Enhancing Professional Development and Supporting Students on Work-Placement by Peer-Peer Learning Using an Online Reflective Blog Assessment

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Enhancing professional development and supporting students on work-placement by peer-peer learning using an online reflective blog assessment

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Abstract

Work placement aims to enhance professional development and allow students to apply knowledge and skills from their programme of study. Students can struggle with both conceptualising work in terms of academic knowledge and the reverse process of transforming tacit knowledge from the workplace into a form they can verbalise. Additionally, they are isolated from their peer support group. To address these issues, we have implemented a blog assessment in Dublin Institute of Technology to actively encourage reflection and also foster peer-to-peer learning through providing an opportunity to share experiences of the diverse range of activities during work placement. A pilot was implemented for Pharmacy Technician students using the institute’s virtual learning environment. As a result of this pilot and subsequent modifications made in the following years, we identified key requirements and resources to prepare, support and engage students in all aspects of the work placement assessment. Examples that we discuss include an assessment rubric, instructional videos and reflective writing resources, a pre-placement reflective writing workshop, feedback mechanisms, and assessment strategies that actively promoted student interaction with their peers. Evaluation results including the main benefits, recommendations, limitations and suggested improvements are also included. It has also been demonstrated that this assessment is transferable to a different programme of study as it was extended to the placement module for BSc (Nutraceuticals).

Further work will include additional measures to guide students to focus on critical points during reflection, and will include an increased emphasis on graduate attributes.
Keywords
community of learning, blog assessment, reflective writing, feedback, peer learning, work placement

Introduction
Work placement is a period of planned work-based learning or experience, where the learning outcomes are part of a programme of study. To be considered eligible for academic credit it should have defined learning outcomes and should be associated with a formal assessment (European Commission, 2009). Common to best practice recommendations is the notion that students should actively participate in reflection, which is key to turning experiences into learning (Boud, Keogh, & Walker, 1985). This has been commonplace, for example, in teacher education, with the concept of the reflective practitioner (Schön, 1983), and has also gained popularity in other professions, for example nursing and other health related areas (Owen & Stupans, 2009; Williams, Wessel, Gemus, & Foster-Sargeant, 2002). Smith, Clegg, Lawrence, and Todd (2007) argue that the pedagogical benefits of work-based experiences depend largely on the extent to which students reflect on them and the extent to which they take understandings derived from an academic context and relate these to the workplace. They discuss the difficulties students face when conceptualising work in terms of academic knowledge. The reverse process of transforming experiential/tacit knowledge from the workplace into a form they can verbalise is also challenging for students. Meanwhile Sykes and Dean (2013) maintain that reflection as a subsidiary practice is ontologically inseparable from the integrated practices necessary for students to achieve workplace competence, and so it is impossible to separate it from the integrated practices themselves. It seems therefore that good quality reflection can be the key to unveiling high quality professional competencies
based on explicit knowledge from an academic context. An example of supports to improve the quality of student reflection in work placement journals has been reported by Hume (2009) who has described the use of Shulman’s framework for good science teachers as a focal point for reflection. She found that in addition to a framework, additional pre-placement workshops and activities, along with time to practice reflective writing, use of examples, and clear assessment criteria were important to help with reflection while on placement.

Other teaching innovations in this area include online technologies (e.g. blogs) which provide a virtual space for reflection which can be accessed by peers and tutors alike (Chretien, Goldman, & Faselis, 2008). A recent review of the supports for student reflection in technology-enhanced learning identified that pre-defined guidance and human-intervention guidance can both act as a positive support for high-quality reflection (Korl, Pedaste, Leijen, & Mäeots, 2014). The review advises that some kind of mechanism should be designed to guide learners in focusing on critical points while engaging in reflective practice.

