Academic staff take the lead: Experimenting with social software at Deakin University

Gayani Samarawickrema  
Institute of Learning and Teaching  
Deakin University

Elizabeth Stacey  
Faculty of Arts and Education  
Deakin University

Colin Warren  
Faculty of Business and Law  
Deakin University

This paper reports on a two staged staff development exercise to help new academic staff to integrate Web 2.0 technologies including web-based communication and some digital technologies into their curricula. It involved professional development for the teaching staff in the first stage followed by these teachers providing professional development for the course participants. The teachers engaged in a blended community of inquiry with face-to-face sessions and online work while the professional development for the course participants included technical support, training and a peer group environment with formal allocation of time for the course, finally leading to an institutionally recognised qualification. Evaluations conducted through focus group interviews revealed that collegial networks and time were important for effective professional development. The paper reflects on the successes and limitations of the model and its potential for further development. It also highlights the importance of providing professional development in a safe environment for academics to adopt technologies for teaching and learning.

Keywords: professional development, social software, online community, Web 2.0 technologies

Introduction

A future that uses educational technology for teaching and learning always involves an element of the unknown for academic staff who are continually encouraged to enter that new landscape and attempt innovation. Leading students into this unknown can add even more stress to the experience so models of professional development that provide a less exposed environment for new teachers to gain skills and confidence, can protect them from dangers inherent in public exposure of any technological mistakes. This paper describes and reflects on one such experience.

The new Web 2.0 technologies and social software systems including wikis, blogs, social bookmarking and social networking services are providing new possibilities and are only beginning to be explored for their learning and teaching value (Choy & Ng, 2007; Elgort, Smith & Toland, 2008). Many new students entering university today are Generation Y teenage millennials possessing wide ranging technological competencies (Kennedy, Judd et al 2008) who view such technology as part of their lives and are willing and motivated to learn through its use. While staff at Deakin University are now becoming competent users of the University’s learning management system, Deakin Studies Online (DSO, a learning management system that includes Blackboard Vista, Turnitin, Lectopia and Elluminate Live!), evolutions in the technology have moved beyond restrictive ‘read-write’ only learning management systems to Web 2.0 environments which enable all users to read, write, edit and publish information. Recently, Deakin University adopted Web 2.0 technologies as part of its corporate suite of technologies for learning, making it conveniently possible to use these for teaching. However, Web 2.0 technologies place control in the hands of all users in contrast to the teacher-control in the familiar learning management system (Dron, 2007). This has required teachers to not just learn to use the new technologies but also to rethink and realign their teaching to suit the pedagogical possibilities offered in learner-controlled Web 2.0
environments. There is also an expectation that teachers embrace new synchronous digital technologies such as Elluminate Live! to enhance their course delivery as well as ‘create knowledge’ through artifacts such as podcasts (Lee, McLoughlin & Chan, 2008) and video files.

In order to address these expectations and technology developments, structured support and formal professional development were clear requirements. Professional development approaches that are most commonly used at Deakin University are skills based workshops on how to use the technology, regular forums and seminars, an annual teaching and learning conference hosted by the Institute of Teaching and Learning, show and tell sessions by successful technology adopters and virtual workshops on social software use (Samarawickrema, Benson & Brack, 2008). These provide Deakin University teachers with the stimulation and motivation to teach innovatively but unfortunately most of these approaches provide few opportunities to discuss, share concerns, experiment, reflect and transfer theory into practice. This project therefore focused on professional development that was possible over an extended period of time. The Graduate Certificate in Higher Education (GCHE), now a compulsory accredited course for all new teaching staff at Deakin University, includes study of the use of technology for teaching and learning and this was extended to include Web 2.0 technologies.

Wilson and Stacey (2004) in reviewing professional development programs to prepare staff for online teaching note the value of accredited courses that are embedded into the organisation. They also discussed the importance of situating learning activities in authentic contexts and of providing opportunities for staff to share experiences, ideas and reflections with others particularly as they engage as learners. They suggest combining online and face-to-face learning opportunities so teaching staff experience learning online from the learner’s perspective. Offering such professional development experiences to the GCHE participants learning about Web 2.0 technologies was in turn a professional development experience for the GCHE teaching team who had to learn the use and the pedagogical possibilities of the technologies while teaching, the very experience from which they were protecting the GCHE participants.

