

Title:

ONLINE REFLECTIVE DIARIES – USING TECHNOLOGY TO STRENGTHEN THE
LEARNING EXPERIENCE

Theme:

Teaching well with technology

Authors:

Eamonn Butler
Department of Central & East European Studies
9 Lilybank Gardens
University of Glasgow
Glasgow
G12 8RZ
e.butler@lbss.gla.ac.uk

Mary Tatner
Faculty of Biomedical & Life Sciences
Joseph Black Building
University of Glasgow
Glasgow
G12 8QQ
m.tatner@bio.gla.ac.uk

*Anne Tierney
Faculty of Biomedical & Life Sciences
Biology Teaching Centre
Level 9
Boyd Orr Building
University of Glasgow
Glasgow
G12 8QQ
a.tierney@bio.gla.ac.uk

** Author who will be the primary contact*

ONLINE REFLECTIVE DIARIES – USING TECHNOLOGY TO STRENGTHEN THE LEARNING EXPERIENCE

ABSTRACT

Internet based technologies have benefits for students and staff in terms of time and information sharing. Students at the University of Glasgow were required to engage in reflective writing, with tutor support, as part of their course assessment. We examine the benefits of this approach in fostering a deep, holistic approach to learning, student contribution to course development through this reflection, and the issues in support of these activities.

ONLINE REFLECTIVE DIARIES – USING TECHNOLOGY TO STRENGTHEN THE LEARNING EXPERIENCE

INTRODUCTION

The use of technology within higher education offers many benefits to the contemporary learner and teacher. For example, it can provide new and exciting ways to teach course material or to engage students and build on traditional learning methods. This is something that is all the more important in a world where increasing workloads and class sizes means less time for staff to spend with students, with the danger that the undergraduate learning experience will suffer. For others, technology and e-learning (whether it be linked to complete online/distance courses, or as support for campus based courses) pose serious drawbacks and may not necessarily present the much sought after remedy for the challenges facing the undergraduate learning experience. Two of the biggest problems, though by no means the only ones, are firstly, maintaining student engagement with the technology over the duration of the course and secondly, the potential for reduced social and cultural interactions between student peers and their tutors whereby technology driven activities are considered impersonal, suppressive of “communication mechanisms such as body language” and have the potential to eliminate peer-to-peer learning (Kruse 2004).

Online discussion forums are one method of asynchronous support which have been suggested as a means to combat some of these problems because they encourage a degree of interaction between students and the tutor and students and their peers. This is often facilitated by means of a virtual learning environment (VLE). However, forums are not without their problems. They are often prone to lurkers, who read but who rarely or, more often, never contribute to online discussions. This can be attributed to the fact that online forums can appear clinical to students and thus do not encourage personal interaction or more importantly ownership of the material produced. Often forums become repositories for FAQs, where students ask questions and expect a tutor answer, rather than engage in organic peer discussion. In the worse case scenario a complete breakdown in student contribution to online forums can have serious repercussions for this style of technology enhanced learning. Furthermore, in terms of assessment (if they are to be used in this manner), discussion forums can only be seen as formative in nature and as such face many challenges by way of ensuring regular engagement by students who often take a strategic approach to their learning and workloads [see Jeffcoate (2010: 49) for more details on formative and summative approaches to online activities]. This can be somewhat frustrating for the tutor, who will often invest a large amount of time and effort in the hope of developing open and self generating discussion.

An alternative to discussion forums as a form of new technology activity is to encourage students to keep an online journal or diary or as it is more commonly known a blog. Unlike with forum-post writing, blogs lend themselves more effectively to summative assessment and therefore have the potential to motivate the student in a more direct manner than discussion forums. Furthermore, there is widespread evidence which suggests that reflective writing, usually in the form of a diary or journal, has multiple benefits which range from (i) supporting independent learning, and (ii) providing a space for students to locate and order their thoughts, to (iii) counteracting possible ‘spoon feeding’ associated with handouts/lecture notes and most importantly, (iv) encouraging deep learning and self assessment (Moon 2003: 7-8). The nature of diary writing, however, is that it is a closed, personal experience, whereas blogging is designed to be open access, read and commented on. As with posting in forums, many students are not fully comfortable with blogging because it is open for anyone to read and this is particularly worrying for them when the material is to be assessed. The challenge is to find a way that allows technology to encourage the personal reflection of diary writing, with the interaction and