In addition to the use of online environments to facilitate reflection during work-placement, there are reports of their use to foster online learning communities, for example in blog-based teaching portfolios (Yang, 2009). Tutors may also participate in a learning-community, simply as a facilitator (or administrator), or interactively providing guidance and feedback. Tang and Lam (2014) have discussed how to build effective online learning communities using student blogs, and highlight a high level of student participation in the blog, and the importance of emphasising high quality interactions between community members (via commenting on peer blogs) as being the two most significant factors for meaningful and sustainable learning.
Rationale and context for the study

The rationale for this study was to integrate best practice in supporting online reflection in an assessment that would additionally build an effective learning community, and also actively encourage students to focus on making cognitive links between their understandings from an academic context to their work placement experiences. Therefore, the teaching approach would draw on various learning theories; experiential and behavioural learning while developing competencies and hands-on skills in the workplace, social constructivism through sharing and discussing experiences through the blog; and cognitive learning through focussing attention on linking theory to practice.

This paper describes a study over the last four years of implementing a reflective work placement blog assessment for two programmes in the School of Food Science and Environmental Health, Dublin Institute of Technology (DIT). The specific objectives of the blog assessment are outlined as follows:

- To utilise a Virtual Learning Environment (VLE) to provide an effective online learning space to foster a community of learning for work placement students.
- To engage students in collaborative learning, encouraging deeper analysis and critical thinking (McNamara & Burton, 2009).
- To enhance career development through sharing work placement activities.
- To provide student friendly peer and tutor support while isolated from college on placement, thus supporting student retention.
- To provide timely tutor feedback and peer review on assessment.
- To enhance professional development through reflection on practice (Carlile & Jordan, 2007) and written communication.
- To broaden the curriculum through gaining, sharing and discussing external perspectives on core knowledge gained in theoretical modules.
This paper will discuss the phases of implementation of this assessment, explaining the lessons learned from the various phases of the study, and provide practitioners with resources to support reflection and guidelines to successfully implement a similar work placement assessment.

**Implementation of the assessment: Phase one: pilot study**

The first phase was a pilot study for the six-month work placement in either a community or hospital Pharmacy for the Higher Certificate in Pharmacy Technician Studies programme DIT. One tutor was assigned to all students (n=32). Assessment of the placement included a graded oral presentation delivered when the students return from placement, a graded report, and a competency logbook (pass/fail). Traditionally, the report had taken the format of a short descriptive and reflective commentary of the role of the Pharmacy Technician, and was submitted for marking after completion of the work placement. It was summative in nature, with no opportunity to provide feedback to students before they graduated. It is this report that has been replaced with the reflective blog assessment.

The VLE Blackboard Learning System was used to host the blogs, through the blog option in the ‘Discussion’ tab. Students wrote individual blogs, but were assigned to blogging groups of three or four. A screenshot example of one of these blogs (anonymous), showing the VLE software interface for a student assessment is shown in Figure 1.
These groups did not necessarily have a mixture of hospital and community placements.

Students were instructed to post an approximately 400 word blog for four consecutive weeks (on prescribed dates), describing the tasks and experiences they had on placement, how these related to college modules and reflecting on their performance. They were also instructed to comment and respond each week, at a minimum to the blogs of the peers in their blogging group. However, all students in the class had access to read (and comment on) the complete set of blogs from the entire class. The students were familiar with the VLE, however they had not previously used the ‘Discussion’ tool. A short tutorial was provided on how to use the software. An anonymous example of the use of the VLE software for peer comments is shown in Figure 2.
Feedback mechanisms

Formative tutor feedback was provided to each student after the first blog and comment postings using the blog commenting feature. This post was not marked as part of the formal assessment. All students had access to the tutor feedback given to all of their peers. Feedback was presented in a positive and constructive manner, and focussed on encouraging concise description, reflection, and relating experiences to theory. Peer feedback was obtained through reading the blog posts of other students and through their interactive comments to one another.

Assessment

Following feedback, the remaining three blogs were graded together with the students’ interactions through their comments.
Evaluation of pilot study including limitations

Pedagogical evaluation followed best ethical practices and conformed to the Institute’s Research Ethics Guidelines (DIT Research Ethics Committee approval number: 65/10). Evaluation took the form of an anonymous survey with closed questions using a four point Likert-type rating scale administered using hand-held polling devices (clickers) and TurningPoint software. Surveys were completed by the students (n=32) in the pilot and student consent was obtained. The evaluation was bound by the normal limitations of self-reported data, including but not restricted to subjectivity based on participants’ feelings at the time of the survey (Cohen, Manion, & Morrison, 2000). The study was limited to the relatively small student cohort and therefore the data is useful only for the purpose of gauging general trends in student opinions, summarised below (Dunne, 2011).

