



Experiential
Learning CETL
Centre for Excellence
in Teaching and Learning



Fieldwork: enhancing student employability



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May 2010

Contents Page

	Page
1.0 Introduction to the Resources	1
1.1 What should students reflect on?	1
1.2 What methods can be used?.....	2
1.3 What does deep and meaningful reflection look like?	4
2.0 Resources and Exemplars	5
2.1 What should students reflect on?	5
2.2 What methods can be used?.....	5
2.3 What does deep and meaningful reflection look like?	6
2.3.1 Fieldwork log (Exemplar)	7
2.3.2 Fieldwork log (Blank)	8
2.3.3 PDP Fieldwork Summary.....	9
3.0 References and Bibliography	11

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First edition February 2008, updated May 2010

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Fieldwork: enhancing student employability

1.0 Introduction to the Resources

It is assumed that fieldwork will enhance a student's employability, but it is not always clear how.

'...Clark and Higgett (1997) report that these opportunities are not yet fully exploited and Andrews *et al.* (2003) show that outcomes associated with desirable graduate attributes that are claimed by fieldwork teachers are not always explicit in briefings, activities or assessments'.

(Experiential Learning CETL submission, 2004)

These resources are intended to help. They encourage students to identify record and reflect on their achievements in relation to fieldwork, so that they are better able to understand them and to explain them to an employer. The resources draw on feedback from staff in the EL CETL disciplines and, in the first instance, are targeted at staff responsible for managing these learning opportunities; they may also prove helpful when planning fieldwork activity and assessments.

The materials presented are not intended to be prescriptive, nor suggest that, 'one size fits all'; they vary in focus and application, allowing for individual interpretation and the differing priorities and cultures of subject disciplines. Nevertheless, there is a common framework, based on some key questions:

- What are the achievements that students should reflect on? What are the criteria that they might use for reflecting on their experience of fieldwork?
- What methods might be used to help students identify, record and reflect on their experiences?
- How will we know when students have done it well? What does deep and meaningful reflection look like?

This pack considers these central questions, provides exemplars, and highlights other resources.

1.1 What should students reflect on?

Or, perhaps this question is what would employers like students to be able to demonstrate?

The Higher Education Academy (HEA) subject centres have developed a set of '**employability profiles**', articulating the qualities that graduates of each discipline will be able to demonstrate. These profiles not only inform employers about what to expect, they also confirm what students should have achieved. The qualities that are listed in these profiles offer a possible framework for student reflection in relation to fieldwork, as well as other aspects of their programme.

For instance, for Environmental Scientists:

'By routinely working in teams on ...field-based research, environmental scientists are versed in project management including planning, execution and evaluation; this

involves skills such as time-management, risk-assessment, problem solving and analysis’.

(GEES, 2008)

A focus on these skills would be highly appropriate for students reviewing a piece of field work.

There may be other criteria, or questions which students may wish to consider. An obvious one is the **module outcomes** - the following module outcome from a Geology module (EOE 5002), for instance, which requires students to:

‘Demonstrate initiative and originality in planning and executing field study and research. Act as part of a team in planning and implementing tasks, making decisions in complex and unpredictable situations including, where appropriate, equipment-based primary data acquisition’.

There is of course a strong argument for also drawing student attention to the module outcomes at the start of the module, so that they can anticipate and prepare for the experience.

There may also be more detailed criteria that students need to consider in relation to a particular set of skills. **Team work**, for example, is often a key feature of field work. A typical question on an application form might be:

What factors do you think contribute to effective team work? Give examples of how you have displayed these qualities.

More detailed team / group work criteria can be found through LearnHigher (2008) which is identifying and developing model resources.

1.2 What methods can be used?

There are a variety of methods for encouraging students to review their own experience of fieldwork. Perhaps not surprisingly these appear to be most effective when they are assessed.

Some methods such as **fieldwork notebooks** are well established. They are usually an integral part of the assessment and may require students to reflect on their own performance, as well as the data that they are collecting. In some disciplines, however, such as geology, field notebooks have a specific function which excludes personal reflection. Students need to be clear about what is expected. There are, nevertheless many similarities in how fieldwork notebooks are used:

Geology/Earth Sciences

- Field notes/geological sketches which accurately and fully describe the geology of each location that the student visits.

Geography and Environmental sciences

- Sketches to show location of samples. (Time, day, weather conditions) Personal observations - what was seen.
- Notes relating to conversations, questionnaires and interviews (human geographers).

