Abstract No: 78648 - Is fieldwork good? An analysis of the student view.

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Introduction

Fieldwork in higher education encompasses a wide range of activities from an hour-long local walk to a lengthy overseas project. Following Gold et al. (1991) fieldwork can be defined as any component of the curriculum that involves leaving the classroom and learning through first hand experience. Fieldwork is treasured within all UK-based earth science and related disciplines, as indicated by both practice and benchmark statements. Many teachers believe fieldwork to be an effective and enjoyable teaching method (Kent et al., 1997).

Despite the affection with which fieldwork is held, there remain suggestions that its role is set to diminish within universities in the UK and elsewhere. There are a number of drives for this:

Firstly, it is argued that some earth science and related disciplines have been moving away from the need for fieldwork; partly due to changes in curriculum, but also development of technological alternatives to fieldwork, such as remotely sensed data, GIS and virtual 'field' exercises.

Secondly, it is argued that the growth of student numbers, combined with declining unit-funding, makes fieldwork too expensive. The subsequent need to charge students for fieldwork raising questions about whether field courses are equitable: Kent et al (1997) find that they can be 'manifestly unfair'.

Thirdly, it is argued that the teaching time commitment of staff on field courses detracts from their ability to conduct research.

There is some evidence that fieldwork is holding its own (Gold et al, 1991, Kent et al, 1997), but there is also a growing view that it is not sacrosanct. In a nutshell, there is a lack of rigorous research findings that can be called upon to support claims that fieldwork is good (Gold et al, 1991; Kent et al., 1997; Winchester-Seeto & Hart, 2000; Johnston and Cooke, 2001; Healey and Blumhof, 2001), which makes its demise a popular target for University accountants.

Kern & Carpenter (1984, 1986) demonstrated the benefits of geological fieldwork in the academic domain. This poster reports on a project that investigated the "affective domain" as well as the "academic domain" through soliciting the student view of residential fieldwork across a range of geology, geography and environmental science programmes in the UK. The project collected evidence using pre- and post-class questionnaires addressing student perceptions of their experience. Statistical analysis of closed responses together with review of open text responses indicates that fieldwork is indeed good.

References

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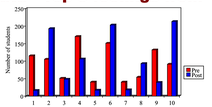
Example questionnaire responses

Data - Top 3 feelings from 10



	Pre	Pairs of feelings	Post
1	Apprehension		1 Did not enjoy
2	Eagerly Anticipate		2 Thoroughly enjoyed it
3	Concern		3 Found it hard
4	Relax		4 Want to go again
5	Worried		5 Lived up to my fears
6	Happy		6 Worthwhile
7	Don't want to go		7 Wish it was not compulsory
8	Can't wait		8 Glad we had to go
9	Don't know what to expect		9 Didn't know what to expect
10	Confident about what to expect		10 Learnt a lot

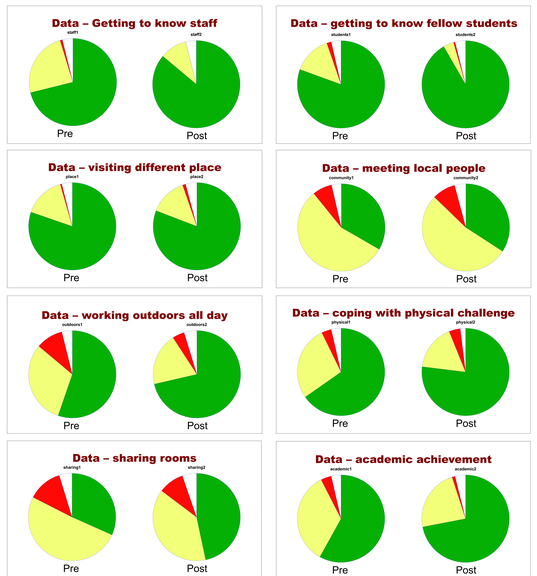
Students asked to select their top three feelings from choice of 10. Red are the choices before the field class, blue the choices after the field class.