Findings

Initially many students were anxious about what their peers and lecturer would think about their blogs, however, by the end almost all students reported that they felt comfortable. Most students posted their blogs by the date prescribed. It has been reported that students may delay making blog postings until the end of placement if phased deadlines are not given (Chretien et al., 2008). This limits the potential for peer interaction and benefitting from meaningful engagement in a learning-community, and has been confirmed more recently as detrimental to student learning (Tang & Lam, 2014). In addition, posting at the end would mean that feedback could not be given early when it would be most beneficial for the placement as a whole.

Students generally found the feedback provided helped them to write better blogs. Yang (2009) has reported that comments by instructors designed to challenge students’ thinking by
posting questions and asking for further reflection resulted in deeper and more critical thinking by students. Most students found comments on their own blog were useful, while slightly fewer considered that lecturer feedback to other students was valuable to them. Interestingly, the most useful feedback from the students’ perspective was from reading the peer blog postings. This is consistent with previous studies, which describe effective assessment as allowing students to become confident in making judgements about their own work through self and peer assessment (Nicol, 2010), and report on the value of reading the submissions of their peers (Dunne & Ryan, 2012).

Only two-thirds of students believed that their performance improved through their self-reflection (Dunne, 2011). As was the case in the report by Hume (2009), we felt it was possible that insufficient support and explanation of the process and value of reflective writing was provided from the outset in our case and this would need to be addressed in future iterations.

In relation to a learning community, most trainee Pharmacy Technicians believed they learned a lot from sharing and discussing placement experiences, commonly reading beyond their own blogging group. A rudimentary analysis of their blog comments showed that they related more to peer support and encouragement of one another, or comments on the tasks and how they compared to the approach in their own work placement establishment, as opposed to requesting further information or depth based on reflection. In some cases it seemed as though trivial comments were being posted in order to meet the criteria of the assessment. Chretien et al. (2008) recognised a similar problem, and commented that further work was required to identify ways to make commenting more meaningful and educational.
Overall, we felt that the blog was successful in supporting the development of a learning-community and the majority of students agreed the blog format should be retained. However, we identified areas that needed improvement through the pilot study:

1. At times we noted a poor standard of language usage. Perhaps owing to the online nature of the blog, some students reverted into an overly casual tone, which on occasion could have been described as the type of ‘text-speak’ and colloquial slang common to social networking that was unsuitable for an academic assignment.

2. There was over-reliance on description of the placement experience with difficulty developing any significant level of critical reflection.

3. There was a lack of real empathy or meaningful reflection in students’ comments, many were deemed quite trivial in nature.

4. Often there was little evidence of relating theory to work practice.

5. Some students posted their blog after the deadline, which disrupted the commenting/feedback cycle, which was unfair to other members of the blog group.

Encouraged by the success of the blog in fostering a learning community we proceeded to make the necessary modifications to the model to specifically address the weaknesses identified. We also considered the wider applicability of the assessment for another programme, specifically the Level 8 BSc (Hons) in Nutraceuticals for Nutrition and Health DIT.

**Phase two: modification of model to address problem areas identified in pilot study**

Based on our observations from the pilot study, and further literature review (Owen & Stupans, 2009; Stupans, March, & Owen, 2013) we felt that our students required better
transparency in the criteria being used to grade their blog assessment. We considered that a detailed assessment rubric would aid in overcoming some of the weaknesses identified, particularly the importance of good quality written language and also to emphasise the value we wished to place on high quality peer interactions through commenting on peer blogs, and more emphasis placed on relating placement experiences to theory taught in college. We developed a detailed assessment rubric (Table 1) informed by best practice and literature (Panaderoa & Jonsson, 2013). It included a breakdown of marks awarded for all elements of assessment, aiming to support tutors in standardisation of work-placement assessment and clarify to students the requirements of the blog assessment, including how to interact with peers. The weightings and categories of the rubric were designed to discourage students from focussing on description of tasks, and instead reflect on their learning in the context of college theory, and engage meaningfully with peers though the blog comments. It was also included as an interactive rubric built into the VLE module, which made correcting the blog assessments more efficient.