Biology

- Accurate drawings of a selection of the organisms (dependant on module) that were examined. Annotations on the drawings to show features that are difficult to draw.
- Sketches to show location of samples.

Some elements appear common and highlight the notebooks' use as a reflective observational tool:

- As a notebook for research data gathering that will provide them with the raw material from which to construct a formal report about the fieldwork experience or exercise.
- To record observations of what was seen and done.

In many instances they are also used as a personal development log, reviewing individual fieldwork experiences and performance. This information can of course be shared and provide a focus for peer review and assessment.

Linking skills with observations

Figure 1 offers examples of how practical fieldwork skills provide evidence against a typical set of module learning outcomes. The observational element of the notebook can contribute to the assessment of these outcomes: students can either observe others, be observed or self assess in order to better realise and understand their fieldwork skills, recording their observations in the fieldwork log.

Such insights will also enhance fieldwork performance and data gathering as each student further realises their strengths and weaknesses, drawing on or improving them respectively for each new fieldwork experience.

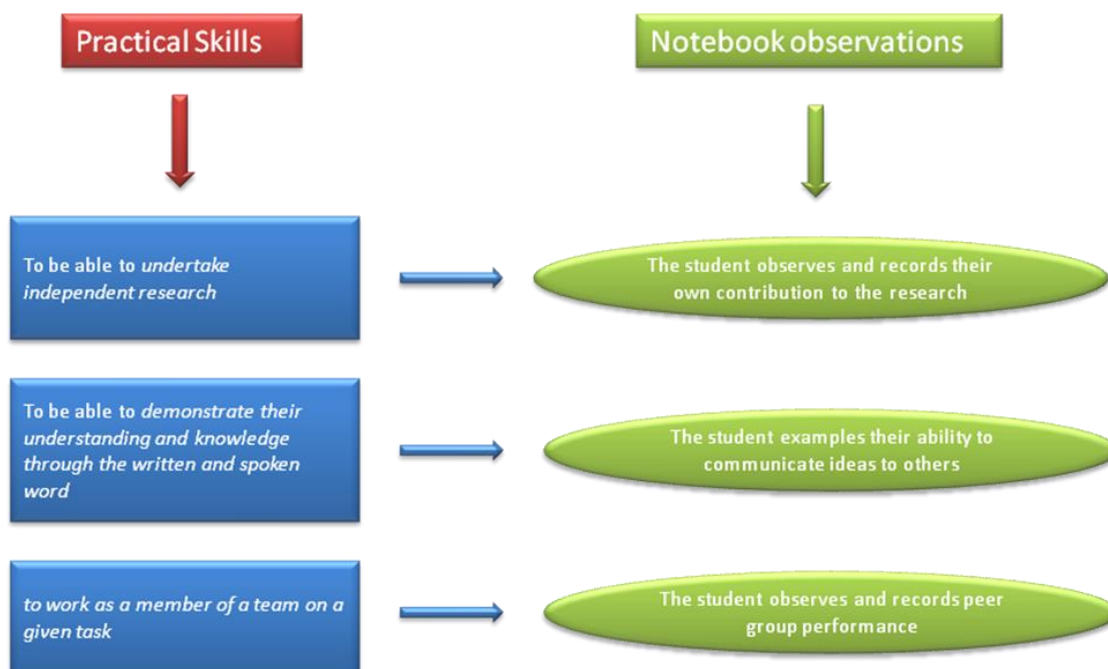


Figure 1: An example of the links between practical fieldwork skills and notebook observations.

There may be other reflective activities that students are required to complete and which are assessed. This could include a personal fieldwork statement where students review and

assess their own performance, and sometimes those of others. This might appear as a separate activity, it may also form a section in a final report. The **Fieldwork Log** in section 2.0 offers an example and might contribute to this process.

All students undertake Personal Development Planning, although schemes may differ between departments. They invariably include opportunities for students to undertake a personal audit of skills and action plan at stage 1, some form of module review at key stages and a summative review and Curriculum Vitae preparation at stage 3. Field work experience and skills might feature in each and could arguably also benefit from an audit and action plan in its own right. An example of a **Fieldwork Summary sheet**, which might be incorporated into the PDP process, appears in section 2.0.

Students can also review their field work experience in groups, using a **structured debriefing**. This encourages deeper reflection and can be a useful link to individual reflection, such as through the examples mentioned above. Gibbs (1988) suggests the stages, based on Kolb's Experiential Learning Cycle.

