Introduction and rationale
There is a growing body of research that supports what many tutors have felt is an important way of learning, learning by doing. In geography, and other environmentally focused subjects, the role of practical and field work is often cited as a key factor in the undergraduate learning experience, and something that facilitates understanding. However, the link between this ‘doing’ and ‘understanding’, is reflection (Kolb, 1984; Hinett, 2004).

This paper documents an action research project that attempted to introduce formal reflection into the curriculum of a cohort of geography students at the National University of Ireland, Maynooth (NIUM). Tutors at NUIM had identified two major questions about the learning experience that they wished to investigate. The first was to evaluate one method of enhancing the transfer of learning between year 2/level two modules and those in year 3/level three modules. At the start of the study, this was deemed to be poor, and was creating issues when students reached higher levels of study, and attempted to construct curriculum vitae for life after university. The second was the desire to investigate the effectiveness of encouraging student reflection, and to assess the degree to which IT would facilitate this process. The present report provides an overview of the process of reflection and its likely part in the learning process, followed by a description of the project process and an evaluation of its outcomes. Finally, consideration is given to future developments in relation both to encouraging reflection and it in the use of IT for this purpose. The modules which form the focus for the project were co-ordinated by one of the authors, while the other acted primarily to evaluate the experience.
What is reflection?

“Reflection is a process of reviewing an experience of practice in order to describe, analyse, evaluate and so inform learning about practice”

(Reid, 1993)

While many people, for example Kolb (1984), believe that this process is an in-built part of learning for all people, such that a model of learning, for example that shown in Fig. 1, might be constructed, there is commonly a lack of awareness of the situation.

![Kolb's postulated Learning Cycle (1984)](image)

Fig. 1 Kolb’s postulated Learning Cycle (1984)

People do not often deconstruct an experience to explain what happens and so do not always consciously learn at a deep level from the event. This means that when the same situation recurs there is a considerable likelihood that the same experience will be repeated, possibly even endlessly, clearly an undesirable situation. To address this difficulty it is necessary for people to firstly become aware of the process and to deconstruct the learning in order to understand what happened (i.e. to learn about it and from it). In other words, reflection needs to go on within the model in order for learning to occur. If the process is successful it draws on both cognitive skills, such as reasoning and knowledge, and also on metacognitive skills, such as intuition and self awareness (Hinett, 2004). As Biggs (1999) noted, this is likely to aid a transformational process, possibly leading to appropriation (i.e. a change in behaviour), as suggested by Boud (1995).
Reflection in geography
Research evidence in general, but particularly within geography, suggests that reflection is of benefit to student learning. For example, McGuinness and Simm (2005) enthuse about the use of reflective diaries promote the integration of ethical and political concerns into learning. There is also a considerable body of work reporting that students are enthusiastic about the process, for example Thompson et al. (2005) and Wright (2005).

The NUIM situation
In year two in NUIM all geography students were required to complete two linked modules which were part of a programme designed to develop skills, generic, subject-specific and those related to research projects. The students were clearly able to learn and to use these skills during the relevant portion of the modules, but, in common with students elsewhere (e.g. Burkill and Corey, 2002) generally failed to transfer their learning to other situations later, even when the tasks clearly required their application. As reported above, it is likely that greater focus on the process of learning will make some improvement in this situation, as students are helped to understand their experiences rather than just focus on the ‘product’. It was, therefore, decided to re-focus the module to encourage the students to work through the learning cycle and, particularly to build reflection into the process.

While Personal Development Planning with a component of reflection is an integral part of the higher education system within the UK and indeed, students are often encouraged to reflect on their experiences in second level education, no such requirement exists within the Irish education system at present. It was, therefore, necessary to introduce students to the process of reflection at this point in their studies.

Therefore a reflective component was introduced into a unit in Methods of Geographical Analysis, in which students undertook research in semester 1 related to real world, community-based problem and in semester 2, worked
in teams to carry out their own small-scale, team-based research projects. Students were asked to set up reflective diaries, online, using a technique known as ‘blogging’, providing both the means of recording reflections and making a contribution to the development of their ICT skills.

The rise of blogging has been somewhat meteoric, with national newspapers reporting some 27 million users worldwide. A blog is an editable web page, which can be simply added to or edited by the user, without any recourse to web page authoring software or HTML. Entries are password protected and can be made whenever the student has access to the Internet. Unlike paper diaries, tutors can access the ‘blog’ at any time after the student has supplied the relevant URL. As ‘blogs’ are open access concerns were raised about the privacy of students. While they were encouraged to make their entries as honestly as possible, they were also reminded of the need for some discretion in exactly how they expressed themselves.