A similarly structured rubric with the same weightings was also used for the BSc in Nutraceuticals programme, however the wording was adapted to include higher order competencies more suitable for the higher level programme. For example, in the ‘strong’ level in the ‘content’ category, it was adapted to ‘In-depth synthesis and well described appropriate aspects of work experiences. Makes clear connections between what is learned from work experiences to college theory.’
We also felt that many students would benefit from a pre-placement workshop to assist them with the concept of reflective writing. To ascertain what supports our students believed they would need to help them with the blog assessment we held a development focus group with the incoming class group. The most desirable support from the students’ perspective was to be provided with examples of good quality blogs. This resonates with published suggestions.
on scaffolding reflective activities which advise allowing students to read critiqued reflective accounts to assist them to improve their own reflective writing (Owen & Stupans, 2009). They also requested audio-visual aids to show them how to use the blog software.

In developing the pre-placement workshop resources we incorporated the students’ requests and our own considerations based on critical self-reflection on the pilot outcomes and examining reflective writing models in educational literature (Boud et al., 1985; Hampton, 2010; Higher Education Academy, 2006; Rolfe, Freshwater, & Jasper, 2001). We also consulted with the DIT Learning, Teaching and Technology Centre (LTTC) staff through the DIT Teaching Fellowship scheme.

**Workshop resources**

We developed workshop resources for both students and tutors. These are available online (Dunne & Ryan, 2014) and contain:

2. Student guidelines around ethics of blogging.
3. A fictional blog and comment in the ‘strong’ category based on the following work-placement experience:
   
   ‘A customer asks for Solpadine (codeine based) tablets, and becomes irate when you proceed to ask questions relating to the sale of codeine-containing over-the-counter products’.

4. Activities to demonstrate how to apply the assessment rubric to the blog and comment examples, through a series of questions.
5. Examples of poorer quality blogs based on the same scenario, to which the same questions were applied in the student activities.

6. An activity focussing on grammar and style.

7. Examples of suitable vocabulary and a structure for reflective writing, based on the University of Portsmouth simple guide to reflective writing (Hampton, 2010).

8. Instructional video screencasts with voiceover developed using Camtasia Studio 8.0 software) addressing the topics:
   – How to post a blog on the VLE.
   – How to post a comment on peer blogs on the VLE.

9. An activity which allowed students to reflect on their learning from the workshop, and write a brief reflective blog using the software.

10. An activity which allowed students to post a comment on a peer blog.

Implementation of the workshop

A mirror module of the work placement VLE module which would host their real work placement blogs was set up for each class group, and the real work placement modules were hidden. A separate workshop for each class was held in a computer room over a two-hour period in advance of their work placement period (n=30 approximately for each class group). These workshops used the same format and resources. The first hour was spent on the reflective writing activities using the handbooks alone (based on 1-6 above). The second hour allowed time for practising reflective blogging on the computers using the mirror module (based on 7-9 above). At the end of the workshop, the mirror module was taken down, and the real module (with empty blogs) was opened once more, ready for use during their placement.
Evaluation of Phase two

Methods. Pedagogical evaluation conformed to the Institute’s Research Ethics Guidelines (DIT Research Ethics Committee approval number: 65/10). Consent to anonymously analyse the content of student reflective writings was obtained. Paper-based surveys were designed and administered before and after the workshop. These consisted of a mixture of Likert-type and open-ended questions. In addition, the same electronic polling Likert-type survey was used as for the pilot after the students returned from work placement. For triangulation and further in-depth study, points of particular interest were further discussed and teased out in post-work placement focus groups facilitated by an independent tutor (n=8). These were run separately for each class group and comprised of one representative student from each blog group while also ensuring gender balance, and standard and mature age group where possible. The comments of the participants were recorded and transcripts of the main themes arising from the focus groups were compiled. This phase of the study was bound by the same limitations as the pilot study.