potential for feedback and comment, if not even discussion, to be found in forums and blogs. This is something that two tutors at the University of Glasgow faced when they decided to introduce reflective writing as assessment in their courses. This paper charts some of the challenges and experiences of the tutors and the students engaged with online reflective writing tasks. It aims to identify if there is a benefit to using technology to support reflective writing, not only in terms of task facilitation but also in terms of engagement and interaction between peers, thus dealing with some of the problems posed by technology itself and highlighted above.

REFLECTIVE WRITING

One of the key goals of the University of Glasgow's Learning and Teaching Strategy (2006) is to "engage students with teaching and approaches to learning which support their development as motivated learners, independent and critical thinkers and promote confidence and awareness in their skills" (Glasgow 2006:2). Reflective writing is one technique that may go some way towards helping achieve this goal. There is a huge body of literature available on the benefits of journal or diary writing as a means to support learning through reflection. Examples include, enabling learners to understand their own learning process (Hubbs and Brand 2005); to increase active involvement in learning and personal ownership of learning (Dummer *et al.* 2008); or to enhance creativity by making better use of intuitive understanding (Boud 2001). Of course, the use of diaries or journals within higher education is not new, particularly within professional or vocational courses such as medicine, dentistry or education. However, within social science, humanities and business (beyond maybe postgraduate research journals or work-placement reviews) diaries, as a dedicated form of reflective activity, are not common. This is surprising, considering the fact that many of the potential benefits associated with the use of reflective writing as part of an assessment portfolio appear to clearly support the type of learning goals set out in the Glasgow Learning and Teaching Strategy. According to Nardi and Kremer (2003: 3) reflective practice is "an intuitive practice in which the student utilizes an ability to recognise relationships between and among events and responses". Independent learning through reflection becomes embedded in the actions of the student. As Boud (2001: 10) has commented "reflection is a process of turning experience [or knowledge] into learning, that is, a way of exploring experience in order to learn new things from it". Reflection, he continues, "involves taking unprocessed, raw material and engaging with it as a way to make sense of what has occurred".

THE COURSES

The two courses taught at University of Glasgow which are examined in this paper both employ reflective activity as a form of assessment. The courses, "Business & the Biosciences" (B&B) and "Central & Eastern Europe: Perspectives on Security since 1945" (PS45), are taught in different faculties and are designed along different lines in terms of the course structure and set up. The students taking the courses also come from different academic backgrounds. The reflection is done by way of students keeping a personal diary (The term 'diary' is used to describe the assessment, rather than 'blog'). In order to support the diary writing process tutors are given access and provide regular feedback. The need to do this quickly led tutors on both courses to examine the way in which technology could support the feedback process without formalising the diary writing in such a way that it becomes solely about writing for assessment rather than writing for learning. Both courses use Moodle to manage the course and students have a large degree of familiarity with Moodle as it is the university approved and recommended VLE. However, Moodle did not prove suitable for this particular task. An alternative piece of software which was available, and possibly suitable for the task, was Mahara.¹ The University of Glasgow has adopted Mahara as an institution-wide personal development planning (PDP) tool. Mahara is essentially an e-portfolio system that incorporates elements of social networking, including blogs. It is the blogging facility within Mahara that was particularly attractive to the