<i>Description:</i>	What is the stimulant for reflection? (incident, event, theoretical idea) What are you going to reflect on?
<i>Feelings:</i>	What were your reactions and feelings?
<i>Evaluation:</i>	What was good and bad about the experience? Make value judgements.
<i>Analysis:</i>	What sense can you make of the situation? Bring in ideas from outside the experience to help you. What was really going on?
<i>Conclusions (general):</i>	What can be concluded, in a general sense, from these experiences and the analyses you have undertaken?
<i>Conclusions (specific):</i>	What can be concluded about your own specific, unique, personal situation or ways of working?
<i>Personal Action plans:</i>	What are you going to do differently in this type of situation next time? What steps are you going to take on the basis of what you have learnt?

1.3 What does deep and meaningful reflection look like?

Students may review their experience using the criteria and methods outlined above yet still gain little from the activity. The depth and quality of reflection is also important. Description of the experience is a good starting point but potential employers will also expect interviewees to be able to explain 'how' a particular skill has been demonstrated. For instance:

Describe a situation in which you have had to solve a problem. How did you approach the problem and how effective were you in solving it?

To answer this question well will require more than description, it will require a deeper level of reflection.

Jenny Moon has written extensively about reflection and has developed, 'A **Generic Framework for Reflective Writing**' (Moon, 2004a), along with some excellent exemplars based on an incident in the park and an employee presentation (Watton *et al*, 2001). She characterises deeper reflection as displaying examples of the following:

- Evidence of standing back, of mulling over and of internal dialogue
- Recognition that the frame of reference for viewing an event can change
- A metacognitive stance – critical awareness of one's own learning and thought processes
- Self questioning, considering different views of one's own behaviour and that of others
- A consideration of the view and motives of others
- A recognition that prior experience – personal and other people's – can influence current behaviour
- A awareness of emotion and that emotional influences can affect perceptions
- Identification of learning opportunities
- A recognition that the personal frame of reference may change, over time, with new information, in different emotional states

She has also produced: '**Reflective Writing: some initial guidance for students**' (Moon, 2004b).

Additional resources on reflection and critical thinking are being developed through LearnHigher (2008).

2.0 Resources and Exemplars

2.1 What should students reflect on?

What are the achievements that students should reflect on? What are the criteria that they might use for reflecting on their experience of fieldwork?

- a) Employability Profiles – GEES (2008)
- b) Employability profiles – Biosciences subject centre (2008)
- c) Teamwork – LearnHigher (2008)

2.2 What methods can be used?

What methods might be used to help students identify, record and reflect on their experiences?

- a) Fieldwork logs sheets, exemplar and blank sheet (Page 7)
- b) PDP Fieldwork summary sheet, exemplar and blank sheet (Page 9)

2.3 What does deep and meaningful reflection look like?

- a) A Generic Framework for Reflective Writing (Moon, 2004a)
- b) Reflective Writing: some initial guidance for students (Moon, 2004b)
- c) LearnHigher (2008) – Critical thinking.

Communicating

Spoken - Written - Team
Visual - Internal - External

Group work was difficult, some people did not help out as much and well I felt that I had to lead the sampling which I did not want to do. Spoke to some others who felt the same, but it did not help as I ended up with the responsibility. It was my own fault; I didn't appreciate that everyone can do it as well as me. I need to be more tolerant of others and not so aggressive; it really gets me nowhere.

Project Management

Problem solving - Risk taking
Resources - Achieve outcomes

Problem with the sampling was the weight of the bags. Too heavy to carry by self; I needed help or someone with a car to help out. Another problem was the communication. I don't know what I can do about it. I know I can get really aggressive but I only get annoyed if people don't pull their weight. Needs someone to mediate - too many extremes in the group and affecting the workload.

Fieldwork Log

Date: 26th October 2007

Experiential

What did I do? Duties? Tasks?
What did others do?

I was out in the field today sampling soil as part of my module. We were taking soil samples in different areas which I did with other members of my group. I enjoyed it but was cold and wet so got soaked and a bit miffed at this point. I was carrying bags of soil which were heavy and wasting; should have asked for help, or left samples at certain places. This did depress my mood. Got most of the samples sorted; need to finish last area.

2nd November 2007. Looking back I can see that being cold and wet will affect how I act.

Since the trip I have also talked to others in the group; realised that a couple were prepared to get more involved but didn't know what I wanted - I just seemed a bit angry. I can see that I need to be clear and assertive about my needs, rather than being quiet and feeling oppressed, or becoming angry and aggressive. *Will look into information about being assertive.