Camblin and Steger (2000) emphasise the value of professional development that builds collegial networks as well as support institutional goals, while Judge and O’Bannon (2008) argue that integration and use of technology by teachers is unlikely to effectively happen if the approach is individualised and suggest that grants to assist in implementation should be for courses where teachers could learn in a community, share ideas and strategies and learn from each other. Recognising these values, the GCHE teaching team developed a university funded strategic development project to explore both use of the Web 2.0 technologies and a community of practice model of professional development for academic staff who were GCHE participants. Their main objectives were to:

- identify new technologies that can be used to teach in the GCHE with a view to showcasing their use for application by participants in their own teaching;
- evaluate those technologies in terms of ease of use, pedagogical applications, teaching effectiveness and student accessibility; and
- explore whether some student clienteles have better opportunity than others to make effective use of these technologies.

Literature review

As technology supported learning is adopted by contemporary higher education institutions, the early warning of Epper and Bates (2001) that the most daunting challenge would be to provide complementary staff development through meaningful learning opportunities that take advantage of these technologies, remains true. Barriers to adopting technologies for teaching such as workloads and time constraints (Riverin & Stacey, 2008) lack of confidence in using technology and lack of access to ICT resources, as well as a need for professional development and awareness of the pedagogical possibilities of digital technologies have been described in the literature (Loveless, 2006; Nicholas, 2008). However much of the contemporary literature portrays current learning technologies as rich and dynamic, facilitating online communities, communication, collaboration and participation (Bates & Poole, 2003; Dron, 2007; Littlejohn & Pegler, 2007), environments that go beyond using the online learning technologies simply for the delivery of content to students and suggest that teachers should integrate online technologies into their courses more innovatively.

As the GCHE participants were a group with a common goal and a common workplace, they had the potential for professional development through a community of practice (Chalmers & Keown, 2006). The use of communities of practice as “a locus of engagement in action, interpersonal relations, shared knowledge, and negotiation of enterprises” (Wenger, 1999, p 85) or as ‘groups of people who share a
concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise … by interacting on an ongoing basis’ (Wenger, McDermott & Snyder, 2002, p.4) is not new in relation to social engagement online and has its basis in social constructivism (Vygotsky, 1978). Garrison and Anderson (2003) have extended these ideas to educational settings where communities of teachers and students interact to further their learning, and these communities of learning have been further investigated as complementary with communities of practice by Stacey, Smith and Barty (2004). McConnell (2006) too remarks on the possibility of such complementary communities and emphasises the importance of the collaborative nature of networked collaborative e-learning for “open, adult learning and professional development where students are able to work in small distributed e-learning groups” (p. 12) which he suggests work well if outcomes are negotiated and not pre-defined. Lewis and Allen (2005) predict that virtual learning communities are a yet to be fully exploited as a means of continuous professional development and in categorising such virtual learning communities, they describe a form of managed virtual learning communities that are developed within organisations or institutions with their support and with a facilitator who is responsible for reporting outcomes of the community’s use for training or professional development. They describe a developmental cycle of such communities similarly to the forming and progression of groups and suggest that for a successful community to emerge, members need to be committed and to manage their time while participating actively online. Commenting further on scholarly communities, Haythornthwaite (2008) argues that successfully maintained learning communities share information, resources, methods and practices through conversation and reflection with colleagues and as part of a co-learning community of scholars.

Web 2.0’s collaborative and (co)creative possibilities offer opportunities for sharing and group learning which draw on the research and writing about such online communities and require that teachers learn to develop pedagogy that optimises the advantages of social software to suit diverse student groups. Teachers need to rethink learning activities so that learners benefit from virtual knowledge building which reflects ‘the wisdom of crowds’ (Surowiecki, 2004). Moving campus-based study groups to virtual spaces and ensuring that they operate effectively is a challenging new skill for teachers. It is unrealistic to expect teachers to do this in meaningful and innovative ways unless they are allowed the time for professional development that builds real capacities through discussion and shared reflection. The focus of this project was to provide a safe environment for quality, effective professional development to occur, a place where skills are developed through experimentation, discussion, sharing and reflection on experience within the online community before adopting those technologies in their teaching.

**Project procedure and data gathering methods**

The project had two stages. Stage 1 was entirely focused on professional development for the GCHE teachers while Stage 2 involved these teachers providing professional development for the GCHE participants. Specifically, the following technologies were explored in this project:

1. **Drupal SMF!**: A customisable open source content management system that allows users to organise, manage and publish content and notifies users when new content is uploaded. It facilitates social networking through threaded discussions, blogging and through sharing of images and personal profiles. Also useful because it can be set up outside the DSO environment providing the advantage of having non-Deakin participants. (See Figure 1).