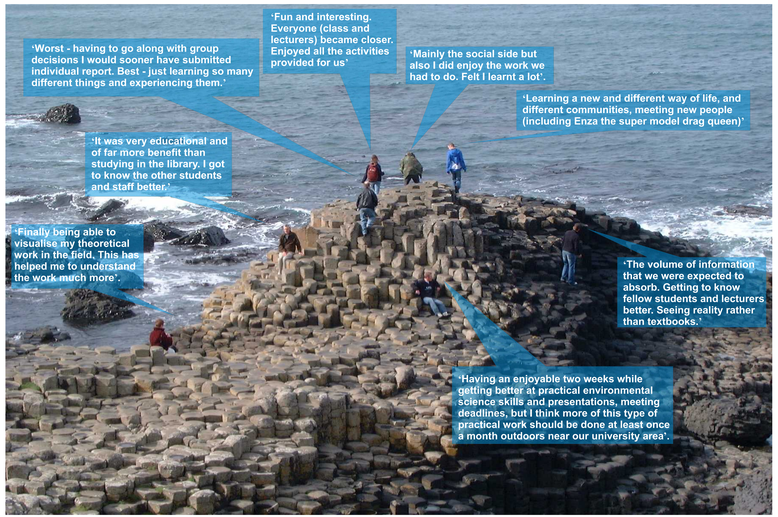
Pre- Post-Data significance

Pair (pre/post)	t	df.	Significance (2 tailed)
Getting to know staff	6.006	290	.000
Visiting different places	.377	290	.706
Meeting people from local comm.	-.181	290	.875
Working outdoors	6.150	289	.000
Sharing rooms	4.922	285	.000
Physical challenge	4.281	290	.000
Achieving academic demands	5.059	291	.000
Getting to know students	4.896	291	.000

- T-test analysis of some pre and post responses
- All of the highlighted comparisons are significant.
- Visiting different places and meeting people in the local community do not show any significant change in feelings from pre to post conditions.
- All of the others are significant (positively!)

Positive | Neutral | Negative | Missing





Quotes

Main Findings

1. Students perceive that fieldwork is good.
2. Post-fieldwork responses show a positive shift with respect to
   - 'Liking challenges in their academic work'
   - 'feeling successful in academic work'
   - 'being confident in working with others'
   - 'using colleagues as an information source'
   - 'trusting contributions of groups of groups/peers/mates when completing group work'
3. Early analysis shows that fieldwork encourages students to take a deeper approach to learning.
4. Students had an improved awareness of the importance of fieldwork through hands on experience.
5. No significant gender difference with relation to their pre- and post-fieldwork feelings.
   - except females are more 'worried' pre fieldwork, 21% of females listed 'worried' in their top three compared with 7% of males.
6. Approximately a third of all students rank 'apprehensive' as one of their top three feelings in advance of the field class, irrespective of age.
7. After the field class only 5% of students listed 'did not enjoy' in their top three feelings.
8. Analysis suggests that there are some significant differences in pre- and post- responses:
   - between students living at home compared with those living away from home;
   - between students with prior experience of residential fieldwork compared with students with no experience.
9. Whilst being positive about fieldwork the picture for induction students is more complex and needs further investigation.
10. There are no obvious age-related experience variations.

Implications for fieldwork practice and policy

1. The field courses in this sample were effective in terms of both academic and social integration.

2. Care needed with student briefing in the pre-field course preparation (to allay apprehension/anxiety):
   - Room sharing and accommodation may cause anxiety;
   - Advise students of the situation as early as possible;
   - Although a third of students felt apprehensive beforehand, the post-class data suggest their anxiety was misplaced;
   - It may be useful to get students who know the field course to share their experiences with students.

3. Maintain residential field courses in the GEES disciplines and consider developing their use in other subject areas.

4. Research has shown that academic and social integration aids retention. Field courses are a mechanism for achieving academic and social integration.