Previous experience of asking students to keep journals or diaries while undertaking projects had revealed a considerable degree of ‘retro-fitting of entries in many cases), and it was clear that blogs, which are time-stamped would remove this opportunity.

Because of prior experience, when students became extremely concerned about their ability to carry out ‘reflection’ as formally defined, it was decided that the concept should be explained in an informal manner as being ‘something which would help learning, by thinking through exactly what happened’. Again, previous experience had shown that many students were unable to carry out the process without a great deal of support and guidance, so questions to focus the reflection were to be provided each week. The first question for each session was a practical one - firstly to encourage the student to recall the event to facilitate the consideration of what happened and secondly to provide a relatively easy start to build confidence for the rest of the work, for example ‘What happened when you carried out your mini survey?’. This question was followed by more
thoughtful/experiential ones, such as ‘What did you feel about asking the questions?’ To encourage the completion of the reflection process, more summative questions were included at appropriate times to encourage review of the skills and methods practiced, for example ‘How would you compare the trial survey with your experiences of the ‘real world’ one?’

Whilst some tutors felt that some students might have a pragmatic approach to learning, and consider that anything which did not gain marks was not worthwhile, it was felt inappropriate to assess reflective journals formally. Formative assessment involved tutor comments and responses, which could be attached to the blog, and the summative assessment link was provided by the inclusion of a section in the project reports which required students to reflect on their experiences, using excerpts from their blog. Finally, students were required to reflect on the overall process at the end of the year, by undertaking a CV building exercise, which focussed primarily on reviewing the skills which they had used during the year and the contexts in which they had been applied.

**Student evaluations of reflection**

Almost all of the 180 students participated in the reflection experience. Midway through the year two methods were used to evaluate the experience. A series of focus group interviews were conducted by Paul Wright involving approximately 20 students, who volunteered to participate. All of the students, including the focus group participants, then completed a written exercise, in which they answered four short essay questions. For both of these exercises, students were asked to consider the reflection experience in terms of purpose, preparation, value and drawbacks.

As part of the final exercise of the year students were asked to review their learning and usage of skills and briefly to consider the experience of reflection again.

**Mid-year findings**

Students observations focussed primarily on the following areas:
a) preparation for the process

Initial responses suggested that students felt basically unsure as to what they were doing, and why:

“Initially when I heard about it I didn’t know what it meant…..”

“…I really hadn’t a clue, not a clue…..”

b) understanding of the process

This lack of understanding was further demonstrated in their explanations of the purpose for which the reflection had been undertaken. These ranged from ones suggesting that it was understood as providing feedback for the tutors, through ones which considered it was useful for the students

“For us as well to analyse them and to remember what we have done, it is handy that way..”

and on to ones which indicated self-realisation such as,

“To learn about yourself to see where you are having problems to be able to maybe, once you know you have a problem you will be able to go to somebody and say yes I do have a problem, more a reflection of yourself and your work.”

However, there were a number of higher order conceptions relating to the reflective process, such as learning from one another, and relating things together by considering actions in a wider context:

“Well I think in any job or any career we have to be able to relate things to each other. ......Any job, we have to be able to relate, memorise, relate and put forward, we did it as part of life skills absolutely....”

“Some people are having the same problems you are having yourself...”

c) motivation for reflection and the benefits obtained

Some responses tended to confirm the tutor concerns about the pragmatic approach adopted by many students, for example:

“I also think because there were no credits if you want to do it you do it, like you don’t get anything, there is no take on who has done them and it was a standard like there was no grades given to say that was a good blog”

However, there were at least one third of the people interviewed who summed the process up in a similar way:
“That is the ideal world where you learn from your mistakes, you do something, you review it, you go, no that was totally wrong. ....ideally you would look back there were mistakes and wrong views and didn’t do it right and could have done this better or whatever but it is not an ideal world I am afraid.”

In other words, this was all well and good, but of very limited value and not of any practical use in the ‘real world’, at least when no credit was gained and when time was involved.

d) the method adopted for the process
One major concern that students did identify was with the questions that were set up to try and encourage a degree of reflection, e.g.:

“I didn’t find them helpful, I found them more mundane about how did I feel about working in a group.”