¹ <http://mahara.org>

tutors in terms of the reflective writing or diary task because it provides a number of benefits, that Moodle or other third party software or online programmes, such as 'Blogger'² or 'Live Journal'³ could not. The most significant of these was that Mahara is university approved and supported, which is important from a point of facilitation and that the work students produce would be stored on university computer servers, thus there would be no danger of vital student coursework being lost to third-party companies. An additional benefit is that Mahara provides a one-stop place for students to keep their writing in an organised, secure and convenient online space. Any materials, including blogs, stored within Mahara are also only accessible by the student unless they choose to give access to others. They do this by creating what is called a 'view'. This element of control is important because not only does it provide the students with a sense of ownership over the work they produce, it reflects the personalised nature of diary writing – by giving a degree of privacy to the writer. Learning after all is a personal process and Mahara supports this by virtue of being designed as a personal learning environment (PLE), as opposed to Moodle which is more of a virtual learning environment (VLE) or course management system. The blogging facility in Mahara allows for feedback comments to be added to a diary entry by a reader. As students become more comfortable with others, such as their tutor, reading their reflective thoughts, it is possible that they may be willing to open their view to other members of the class, allowing their peers to read and comment on their writing. Such a move changes the diary from a personal writing space into something that resembles an open access blog. However, because the student retains control over who can see the blog view, it cannot be called a real blog and therefore, reflects something of a hybrid diary/blog.

Course 1: Business & Biosciences – A short, fat course

Business & Biosciences (B&B) is an introduction to business for final year bioscience students, who can come from any of seventeen degree courses offered by the Faculty of Biomedical & Life Sciences. It is a two-week full-time course, offered pre-semester, in weeks 0 and 1. The students do not know one another before coming into the course, and are under pressure to form relationships quickly, in addition to completing the coursework in a short space of time. The reasons for the short course structure are practical: how to fit in a full honours elective which exposes students to the necessary business skills before students commence their honours project/dissertation, and pedagogical: how to simulate the pressure of a working environment, with the pressure of deadlines and a steep learning curve. Students explore a component of business in the morning sessions, through seminars and semi-structured tasks, building up their experience, whilst applying what they have learned to their own business/product in the afternoon sessions. Course tutors can monitor student progress in the morning sessions, but afternoon sessions are unsupervised, so the diaries offer tutors a useful perspective on progress, as students reflect on their own daily activity. Formative feedback on the diaries is given daily during the course, and the final diary, which is a distillation of the two weeks, is summatively assessed. Students remark on their progress, when they revisit early diary entries in order to write their final document for assessment (see Table 1).

Course 2: Central & Eastern Europe: Perspectives on Security since 1945 – A long, thin course

In contrast with Business & the Biosciences, Central and Eastern Europe: Perspectives on Security since 1945 (PS45) is a two-semester course, which meets once a week for a two-hour session. The course is offered by the Department of Central and East European Studies (CEES) within the Faculty of Law Business and Social Science (LBSS). In contrast to B&B, the issues facing this cohort of students appear to be those associated with motivation and perseverance, and being able to keep up with the diaries every week for twenty weeks. As with B&B students, the

² <https://www.blogger.com>

³ <http://www.livejournal.com>

majority of PS45 students are in final year, and come from a range of departments reflecting various social science and humanities disciplines. For example, the 2009-2010 cohort of students come from the Departments of 'CEES', 'Politics', 'Slavonic Studies' and 'Economic and Social History'. In weekly meetings, each topic, or theme, is dealt with in a variety of ways: tutor-led seminar, discussion of original documents of the period, student-led presentations, video clips and documentaries. There is an air of lively discussion in the classroom, and the tutor supports the students in expressing their opinions of the weekly themes. Students are expected to write a weekly diary reminiscent of each week's theme, but should also draw upon previous themes and other courses. The first time this course was run the tutor provided feedback comments on a weekly basis but found this very time consuming. As a means to open the task to peer support the feedback structures were slightly altered in the second year the course ran. Tutor feedback continued to be given, but approximately once a month rather than once a week. Students were also divided into peer groups and are encouraged to comment on one another's diaries. The final, reflective piece comprising of diary entries for each week and a final end of course entry is submitted for summative assessment at the end of semester 2, before the examination period begins.

