Exploring the affordances of virtual fieldwork in a multi-user, 3-D digital environment

Conference or Workshop Item

How to cite:

Link(s) to article on publisher’s website:
https://www.plymouth.ac.uk/whats-on/geological-society-conference-sharing-educational-practice-in-the-geosciences

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Version: Version of Record

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Virtual Skiddaw: Exploring the affordances of virtual fieldwork in a multi-user, 3-D digital environment

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What we built

100 km² area
real data, maps

6 detailed sites
higher res
hand specimens

Navigation
avatars
guided (linear)
free-roaming

Chat
range adjustable

Support
manual, transcripts
Gaming VFTs: challenges

Cost: resources, people, time

Real data: detail vs performance

Framework: self-contained vs adaptable

Comparisons: virtual vs physical fieldwork

Overload: not alienating non-gamers...

How to combat fear that VFTs might replace real field teaching?

Gaming engine: affordances

‘3D’ landscape – geology in context; spatial literacy

Rich interface – interactivity and immersion

Self-contained – (mostly): little linked material

Multi-user – especially for distance learners

‘More than fieldwork’ – do something different:

– flying
– aerial views, map overlays
– in-world cross-section
– teleports (time-saving)
– fadeable avatars

What about: F2F students? or schools?
Evaluation & the future...

1. V-skiddaw at the OU
eSTeM project + Steve Tilling

2. V-skiddaw for A-Level students

3. A Virtual Field Trip Service
   innovate UK project
   Daden Ltd, DesignThinkers, OU

What about:
F2F students?
or schools?

Virtual Field Trip Ecosystem

Authoring Institution
(also likely to be a user institution, but could be non-educator)

Technically Skilled Educator/Staff

Create new locations and core lesson plans

Under contract (if reqd)

Digitise area from sat/aerial/site

Geospatial Subcontractor

£ Revenue Stream from others’ use

User Institution

Educators

Customise Lesson Plans

Learning Analytics

Experience Virtual Field Trips

Create User Generated Content

Web/Cloud
Multiple Locations, eg
Skiddaw
Snowdon
Everest
Moon

Multiple Lesson Plans
KS1-3
GCSE
A Level

Core App

VFTaaS Operator
(Daden)

Management/Support Costs

New Locations

New Features

£

Revenue/Cost flows in yellow
Questions for you

1. Main attractions of Virtual Skiddaw?
2. How would you use a similar VFT?
3. Should we make more?
4. Would you like to be involved?
Shameless plug...

Project team (1)

**Open University**
Shailey Minocha – *leader, virtual worlds*
Tom Argles – *geologist*
Brian Richardson – *production manager*
Kat Garrow – *project manager*
Sarah Hack – *graphic designer*
Nick Braithwaite – *OSL Director*
Sarah Davies – *academic consultant*

**Trent & Peak Archaeology**
David Strange-Walker – *LiDAR, photogram*
Project team (2)

Daden Ltd
David Burden – project lead
Paul Rahme – programmer
Macdonald Mbaya – programmer
Darrell Smith – project manager
Tim Lozinski – graphics/environment
Iain Brazendale – programmer
Lucy Smallwood-Rose – administrator
Guy Wallace – graphic designer
Chris Stevens – programmer

Site visit, April 2013