Students' experiences of undertaking remotely-accessed fieldwork

Alison Stokes[1], Trevor Collins[2], John Maskall[1], John Lea[2], Paul Lunt[1] & Sarah Davies[2]

[1]University of Plymouth; [2]Open University

What is 'remotely-accessed fieldwork'?

Context and aims

- **Context:**
  - Fieldwork facing increasing threats and pressures (impact of fees??)
  - Need to identify innovative means of enhancing or extending 'traditional' fieldwork

- **Aims:**
  - Explore students' experiences of participating in direct and remotely-accessed fieldwork
  - Consider the potential for mobile technologies to enhance fieldwork opportunities

Experimental design

- **Participants**
  - Students:
    - Multidisciplinary / stage
    - Direct=20; remote=21
  - Tutors:
    - Direct: two field tutors
    - Remote: one field tutor, one base tutor

- **Exercise**
  - Two consecutive days, a.m. (direct) and p.m. (remote) sessions
  - Based on environmental impact assessment
  - Similar for direct and remote groups
    1. Introduction and briefing
    2. Tutor-led walkover
    3. Group-led completion of scoping sheets

Car park

Location 1

Location 2

Location 3

Location 4

Location 5

Car Park - Remote base location

Location 1. Waste areas

Location 2. Multi-use path - way ma

Location 3. Arsenic roasting furnac

Location 4. Erosion gully

Location 5. Far

Image © 2010 Getmapping plc
© 2010 Tele Atlas
© 2010 Europa Technologies

lat 50.538989° lon -4.221162° elev 87 m

Evaluation

1. Task performance
2. Pre and post-activity survey
3. Direct observation of activity
4. Post-activity group interview

Task performance

Direct groups		Remote groups	
1a	30.4%	2a	39.2%
1b	48.3%	2b	52.5%
1c	42.5%	2c	37.5%
3a	42.9%	4a	43.3%
3b	34.6%	4b	38.8%
Mean score	**39.8%**	4c	35.4%
		Mean score	**41.5%**

There is **no significant difference** in task performance between the direct and remote groups

Survey findings: skills

Skill	Compare PRE	Compare POST	Pre-post DIRECT	Pre-post REMOTE
1) Organisation				
2) Using and interpreting maps				X
3) Working in a team			X	X
4) Communicating with my peers			X	X
5) Communicating with academic and technical staff			X	X
6) Observation			X	
7) Predicting and assessing potential environment impacts			X	X
8) Integrating information from different sources			X	X

X = statistically significant difference in scores (p<0.05)

There is **no significant difference** in self-rated competency between the direct and remote groups, either before or after the fieldwork
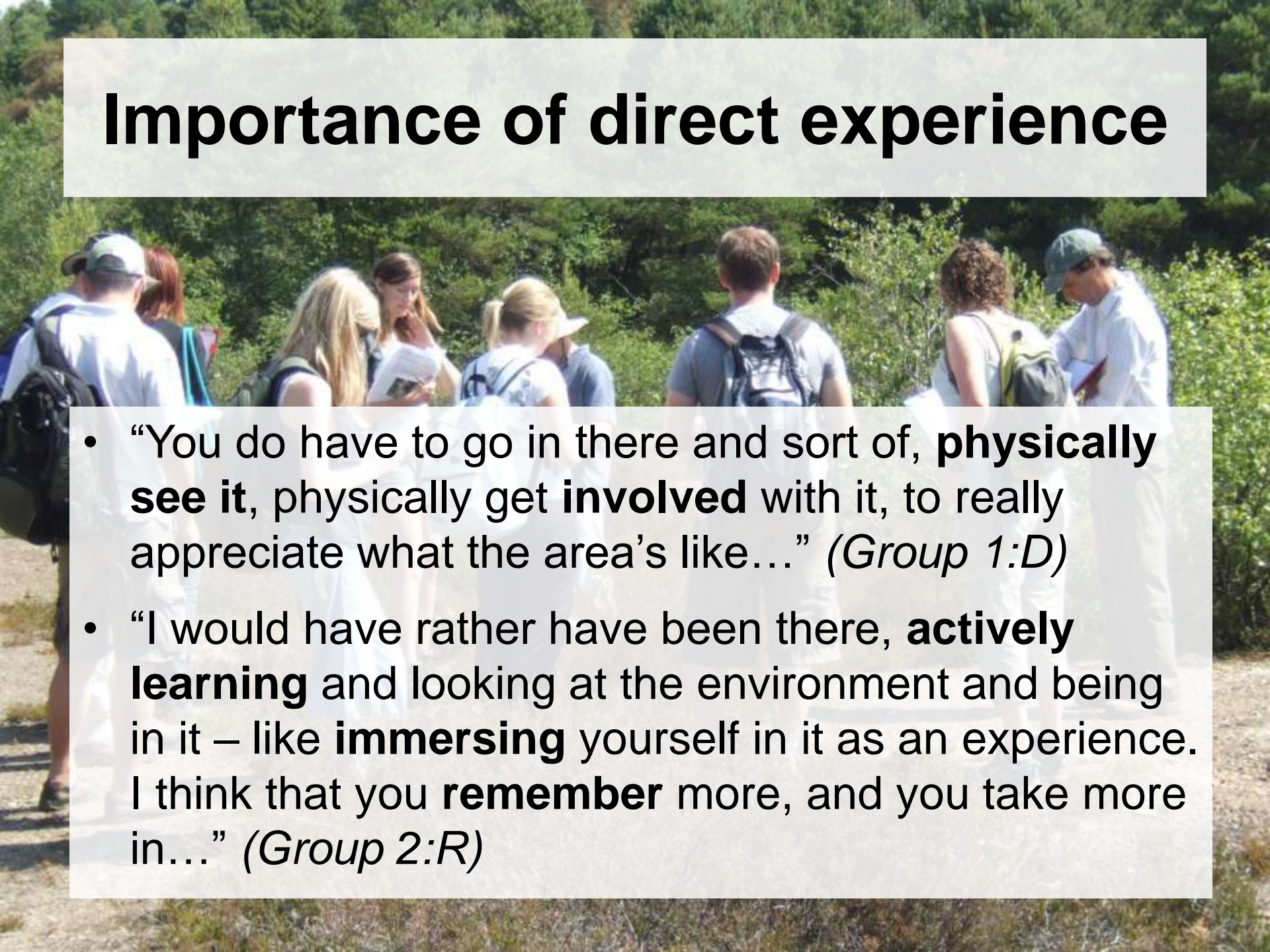
Survey findings: attitudes