Table 1: Overview of the reflective diary task for B&B and CEES

COURSE	Business & the Biosciences	Perspectives on Security Since 1945
Student type	Bioscience	Social Science
Student Year	4 th year Honours students (possibly MRes)	3 rd & 4 th Year Honours students
Mahara experience	Little/No	Little /No
Mahara training given	Yes	Yes
International Students included	Yes	Yes
Length of course	2 weeks	2 semesters (22 weeks)
Diary entry submitted	Daily	Weekly
Diary Assessed	Yes (10%)	Yes (25%)
Peer Assessment of diary	No	Yes (formative only)
If students miss session how do they catch up to complete diary entry	From peer group	From reading and peer group

RESEARCH QUESTIONS

The initial reasons for carrying out this study are pragmatic in nature.

- Given the increasing pressure on staff time (and on student time, given their workload both in and out of university) do the benefits of using reflective diaries both formatively and summatively, outweigh the extra effort involved for all parties?
- If so, is Mahara the best medium for the diaries, given that its intended purpose is for personal development planning?

METHODOLOGY

Students from both courses were questioned on their use of the diaries and their use of Mahara, in a questionnaire (B&B n=11; PS45 n=25). The information gathered from the questionnaires was

used as the basis for a set of questions to be put forward to the students in two focus groups, one for students from each course. Four students from B&B and five students from PS45 took part in the focus groups. The focus group interviews were transcribed and analysed for emerging themes.

OUTCOMES

Use of diaries

Very few of the students had previous experience of writing a diary, either for personal, work or academic reasons. One student from B&B and nine students from PS45 had previously kept diaries; six as travel journals, two for university work, and two as personal long term diaries. In general the students from both courses agreed that the diary writing experience in the context of the course was a positive and useful experience. Students used it as a way to measure how they and their classmates were keeping up with the coursework.

“I thought it was really good as well because it keeps you on top... I think it makes it easier to talk in class as well because you know that everyone’s putting an effort in.” (PS45 Student 2)

“I thought it made you address problems when you were doing the actual plan because you were writing what you thought went wrong, you weren’t going to just leave it to other people in your group to sort stuff out. If you were going to write it down you might as well get it sorted out.” (B&B Student 2)

“And it was surprising when you came to read them back ... how much you would have forgotten or missed out if you hadn’t kept a diary all along.” (B&B Student 3)

Students were also able to use the diaries as a way to express themselves, unburdened of the usual conventions of academic writing, voicing their opinions and concerns, which in turn allowed them to be more critical and reflective of the course and course topics.

“I think it was nice that we had the freedom to put it in our own way a little bit rather than really strict guidelines because then we got a more honest piece of writing at the end of the day.” (B&B Student 3)

One student from PS45 had tried to keep a diary but had found it difficult to keep up the momentum, and similarly had found the coursework diary task difficult.

“I would love to be able to keep a diary. I’ve tried! ... I think it would be really good to put down reflections and ideas and memories, you know, of people, events, that it would be great to go back to, like a photo album. ... I’m quite a lot behind to be honest so I’m missing a few from last term, and I’m missing a few from this term and I’m putting it down to a matter of habit.” (PS45 Student 1)

Similarly, one of the B&B students found it difficult to reflect on the course, and took a more descriptive line.

[Tutor] *“So you were saying that your diary had sort of lots of different things in it so there was lots that wasn’t specifically related to the course.”*

“No, it was just everything in the entire day.” (B&B Student 2)

“Random walks down the street.” (B&B Student 4)

“But that’s what your diary was about!” (B&B Student 1)

Academic writing

The diary task for both groups of students was a formative assignment with a summatively assessed component. Despite the fact that the diary formed a part of the assessment for both courses, students dismissed the diaries as an academic exercise. They looked upon it as something that might be easier than writing an essay or report, or something that was a little different, offering respite from the onslaught of report and essay writing for other courses.

“I thought that it might be easier, in comparison to other types of assessment because it’s quite easy to write how you feel about things and what you think of it, rather than, I don’t know, it’s more informal.” (B&B Student 1)

“You wouldn’t look forward to doing an exam but you look forward to doing the diary.” (B&B Student 1)

“I think it was a kind of psychological thing, being called a diary makes people more keen to do it than it being called a report, because you have so many reports.” (B&B Student 1)

“And that’s the thing, because it’s not academic, it doesn’t have to be written academically, it’s much easier to do.” (PS45 Student 2)

Despite the students’ perception that the diaries were not a form of academic, the use of diaries supported the students’ development of a critical approach to learning, almost by stealth. It is interesting to note that students from both groups commented on the ‘non-academic’ nature of the diary task, but the result of using the diaries was a more mature, critical approach to learning.