2. **MediaWiki**: A wiki using the software MediaWiki, the software that runs Wikipedia (see Figure 2). Wikis allow the participants to add, remove, and edit the content providing ease of interaction and operation making it an effective tool for collaborative authoring. This concept of ‘open editing’ has profound and subtle effects on promoting democratic use of the web and content composition by non-technical users.

3. **Elluminate Live (eLive)**: This is Deakin University’s synchronous communications tool which facilitates communication and collaboration between staff and students by allowing participants to talk over the Internet, chat online, share video, whiteboards, multimedia files and applications—all in one space. Teachers who moderate eLive sessions can record them and make it available via DSO.

**Stage 1**

A DSO site was initially set up for the project and the GCHE teachers worked as a community of inquiry in a blended learning setting (Garrison & Vaughan, 2008) integrating the face-to-face, online and hands-on sessions, a successful approach for bonding a community of online colleagues (Riverin & Stacey, 2008). The majority of the team had been strong users of the Blackboard component of DSO and were aware of the principles of good integration of technology into courses including authentic and specific
purposes for technology use, reward for effort of use through assessment, and the need for clearly structured instructions that scaffolded use. A Drupal and a Wiki were also established for the project and linked to Blackboard. This stage focused on the professional development for the GCHE teaching team and educational developers and included two half-day face-to-face workshops to plan and learn about the new technological possibilities available at Deakin and develop skills with the technologies to be introduced to the course in semester 2.

During Session 1 the GCHE teachers explored and reviewed technology possibilities conceptually by:

- generating ideas for integration into GCHE units with the objectives of learning about exemplars of good use of social software for learning/research and
- exploring methods of integrating social software with DSO use and the possibilities and promises of technology in relation to the project objectives.

Session 2 consolidated ideas and plans generated in Session 1 for professional development for the GCHE participants by:

- organising individual and team support for DSO and eLive sessions;
- recording workshop presentation data and uploaded it to DSO sites in readiness for semester 2; and
- setting up eLive sessions as introductions to the units.

Training included demonstrations of currently available technological devices (iPods, digital cameras both video and still, and digital audio recorder) by expert teachers who suggested ways for creating digital objects useful for teaching and learning. This was an authentic learning experience for the team but this stage provided little practice of these new skills before the GCHE teachers were required to design and facilitate the learning experiences of the course participants who, in some cases, were more technologically capable - a situation many academics find themselves in as they try to keep up with new technologies without having an opportunity to first become confident users of the technologies.

**Stage 2**

This stage focused on the professional development for the GCHE participants. Volunteers from all participants enrolled in the GCHE were called through introductory workshops to the Semester 2 units of study and through email and DSO postings. The Drupal and the Wiki were integrated with DSO and introduced to participant volunteers. Table 1 provides an overview of the participants’ involvement in the exercise.

| Participants | 15 volunteer participants  
| 8 staff (5 GCHE teaching team and 3 educational developers) |
| Task | Task was open ended requiring participants to explore the software and reflect online and through assignments on its usefulness for teaching |
| Time | Time allocated formally as enrolling in the GCHE is mandatory for all new staff  
A semester long period allowed for activity |
| Learning design and purpose | Opportunity to learn, practice skills, gain confidence and develop problem-solving strategies |

GCHE participants were supported and encouraged by the GCHE teachers through a structured process that spanned a semester to work as an online community to re-examine and reflect on their own curriculum and investigate the pedagogical possibilities of the Web 2.0 technologies. This work (see Table 2 for summary of procedure) contributed to their assessment for the Graduate Certificate of Higher Education which is institutional recognition and certification for their role as practitioners in higher education at Deakin University. The participants were asked to:

1. Use reflective journaling during semester: This was intended to be a basis for their later responses to focus group interviews and to help them reflect on issues about how they found technology use as learners, how they saw them from their perspectives as teachers, and possible difficulties for their students;
2. Join an online discussion via the Drupal and Wiki: This was to report experiences and reflections as well as share concerns and ideas.
3. Meet in on-campus focus groups: These were convened to discuss the impact of these technologies on the learning outcomes of the two units trialling the aims of the project. These were 30-40 minutes in length and were facilitated by the non teaching members of the project team (research associates) who audio taped the conversation, and took field notes for analysis.
4. Apply their technology investigation and involvement to their assignments: Participants’ assignments explored and reflected the use of social software and multimedia in the context of their own teaching.

Participants had the choice over content and direction as the focus of their study was largely to explore the technology and apply its possibilities in reflecting on their own teaching.