Findings

One of the main aims of the workshop was to help students with reflective thinking and writing. In each class group many students felt they were able to write reflectively beforehand (Figure 3). Those who could not, were confident after completing the workshop. This is consistent with Owen and Stupans (2009) and Stupans et al. (2013) who advise on allowing students to analyse critiqued reflections as part of their preparation for work-placement reflective writing. We believe the short reflective writing activity (workshop resource no.9) at the end of the workshop helped to embed their learning from the workshop, and was also a beneficial experience in writing a short reflective blog ahead of going out on work-placement.
Figure 3: Responses for ‘I know how to write reflectively’ both before and after workshop. Higher Certificate in Pharmacy Technician Studies (n=23) and BSc. Nutraceuticals (n=23).

The workshop significantly increased their confidence in their ability to write a reflective blog as shown in Figure 4. For the Higher Cert in Pharmacy Technician Studies, a higher number of students initially were unsure of whether they were confident or not in writing a blog. In this case, it is likely that they were unfamiliar with the concept of blogs.
Figure 4: Responses for ‘I feel confident that I can write a reflective blog’ both before and after workshop Higher Certificate in Pharmacy Technician Studies (n=23) and BSc. Nutraceuticals (n=23).

From the students’ perspective the assessment rubric was a welcome resource. Initially they did not appreciate its value; however Figure 5 clearly indicates that the students did see the benefits of it once they had been shown how to use it, during the workshop. Aligned with Sykes and Dean (2013), the activity involved the use of carefully structured probing questions based on the rubric and aimed to support richer articulation of student experiences and improved cognitive links to theory in their own reflective writings. It has been demonstrated that providing students with assessment rubrics and instructional guides significantly improves the students’ ability to reflect on their learning while on Pharmacy work placements because it clarifies what is expected of them (Stupans et al., 2013). Additionally, providing students with such supports has been shown to increase their concentration on reflection-for-action (considering future action) during which critical reflection moves beyond reflection-in-action (during experiences) and reflection-on-action (reflection on past action) (Owen & Stupans, 2009). Students were given three examples of
blogs based on the same scenario. The first was strong across all categories of the rubric. The standard of writing in the second was very good, and this gave the students the initial impression that it was a good quality blog. However, by using the rubric they were able to identify that it was overly descriptive and not very reflective. The third blog was written in an exceptionally poor standard of language, and this gave the students the initial impression that it was a very poor blog. However, using the rubric they were able to pick out some stronger aspects of the blog.

![Bar chart showing responses for 'I understand the purpose of the rubric'.](https://example.com/bar_chart.png)

**Figure 5:** Responses for ‘I understand the purpose of the rubric’. Higher Certificate in Pharmacy Technician Studies (n=23) and BSc. Nutraceuticals (n=23).

Our findings show that the all students from both class groups found the blog examples useful and appropriate. This is consistent with reports which discuss the advantages of providing students with guidance with selecting relevant materials so as not to miss relevant aspects which they would not otherwise think appropriate (Lai & Calandra, 2010). Without such supports learners struggle to know what to write, resulting in a descriptive outcome (Roberts, 2009).
Both class groups were given exactly the same examples (based on a Pharmacy scenario) and the findings show that each group found them equally appropriate. This demonstrates at least for these two programmes, the resources were transferable and could be used more widely in other work-placement modules. In fact, we found that there can be an advantage to not having a scenario directly related to the subject area of the work-placement: in some cases early instalments of Pharmacy Technicians’ blogs suffered some loss of creativity compared to the pilot study as many students attempted to mimic the example they were provided with in the workshop. We believe this relates to previous reports where structured guidance did not have the desired effect because learners may simply comply with directions rather than internalise guidance (Kim & Hannafin, 2011) and adopt ‘copy and paste’ strategies in order to come up with ‘correct’ answers to the prompts (European Commission, 2009; Furberg, 2009). However this was not a problem for the Nutraceutical students because the scenario was unrelated to their placements. While Pharmacy Technician students’ creativity improved as they progressed and were inspired from reading peer blogs (Figure 6), we believe it would be advantageous in future to provide several diverse examples of blogs as a resource ahead of work placement. Furthermore, the focus group brought to light a worrying trend that students felt it was important to blog only on critical incidents or issues, leading to an excessively negative tone to the blogs. Additionally, from the focus group there is some anecdotal evidence to suggest that occasionally students blogged on plausible possible issues which did not actually occur in order to have a ‘critical incident’ upon which to write a blog. To discourage the practice of inventing issues, and instead promote more constructive creativity, we intend to develop reflective writing supports which also reflect on more positive, and perhaps more routine, experiences.
Figure 6: Responses for ‘I found reading other students’ blogs helped me write a better blog’ Higher Certificate in Pharmacy Technician Studies (n=23) and BSc. Nutraceuticals (n=23).