“Yes, you can see from where we had the lessons and lectures to where we were working on our own, the change.” (B&B Student 4)

“It was good because you would write things that had happened and observations you’d made just on life and tie it in with the class and it was different doing it but I really liked the diary. It was good.” (B&B Student 1)

“The diary has encouraged the students to talk and to express their opinions. I have noticed that there is much more discussion in this class than my others. We have had quite a lot, like, not arguments, but debates.” (PS45 Student 3)

“It makes you study the bits in class that you might not have... I think if I didn’t keep the diary, I wouldn’t have looked at that chapter. But now I’ve actually found some of it quite interesting.” (PS34 Student 2)

“I was more inclined to look over what I’d done.” (B&B Student 1)

“I think the positive point is that it is a great way of revising, especially for me. I started doing it in late January, and I suddenly realised that there were topics and these things that I’ve already forgotten... It’s actually been great revision for me that I would have had to do eventually anyway but this allowed me to do it before and I’d

do it again and do it more effectively because you actually have to write something about it whereas for an exam if I was revising, I'd revise three or four topics... that's a good point." (PS45 Student 1)

Community building

In addition to the academic advantages, one of the most striking themes to come out of the focus group discussion was that of the formation of learning communities as a result of the diaries within both groups of students. Despite the contrasting nature of the two courses, and the different backgrounds of the students, the theme of coming together in an academic community was one that echoed throughout both focus groups.

"I'm from a different department and ... sometimes I can feel a little bit not quite on the same level as people who are studying all around the same period... so it really helps to see other people's perspectives." (PS45 Student 4)

"... we didn't know each other ... I think you got to know people better and it was a kind of talking point as well." (B&B Student 1)

"It definitely makes the class much more interactive and supporting each other. I've never been in a class before where people email each other videos and help each other as much as what we do in this one." (PS45 Student 2)

"I missed the environmental week and I just know nothing about environmental security... so I read [student]'s diary and it just made it so easy... looking at someone else's diary you get another perspective of it so it makes it a lot easier to understand everything." (PS45 Student 2)

Time and again, students volunteer examples of sharing and collaboration within the class, of coming together in both a social and an academic sense. When asked what the most positive aspects of using the diaries were, students talked about being able to interact better, both online and face to face.

"I'd say the positive would be encouraging you to interact with each other, bringing things from other courses and just keep on with your learning every week and not forcing you, but encourage you to look at stuff that you maybe wouldn't have done before." (PS45 Student 2)

"It allows you to express your opinion and it keeps you engaged with the literature." (PS45 Student 3)

Mahara as a medium

Mahara is the official PDP software adopted by the University of Glasgow. It was used in both courses as a diary tool because it was available, although it is not the primary use for the software. There are issues with the use of Mahara as a tool for writing reflective diaries. Firstly, the software is not immediately intuitive. Both tutors and students reported difficulties in using Mahara. For tutors, one of the main problems was with giving feedback. Tutors for both courses observed that feedback to students sometimes disappeared, which may be as a consequence of the privacy settings on Mahara. It is also not possible to edit feedback, once it has been given. When asked, students did not report any problems with receiving feedback. However, they found the software difficult and unpredictable to use.

“It was quite complicated at first. For example the My Views and My Blogs that they are kind of separated” (PS45 Student 3)

“I couldn’t figure out how to get it to either put a blog in and couldn’t get the difference between posting a blog or a post, so for each day sometimes it would be a blog and sometimes it would be a post and I just could never figure out how to get it to be one or the other.” (B&B Student 2)

“I’ve been doing it every single week and I can’t work out properly what boxes to click and all that sort of stuff and putting it in different places and then you can open it up and it all looks wrong and you mess about with it again. There needs to be a bit of a Dummy’s Guide.” (PS45 Student 2)

Despite problems inherent in Mahara, both groups of students were optimistic regarding its use, both groups suggesting that it should be introduced in summative coursework, early on in a student’s university career.