Survey item	Compare PRE	Compare POST	Pre-post DIRECT	Pre-post REMOTE
a) I am clear about the aims and purpose of the EIA				
b) I have an appreciation of how this site is located in relation to the surrounding landscape			X	
c) I have a clear sense of the scale of the site		X	X	
d) I have a clear sense of how the different parts of the site relate spatially		X	X	X
e) I am looking forward to participating in the EIA		X	X	
f) I expect to make a useful contribution to the EIA				
g) Fieldwork can only be done 'in the field'				
h) The EIA will be interesting		X		
i) I am looking forward to working in a group with other students				
j) I expect to feel 'part of the team'		X		X
k) I feel confident about communicating with members of my group				
l) I feel confident in communicating with the tutors / field-based tutor			X	
m) I feel confident in communicating with the base tutor				
n) I have the skills necessary to participate in this exercise	X		X	

Anticipation and reflection

	Direct participants	Remote participants
Most looking forward to	Learning something new / having a new experience (58%)	Learning something new / having a new experience (43%)
Liked most	Learning something new / having a new experience (48%)	Learning something new / having a new experience (43%)
Least looking forward to	Having insufficient knowledge or understanding (52%)	Being passive / not being able to walk around the site (50%)
Liked least	Working in the heat / lack of time to complete exercise (57%)	Technical difficulties / not being able to experience site directly (88%)

Importance of direct experience

- "You do have to go in there and sort of, **physically see it**, physically get **involved** with it, to really appreciate what the area's like…" *(Group 1:D)*

- "I would have rather have been there, **actively learning** and looking at the environment and being in it – like **immersing** yourself in it as an experience. I think that you **remember** more, and you take more in…" *(Group 2:R)*

Feelings and attitudes towards fieldwork

- "…imagine you're sat in a classroom, you're not really experiencing [a field location]... you're not going to have the same **emotional feelings** towards the work you're doing… if you're more hands-on with it, you feel more **proud** of what you're doing – feel like you've **achieved** more." *(Group 1:D)*

- "I'd feel much more **confident** in a piece of paper I'd handed over if I'd actually seen it with my own eyes. I mean, I did agree that the work produced was probably the same, it's just…your own **confidence** if you're producing work…" *(Group 2:R)*

Social interaction

- "I thought it was really interesting to work with people that had done a different degree and a **different subject**" *(Group 1:D)*

- "Although it was interactive 'cos we did, like, speak with the tutor who was out in the field, it wasn't a hundred per cent interactive…it's not you doing the looking and experiencing it yourself, you're **experiencing second hand**, kind of." *(Group 2:R)*

Opportunities for remotely-accessed fieldwork

- Field experience for mobility impaired students

- Access to hazardous or protected locations

- Support for direct field activities (e.g. video footage and stills images)

- Complement to traditional lectures

Key findings

- Remote fieldwork offers a range of opportunities to enhance and extend existing fieldwork activities

- Direct and remote fieldwork appear capable of generating similar learning outcomes

- However the overall learning experience, and the impact on feelings and attitudes (i.e. affective domain), are different

- **Future work:** How can remote fieldwork be developed to better replicate the experience and affective outcomes of direct fieldwork?