

- w/c 16th November : GIS Day / Week

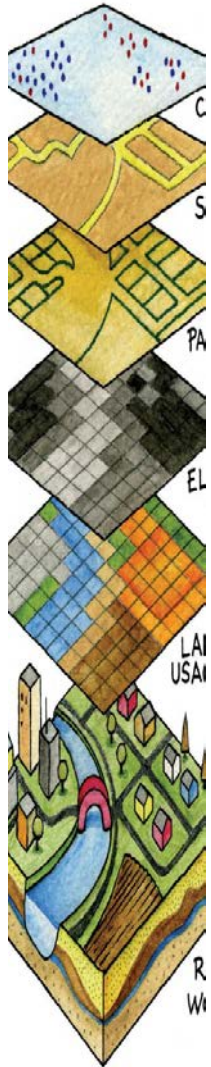
- May: ESRI Conference, London

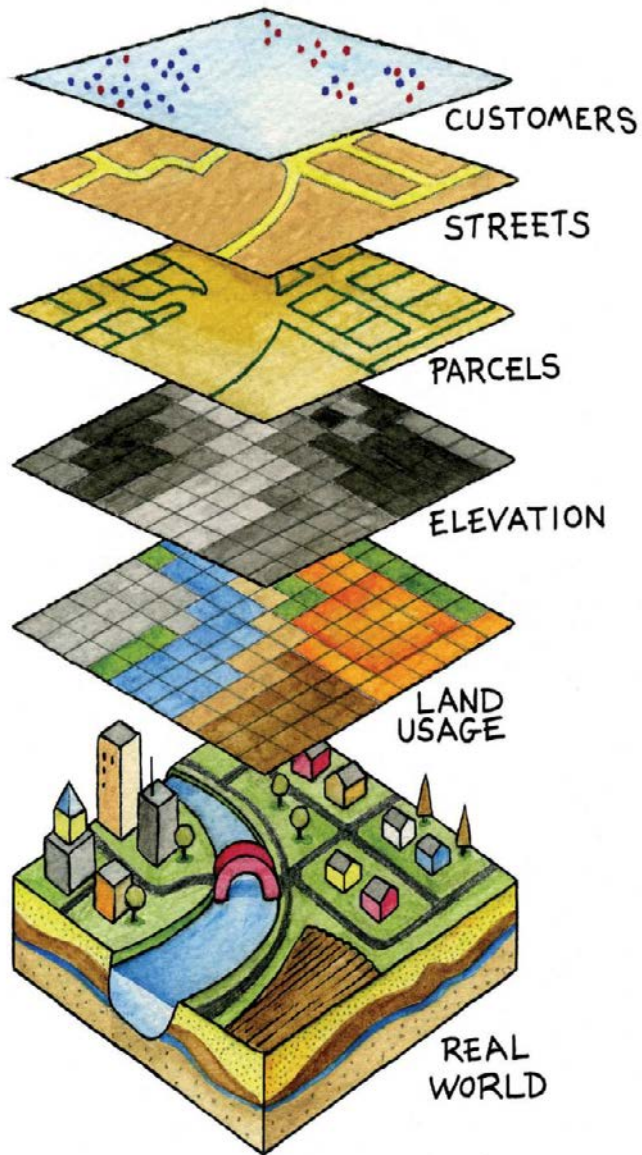
- Involvement in online support community:

- CamGIS (Moodle)

- Facebook

- Involvement in PGCE training





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