“some of the questions I found were pointless”

Less that a quarter of the group identified questions as being helpful, and this was often in terms of giving them a ‘starting point’, rather than directly answering the questions themselves. One student suggested:

“No I think if you are left to sit down and write exactly what you felt about it, what you didn’t like to me you could actually do that yourself”

“.... the questions I thought were good to get each student thinking on the same sort of guidelines...”

The inference from this group of students was that the questions given at least prompted a degree of reflection, but some felt them a little restrictive and did not allow them enough room to really say what was on their mind.

Considering whether the blogging itself was a barrier to the reflective process, the group was equally divided. Top of the list of benefits of blogging was the portability and inability to misplace the writing. However, the accessibility of blogs to all and sundry was cited by one student as a
drawback. Similarly, students citing IT issues tended not to view the technique as any better than traditional journal keeping.

e) barriers which restricted reflection

NUIM students identified many pragmatic reasons for not always fully engaging with the reflective writing process, such as IT issues and time pressures:

“I know it will only take you five minutes but you could be waiting twenty minutes to get access to a computer.”

“Well I am happy enough but using Excel and Word I wouldn’t have a clue like that.”

“I just find you are trying to spread yourself thin, you are trying to get all your essays in and you assignments and do your reading as well”

“But then you have your home life as well, I have three kids at home, …… So it is trying to fit it all in and then trying to leave enough time for myself as well, very, very time consuming”

Whilst around ten students of the twenty interviewed identified one or both of these issues as important, there was considerable disagreement about the latter barrier. As many students found it easy to fit into their lives as did not. However, most people suggested that there might be other ways of capturing reflection than blogs.

Comparison of responses from students who identified time as an issue, suggested that other predominant concerns were that they saw little value in the exercise, other than some vague attachment to assessment (and, thus, grades):

“I thought blogs they were a complete waste of time to be honest with you I didn’t see any benefit out of it at all but in saying that it was good that the questions were there that you could revise and look back and it would refresh you memory”.
End of year findings

As part of the final class of the year, a curriculum vitae building exercise was undertaken. As part of this work students were presented with a list of basic skills which they had used during the year, for example oral communication, time management and ICT. They then identified as individuals and then in plenary all of the ways in which these had been used as part of their studies. The plenary reports identified a huge range of usage of each skill - a considerably greater range than those suggested by the previous year’s cohort. They were also asked about their degree of comfort with the process of reflection - and over 70% reported that they felt comfortable with the process, while only 8% felt uncomfortable.

Discussion

The tutors responded to the findings of the mid-year evaluations by providing a clear explanation of the purpose of reflection. It was also decided to allow students greater freedom in their approach to their reflections. Questions were no longer set each week, but students were provided with a set of generic questions, based on those suggested by Gibbs (1988), such ‘Description (What happened?)’ and ‘Action Plan (If it happened again, what would you do?)’. It was stressed that these were for guidance, but could be ignored if students felt that their own approach was more appropriate for them. Some did, indeed, use the freer style to great effect. Unfortunately, many more ceased to reflect on a regular basis - suggesting that while the ‘enthusiasts’, who were probably also more likely to be those who would take part in a focus group situation, did, indeed, relish a freer approach, the majority view was closer to the small number of interviewees who suggested that the structure was necessary to encourage their reflection.

Overall, the shining reports of the benefits and success of introducing reflection and, in particular, reflective writing into the classroom, seem not to echo through the voices of students interviewed. However, the ‘blogs’
revealed that the students were actually carrying out the process and that their reflections developed over the period. For example

_I have never liked working in groups. I have had too many bad experiences in the past doing group work, so I was a little apprehensive about facing more of the same ... this year. It was difficult initially because you have to think quickly with people you have never even met before so I found that all of us were a little shy in the beginning._

However, _... as the project progressed with the deadlines getting ever closer I found that the group became a better and more efficient unit. I now realize that group work is an inevitable part of college life, and indeed life in the workforce so I have come to the conclusion that it is better to get involved and do the work as a team rather than working alone. That way there is a better blend of ideas being thrown around while the work is completed in a shorter space of time._

Ramsden (2003) suggests that clear goals and expectations facilitate a deep approach to learning. Therefore, it seems clear that by encouraging more students to be able to identify the need for, and use of, reflection, might enable students to see the process as freeing rather than a restrictive ‘must do’, due to assessment requirements.