Self Management

Organise - Responsibility - Time
Decision making - Working with others

This was difficult as I was delegated the task of leader. I did not manage my team with tact, which I need to improve on. The responsibility of the write up was not a problem as it was independent but collection of results - a nightmare. Working as a team lets me down and I really need to think about my temper with others.

Skills Application

Information management - Numeracy
Prior / new knowledge skills - IT used

My data collection skills (sampling soil - coring) are really improving as we were out in the field for 4 days. Group work skills have progressively got worse. We will be using Minitab to do the stats which I have never used and I am a bit nervous. Hopefully I will improve, learning while I do it.

Communicating

Spoken - Written - Team
Visual - Internal - External

Fieldwork Log

Date:

Experiential

What did I do? Duties? Tasks?
What did others do?

Self Management

Organise - Responsibility - Time
Decision making - Working with others

Project Management

Problem solving - Risk taking
Resources - Achieve outcomes

Skills Application

Information management – Numeracy
Prior / new knowledge skills - IT used

2.3.3 PDP Fieldwork Summary

You can use this form to keep a record of your fieldwork experience gained both through your course, and other means, such as volunteer activity. Fieldwork experience is valued by employers, not only because they may be interested in the particular focus of activity, but also because it can demonstrate both your subject related and transferable skills.

It is useful to keep a log of your fieldwork experience, as well as to identify and review the main skills that you demonstrated. You may wish to come back to this information when developing Curriculum Vitae, completing an application form or preparing for an interview.

Description of Fieldwork activity (example)	Main outcomes
<p>Geology field trip Aliaga, Spain</p>	<ul style="list-style-type: none">• Familiarisation with the area• Developing a geological map of the area• Practising geology field skills from Year 1• Preparing for Year 3 projects
<p>Date & Duration:</p> <p>Sept 2005 (Year 2); 11 days</p>	<p>Related pieces of work / assignments:</p> <p>Geological map of the area Fieldwork notebook</p>

What skills did you demonstrate and what evidence do you have to prove it?

- Independent living skills - camping; experiencing a different culture - shopping etc
- Visualisation - interpreting the lay from a map
- Mapping skills and confidence in their use- producing the map
- Taking dip and strike measurements - reflected in the map
- Judging risk in the field; working safely on the map - use of high visibility jackets

You may find Employer Profiles for your subject useful:
<http://gees.ac.uk/projtheme/emp/empprofs.htm>

Description of Fieldwork activity

1

Date & Duration:

Main outcomes

Related pieces of work / assignments:

What skills did you demonstrate and what evidence do you have to prove it?

You may find Employer Profiles for your subject useful:
<http://gees.ac.uk/projtheme/emp/empprofs.htm>

Description of Fieldwork activity

2

Date & Duration:

Main outcomes

Related pieces of work / assignments:

What skills did you demonstrate and what evidence do you have to prove it?

You may find Employer Profiles for your subject useful:
<http://gees.ac.uk/projtheme/emp/empprofs.htm>

3.0 References and Bibliography

All web resources were accessed: 11/5/2010.

Andrews, J., Kneale, P., Sougnez, W., Stewart, M. and Stott, T., 2003, Carrying out pedagogic research into the constructive alignment of fieldwork, *Planet 5*, 51-52.

BioSciences subject centre (2010)

Employability within bioscience subjects

<http://www.bioscience.heacademy.ac.uk/resources/employability/index.aspx>

A set of useful resources relating to industry skills expectations for bioscience graduates – with emphasis on the industrial appraisal approach to skills and employability:

<http://www.bioscience.heacademy.ac.uk/resources/employability/skills.aspx>

Centre for Recording Achievement (2010)

Employers and CPD / Introduction, although useful to understand employability from the employers' perspective:

<http://www.recordingachievement.org/employers-cpd.html>

Clark, G. and Higgitt, M., 1997, Geography and lifelong learning: a report on a survey of geography graduates *Journal of Geography in Higher Education* 21(2), 199-214.

Cowan, J. (2006) *On becoming an innovative university teacher: reflection in action*. Maidenhead: Open University Press.

Experiential Learning CETL (2004) *CETL: Experiential learning in environmental; and natural sciences: Stage 2 bid for funding*, University of Plymouth.