“I think introducing people to it in the way we were would be a really good idea early on in their uni career, have them do it as coursework in quite a short period of time, just so they get used to using it, and once [they’re] fluent with it it’s a lot easier to run with.” (B&B Student 3)

“The way it lets you save things and the diaries, the way you can do the presentation and bring in all the different things, and people look at it online, [that’s] really good. It would have to be that you’d started it in first year and you’d kept at it all the way through. It would be a lot easier.” (PS45 Student 2)

Students also liked the control they had over who could see their blogs.

“You had total control and you could be as private with it as you wanted which was quite nice.” (B&B Student 4)

“I guess if you had someone in your class who was a well known plagiariser, you could stop them.” (PS45 Student 4)

SUMMARY

Students report that the reflective process aids and supports them, and there is evidence that students include their own experience in their diaries, and include their diary experiences in other areas of life. Tutors supporting the diaries also report satisfaction in the process, witnessing the development of student learning during the course. However, there are other, overarching benefits from the diaries, in that students’ observations and opinions are a valuable resource in informing and developing the courses themselves, completing a feedback loop and giving the students a voice beyond that of just participating on the course. The diaries transform students into legitimate participants within the community of learners (Lave & Wenger 2002). This can be closely linked to the ideas of communities of practice (Wenger 1999).

Communities of practice surround us. We all form communities of practice at work, school and in the home, as we all share working and learning in formal and informal situations. Wenger (1999) describes a community of practice existing where a changing social activity occurs. Communities of practice can exist in the real or in the virtual world. Naisbett *et al.* (1999) suggest that technology can be used to enhance communities online, which in turn facilitates the coherence of

the real world communities. The 'High Tech, High Touch' idea goes further to suggest that we, as human beings search for more human contact in a reaction to increasing interactions with technology. Bleed (2001) suggests that campuses should move forward in designing spaces which allow the integration of the technological with the face to face experiences of students. On a traditional campus like Glasgow, this presents its own challenges, and in this case the physical spaces occupied by both groups are not ideal. As with many historical campuses, physical space is geared towards teaching by transmission, and open spaces to house small groups are at a premium. From observation by staff, and reported by the students themselves, both groups are experiencing an 'integrated hybrid model' of learning as proposed by Skill & Young (2002) who suggest that:

"The integrated hybrid course emphasizes learner empowerment and responsibility as a key value in the course design. Students are encouraged to take control of their learning through both team-based and independent learning activities. Opportunities for the creation of meaningful, student-controlled learning communities (both in person and virtual) are an essential component in most hybrid courses."

Garrison & Anderson (2003) also argue for the integration and seamless embedding of technology into modern curricula, arguing that it offers a learning environment where both teachers and students can become active participants in the process where discussions, debates, arguments and the creation and dissemination of knowledge form the community of practice. The success of the online community, however, rests on active participation in activities that "allow(s) participants to feel, when they enter a discussion forum in a course site, that they have entered a lively, active discussion" (Palloff & Pratt 2004). While the diaries may not be a discussion forum in the strictest sense, they allow for discussion to develop and for opinions to be formed and held between groups of students and within classroom based environments.

In both groups of students, we have seen evidence of Naisbett's 'High Tech, High Touch' theory– in the case of the B&B students, writing the diaries became a talking point during the day, bringing the group closer together as they shared the task, and gaining support and confidence as they shared the experience. In the case of the PS45 students, in addition to support, sharing the diaries encouraged more lively discussion in class as well as an increased appreciation and broader knowledge of the topics. The paradox of this situation is that when faced with the diaries, students in both groups expressed the opinion that they did not consider the diary writing an "academic" activity. However, on reading the diaries and observing interactions in class, the diaries offer a medium to develop an intellectual argument rarely seen when the assessment is an essay or a report. By removing the restrictions which confine students into writing *what they think staff want to read* the diaries enable them to develop academically in terms of the intended learning outcomes of the course and depth of learning/understanding.