The pilot study was shown to be transferable to other programmes and students from both groups continued to learn from the experiences their peers shared through the blog (Figure 7). This was particularly beneficial when work placements were highly diverse as was the case for the Nutraceuticals class who were placed in pharmaceutical, food production, research and regulatory placements. This demonstrates the use of blogs for work-placement assessment allows productive peer-to-peer learning, so that students can share experiences, help each other to deepen their understandings and facilitate the learning process (Olofsson, Lindberg, & Hauge, 2011). Also, by providing students with a lens into diverse workplaces they are given second-hand experiences which benefit career management through opening up possibilities of career paths which they would not have otherwise encountered or considered.
Conclusions and Recommendations

Overall, the introduction of the blog has been very successful in fostering peer-to-peer learning through allowing students to share diverse experiences while on placement. The interactions through the blog and comments are also a beneficial support for students isolated on placement. The assessment rubric design encouraged students to make greater efforts to demonstrate how their college learning had influenced their placement. Broadly speaking, we are satisfied that the reflective writing workshop was successful in preparing students for their work placement blog assessments. Most notably, the quality and empathy shown in the comments has greatly improved from the first year of implementation. Compared to previous years, the quality of writing and the focus on reflection in the blogs has certainly improved, although further work on coding reflective content would be required to quantify this. We believe however that additional opportunities to practise reflective writing, along with further activities to provide a focal point for reflection would be useful. This could include focusing on graduate attributes and transferable skills, for example. We are now also planning to pilot the blogs over an eight week period with fortnightly blog instalments instead of weekly, to

![Figure 7: Responses for ‘I learned from the experiences other students shared through the blogs’ Higher Certificate in Pharmacy Technician Studies (n=23) and BSc. Nutraceuticals (n=23).](image-url)
allow more time for reflection and for the blog-comment-feedback cycle. We believe an assessment of this nature resonates with several of the recommendations of the recent EU high-level group on Modernisation of Higher Level Education in Europe (European Commission, 2013), particularly in terms of assessment against clear and agreed learning outcomes, and the exploitation of opportunities presented by the digital era to improve the quality of teaching and learning.

Based on our findings from student evaluations and our personal reflections, we would like to make the following suggestions to any practitioners interested in implementing a similar approach.

1. Where reflective writing is used as part of a high stakes assessment of work-placement, the students could be introduced to reflective writing earlier in their programme of study, for example in a low stakes assessment in an unrelated module.

2. It is useful for students to be given an example of a blog on a critical incident or issue. However, to avoid an excessively negative tone throughout the blogs and to encourage learners to reflect on all aspects of their placement experience, students could also be provided with examples of reflection on positive, and more routine, work placement incidents and experiences.

3. Students could be provided with several examples of diverse, high quality blogs to avoid a single blog becoming a blueprint or template for blogging, thus reducing creativity in style and originality of topics.

4. Consider ensuring that there is diversity of work placements in each blog group, to ensure a range of experiences are shared within each group.
5. We recognise that the rubric is a very useful tool to provide clarity and transparency of assessment. It is important that due consideration is given to the weightings of the various criteria, as this influences the relative importance that students place on each. We recommend that writing style is included in the rubric, to avoid students reverting to an informal or overly casual tone of writing in the online environment.

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