GEES (2010)

Planet Special Edition 1 (2001): Embedding Careers Education in the Curricula of Geography, Earth and Environmental Sciences

<http://www.gees.ac.uk/pubs/planet/careers.pdf>

GEES wiki / Employability, Entrepreneurship and Enterprise - based on the GEES Subject Centre 'Employability Guide':

<http://gees.pbwiki.com/Employability,%20Entrepreneurship%20and%20Enterprise>

GEES Employability Profiles can be obtained from:

www.gees.ac.uk/projtheme/emp/empprofs.htm

Direct link to profiles document:

<http://www.gees.ac.uk/projtheme/emp/geesempr.rtf> and how staff can utilise these profiles (elements of reflections are mentioned):

<http://www.gees.ac.uk/projtheme/emp/empprofs.htm#staff>

Mapping Subject-based Skills to the Employers' Criteria

<http://www.gees.ac.uk/projtheme/emp/mapprof.rtf>

Gibbs, G. (1988) *Learning by doing: a guide to teaching and learning methods*, Further Education Unit: London.

HE Academy (2010)

Moon, J. (2004) *Reflection and employability*, No.4 of the ESECT/LTSN Generic Centre "Learning and Employability" series. York: Higher Education Academy

[http://www.heacademy.ac.uk/assets/York/documents/ourwork/tla/employability/id339_reflecti
on_and_employability.pdf](http://www.heacademy.ac.uk/assets/York/documents/ourwork/tla/employability/id339_reflecti
on_and_employability.pdf)

Employability Tools - Self Evaluation and Reflection Aids:

[http://www.heacademy.ac.uk/resources/detail/ourwork/employability/employability_tools_self
evaluation_and_reflection_aids](http://www.heacademy.ac.uk/resources/detail/ourwork/employability/employability_tools_self
evaluation_and_reflection_aids)

Kolb, D.A. (1984) *Experiential learning: experience as the source of learning and development*. Englewood Cliffs; London: Prentice-Hall.

LearnHigher (2010)

Critical thinking & reflection, applicable to employability:

<http://www.learnhigher.ac.uk/learningareas/criticalthinkingandreflection/home.htm> and
resources:

<http://www.learnhigher.ac.uk/learningareas/criticalthinkingandreflection/resourcepage.htm>

Group work

<http://www.learnhigher.ac.uk/learningareas/groupwork/resourcepage.htm>

Moon, J.A. (2004a) 'A Generic Framework for Reflective Writing', *A Handbook of Reflective and Experiential Learning: Theory and Practice*, Routledge-Falmer, London and New York, pp 214-216. Also available online:

<http://www.cemp.ac.uk/downloads/resourcesforusewithreflectionorlearningjournals.doc> or
http://www.cemp.ac.uk/downloads/cemp_Production_Analysis.pdf

Moon, J.A. (2004b) 'Reflective writing: some initial guidance for students', *A Handbook of Reflective and Experiential Learning: Theory and Practice*, Routledge-Falmer, London and New York, pp 186-189. Also available online: [http://www.e-
radiography.net/projects/relective_writing.htm](http://www.e-
radiography.net/projects/relective_writing.htm)

Prospects UK (2010)

A short article that describes employability and uncovers the myths as to what makes students employable:

[http://www.prospects.ac.uk/cms/ShowPage/Home_page/What_do_graduates_do_2006/Em
ployability_and_myths_uncovered/p!epmiqXc](http://www.prospects.ac.uk/cms/ShowPage/Home_page/What_do_graduates_do_2006/Em
ployability_and_myths_uncovered/p!epmiqXc)

The Council for Industry and Higher Education (2010)

CIHE provides a range of resources some originally written with the employer in mind. See in particular Student Employability profiles: a Guide for HE practitioners

[http://www.cihe.co.uk/wp-
content/themes/cihe/document.php?file=0609StudentEmployabilityProfiles.pdf](http://www.cihe.co.uk/wp-
content/themes/cihe/document.php?file=0609StudentEmployabilityProfiles.pdf)

...and Degrees of Skill: Student Employability Profiles: A Guide for Employers

[http://www.cihe.co.uk/wp-
content/themes/cihe/document.php?file=0609CIHEDegreesofSkill.pdf](http://www.cihe.co.uk/wp-
content/themes/cihe/document.php?file=0609CIHEDegreesofSkill.pdf)

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www.ex.ac.uk/employability/students/reflective.rtf

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http://www2.plymouth.ac.uk/science/elcetl/Documents/WBL_Employability/Enhancing_student_employability_Nov_2006.pdf