The use of diaries has not reduced the workload of staff and students. Yet this should not necessarily be seen as problematic. For the students this is to their advantage, as the time spent on the diaries is 'effective study', tackled at the top end of Bloom's Taxonomy (1956) of analysis, synthesis and evaluation. It also allows staff to be more aware of what their students are doing, and as time passes, becomes less burdensome as students become more familiar with the task.

In terms of whether Mahara is the best medium for the task, there are still some facilitation issues, but in principal Mahara works. From a practical point of view, the diaries could not have been shared as effectively in anything other than an online medium. From a deep learning point of view it allows for academic and community development. Reflective writing activities also have a clear advantage in terms of enhancing the original role of Mahara as a PDP tool because it

amalgamates the learning experience with the demands of personal development. It also enriches the personal development aspect – it is no longer about simply building a ‘nice resume’, but rather it is about encouraging the student to think and act more holistically about their personal development.

REFERENCES

- Bleed, R. B. (2001) 'A hybrid campus for the new millennium', *Educause Review*, January/February, pp.16-24.
- Bloom, B. S. (1956) *Taxonomy of educational objectives, the classification of educational goals – Handbook I: Cognitive Domain*. New York: McKay.
- Boud, D. (2001) 'Using journal writing to enhance reflective practice', *New Directions for Adult & Continuing Education*, 90 (summer) pp.9-17.
- Dummer, T. J. B., Cook, I. G., Parker, S. L., Barrett, G. A. & Hull, A. P. (2008) 'Promoting and assessing 'Deep Learning' in geography fieldwork: an evaluation of reflective field diaries', *Journal of Geography in Higher Education*, 32(3), pp.459-479.
- Garrison, D. R. & Anderson, T. (2003) *E-learning in the 21st century: a framework for research and practice*. Abingdon & New York: Routledge.
- Glasgow (2006) *The Learning & Teaching Strategy*. Available at: http://www.gla.ac.uk/media/media_89688_en.doc [Accessed 12 April 2010]
- Hubbs, D. L. & Brand, C. F. (2005) 'The paper mirror: understanding reflective journaling', *Journal of Experiential Education*, 28(1), pp.60-71.
- Jeffcoate, J. (2010) 'How postgraduate students engage with online course material and activities', *ITALICS* 9(1), pp.42-51.
- Kruse, K. (2004) "The Benefits and Drawbacks of e-learning", Available at: http://www.e-learningguru.com/articles/art1_3.htm, [accessed 12 April 2010]
- Lave, J. & Wenger, E. (2002). 'Legitimate peripheral participation in communities of practice' from: Lea, M. R. & Nicol, K. (eds) *Distributed Learning Social & Cultural Approaches to Practice*. London and New York: Routledge Falmer.
- Moon, J. (2003) 'Learning Journals & Logs, Reflective Diaries', Centre for Teaching & Learning, Good Practice in Teaching & Learning, University College Dublin.
- Naisbett, J., Naisbett, N. & Philips, D. (1999) *High Tech High Touch: Technology and our accelerated search for meaning*. Nicholas Brealey Limited.
- Nardi, D. A. & Kremer, M. A. (2003) 'Learning outcomes and self-assessments of baccalaureate students in an Introduction to Nursing course'. *The Internet Journal of Advanced Nursing Practice*, 5(2).
- Palloff, R. M. & Pratt, K. (1999) *Building Learning Communities in Cyberspace: Effective Strategies for the Online Classroom*. Jossey-Bass Publishers, San Francisco.
- Skill, T. D. & Young, B. A. (2002) 'Embracing the Hybrid Model: Working at the Intersectionss of Virtual and Physical Learning Spaces', *New Directions for Teaching & Learning*, 92, Winter pp. 23-32.
- Wenger, E. (1999) *Communities of Practice: Learning, Meaning & Identity*. Cambridge University Press.