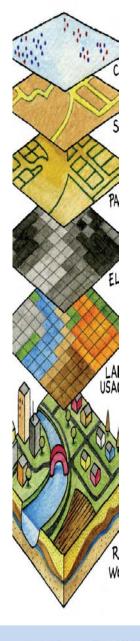


Developing Geographical Understanding through GIS: Supporting Trainee Teacher Practice with GIS

Dr Nicola Walshe

Faculty of Education
University of Cambridge

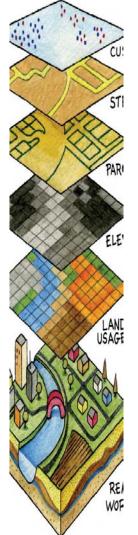


Project Rationale

- 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.

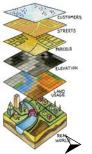






- To consider how to best support trainee teachers with developing their practise using GIS (specifically ArcGIS Online);
- To explore how an in-depth programme of GIS training across a PGCE Course develops:
 - trainee understandings and perceptions of GIS and its place in the geography classroom; and
 - 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
- January
- March
- May
- June
- June

ArcGIS Online training day

Story map activity in PP2 school

Advanced ArcGIS Online analysis

ESRI Conference, London

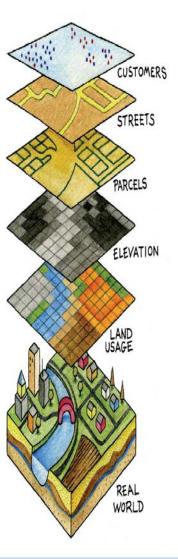
Advanced training and reflection

Dissemination / celebration event

CamGIS teacher support group

Other mechanisms of support.....?





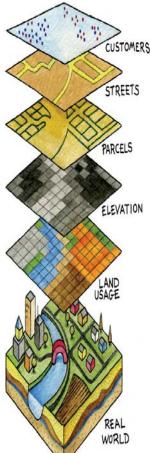
Research Programme

- 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)

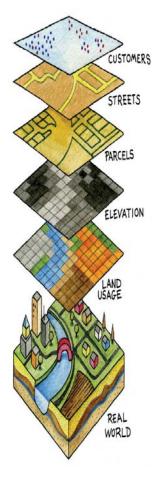
Two PhDs

- A range of prior teaching experience
- Generally positive attitudes towards technology
- A range of experience with GIS



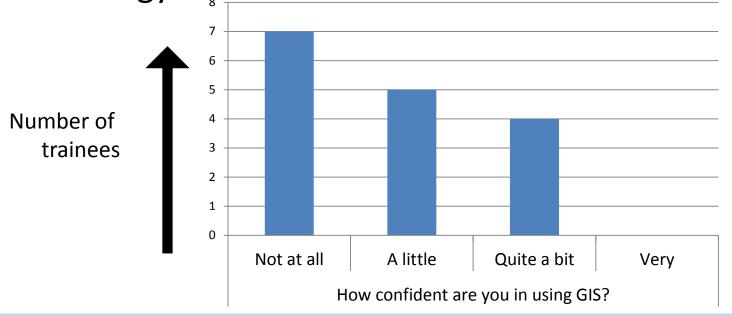


The Trainees: Existing GIS Experience



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

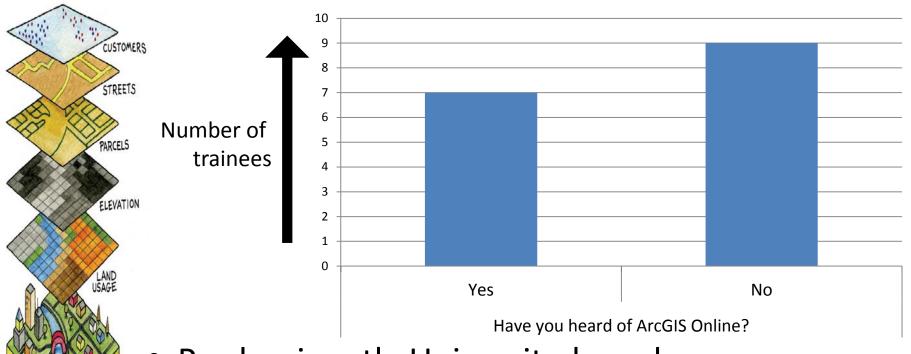
'Clickology'







The Trainees: Existing ArcGIS Experience

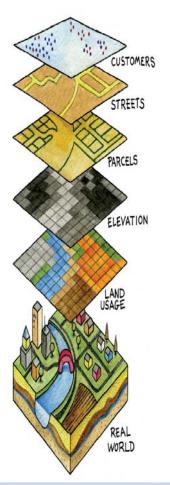


- Predominantly University-based
- Some familiarity (not expertise) with ArcGIS Online





The Trainees



How do they feel about taking part in this project?

```
anxious

petrified

terrified

excited

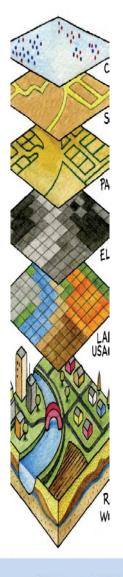
happy

nervous keen

concerned

eager
```

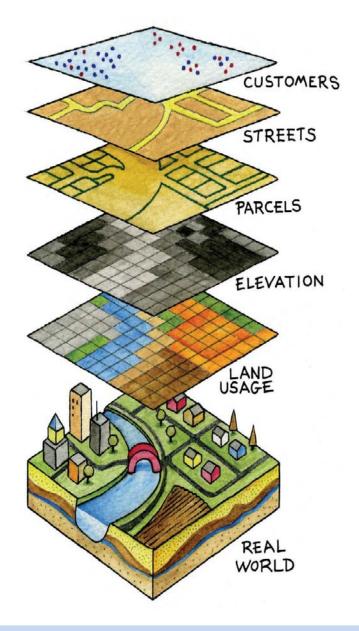




How can you get involved?

- 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





nw279@cam.ac.uk