This conception of reflection as something ‘other’, rather than something central to learning is one that comes across in student feedback again and again, despite the evidence to the contrary provided by the blogs and the other feedback. As a work-based learning student remarked to one of the authors in another educational context:

_“The problem is, I just can’t do reflection. I hate it”_

The student then proceeded to have an eloquent ninety minute conversation with the tutor in which s/he reflected at length. What, in fact, this student was identifying was that there is a tension about what the process is, and what students think it is. Moreover, it identified a major barrier, which is reflective writing, as the student later conceded that taping her spoken thoughts would be a much easier way of capturing the detail. Secondly, it also highlighted the need for some kind of reflective framework, as the conversation was facilitated by the tutor rather springing very much from the musing of the student.
The framework suggested by the project team sprung from early concerns during the design phase of how students might respond to questions attempting to provoke an emotional response. Therefore, the questions tended to focus on the process of the class rather than the process of learning per se. It was recognised, by both students and the project team, that some of these questions could promote a rather descriptive approach, rather than the analysis of what was happening, which useful reflection should encourage. However, a considerable degree of reflective writing did, in fact, occur and the evidence provided both in the blogs and in the sections of the various reports

This focus on tactics rather than learning perhaps accounts for students seeing the project as one of feedback, as many students suggested that the role of the blog was to tell tutors who they felt things were going with the class, rather than with their own development. Subsequent cohorts will be introduced to the role of reflection within learning, especially with regard to identifying personal development issues in line with considerations about employability.

The pragmatic barriers to reflection are somewhat more difficult to remedy. The IT facilities required are governed by institutional pressures, but it is clear that a clearer approach to the use of blogs, so that students feel rather more secure than they suggest they did, is one way of clearing up any issues.

As for the issue of time, it is clear that the group is divided as to whether this is really a problem. One suggestion might be that these assessment (as opposed to learning) centred students, use time as an easier excuse for not engaging than discussing the real issue of value. The role of conveying value and expectation rests solely in the hands of the tutors, and it is clear, therefore, that more effort needs to given on explaining the concept of reflection, and its role in learning.

However, one anomaly seems to remain. Whilst the students seem to question the value of what they did, feel unconfident about their ability to
reflect, and suggest that there were problems with the process, the interview data shows a rich and thoughtful response to the exercise, in other words some quality reflection about what they did. In some students this even transformed itself into suggestions to tutors as to how to improve the experience next year. Furthermore, as evidenced above, they did provide evidence in their blogs and in written reports that they were actually reflecting.

This highlights a dichotomy and a problem. Firstly, students either genuinely feel they cannot reflect, or say they can not do so, when clearly they can. Secondly, they struggle with the mechanism of capturing reflection i.e. writing, when they quite clearly have reflective thoughts about what they do all the time. These students have clearly learned, so, at some stage, if Kolb is correct, they must have reflected!

This suggests then that if tutors feel that capturing reflection is important they have to work to find ways in which student feel comfortable with this process. Such a method might be time consuming, but this study highlights the problems many students find with using writing as the tool for reflection. At present those less comfortable with the written method would appear to be somewhat at a disadvantage. This disadvantage would clearly become a much greater concern both for tutors and students if assessment was to be directly tied to the written reflections. Further work is, therefore, required on the reasons why this should be the case and the development of either ways to facilitate the writing process or alternative ways to capture reflection (or both).

Conclusion

A group of over 180 second year Geography students at NUIM were introduced to the concept of reflective writing, through the medium of blogging, during a unit which introduced students to methods of geographical research. This was in response to a perceived issue of students not easily recognising developed, developing, or required skills when applying for jobs and writing curriculum vita.
Twenty students were focus-grouped in order to gain feedback about their experiences and all of the class completed a ‘short-essay' evaluation in mid-year, followed by a CV exercise at the end of the year. In mid-year they identified issues relating to the practicality of the scheme, but also commented upon issues of expectation and value that need to be addressed in the next cohort. These comments do not seem to support published action research material along similar lines, where student response is broadly positive.

Finally, the students' overall not very positive response to reflection seemed to be in direct contrast with the evidence, which suggested they had both reacted to and reflected upon the experience in such a way that they identified key things they had learned about what they doing in class, and the way in which they were doing it. Also, many seemed more comfortable talking through these reflections in a facilitated discussion, than writing these responses down in any way. It is suggested that the need to promote reflection more definitely at an early stage in the learning experience is important and that either alternative methods or a more supportive approach to written capture are researched.

References