**Table 2: Summary of the technology and procedures used by participants**

<table>
<thead>
<tr>
<th>Software/technology</th>
<th>Process</th>
</tr>
</thead>
</table>
| Web 2.0 technologies (Drupal and Wiki) | (a) Emails sent to participants with links to Drupal inviting them to access site, explore and reflect on the relevance of the specific technology for learning and asked to post reflections to a facilitated discussion forum.  
(b) Midway through the project, participants were prompted to report experiences and reflections and these ideas were summarised by the teachers.  
(c) Participants were encouraged to apply both these social software systems to the individual course they taught.  
(d) They were also given the option to use the exercise as their assignment, promoting further reflection. (Figures 1 and 2) |
| Elluminate Live! (e-live)          | (a) eLive was introduced in both units to encourage its use.  
(b) The participants reported on experiments with eLive in their classes. |
| Other technologies (digital cameras and iPods) | (a) Participants were encouraged to use these technologies in their assignments  
(b) They were asked to report on their application and reflect on its uses in their teaching as part of their assessment. |

Figure 1 is the home page of the Drupal and shows participants’ interactions via blog postings which were analysed for frequency and content through analysis of participants’ comments on their blogs in the Drupal, and contributions to the Wiki and as well as reflections captured in assignments. The blogs in particular gave rich qualitative data of participants’ reflections, frustrations, concerns and ideas for further use, across a semester (see Table 3). Further data were collected from the GCHE participants at the end of the semester via two focus group interviews facilitated by the research associates who were a part of the GCHE teaching team. A set of open-ended questions guided the semi-structured interviews which were audio-recorded and analysed for common themes.

Data from the GCHE teaching team were obtained through team discussions, both face-to-face and online, and reported in project reports to the funding body within the university.

Figure 2 is a page of the GCHE Wiki. This page shows some basic information provided by the teachers as ideas as well as scaffolding for participants.

**Project findings**

In relation to the project’s objectives, Stage 1 enabled the GCHE teaching team to identify new technologies to use in teaching the GCHE with a view to showcasing their use for application by participants in their own teaching. As summarised in Table 2 above, both the teaching team and the course participants learned to use new aspects of DSO as well as accessing and using Web 2.0 technologies, a Drupal and a Wiki. Other multimedia technologies (digital cameras, video cameras and iPods) were explored for developing online resources.

These technologies were evaluated by the GCHE teaching team and participants in terms of ease of use, pedagogical applications, teaching effectiveness and student accessibility and the response to the interactive communication technologies are reported below from both groups. Through online discussion and through focus group interviews GCHE participants in the project reported on whether some student clienteles have better opportunity than others to make effective use of these technologies.

**GCHE participants’ response**

In general, the GCHE participants were predictably less motivated to engage with the software and with each other. A level of unfamiliarity with the software/site navigation, lack of face-to-face skills sessions to introduce the new Web 2.0 social software and the additional burden of having to learn something new
as busy new academic teachers themselves, sometimes new to online technologies and therefore less confident in using them, appear to have contributed to this. Table 3 provides a summary of the participants contributions to the Drupal and the Wiki.

At the end of the semester, eleven GCHE participants were interviewed in three focus groups. They reported that the social software sites were hard to navigate, not intuitive or user-friendly and were time consuming and difficult for them to access which understandably made them unenthusiastic about their use. However, since they were also teachers they could see the potential of using web 2.0 environments, particularly with Generation Y students, though they suggested that time and professional development were necessary for academic staff to embrace such an innovation.
Table 3: Summary of social software participation

<table>
<thead>
<tr>
<th>Contributions</th>
<th>Drupal</th>
<th>Wiki</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forums:</td>
<td>3 separate forums (9 topics) with total of 124 posts,</td>
<td>Home page with 30 edits</td>
</tr>
<tr>
<td>Blogs:</td>
<td>9 separate blog postings by individuals with 24 replies/comments</td>
<td>Intro page 25 edits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ideas and examples -10 edits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Examples -9 edits</td>
</tr>
</tbody>
</table>

They also saw the positive side of the social software and appreciated the RSS feeds that enabled them to receive an email when there were new postings on the site. They recognised the value it offered for group interaction and collaborative writing, especially since they worked on the University’s different campuses. Cross-campus collaboration was made easier, particularly when they were jointly authoring publications as academics and as teachers they recognised that wikis could be used for student group work. One participant had already implemented a wiki for a student group project that was focused on knowledge building and was able to share his knowledge and experiences which was beneficial to the group.

A majority of them commented that they took a long time to understand both the Wiki and the Drupal. In addition, as this was a pilot project not yet integrated seamlessly with DSO, there were some initial connection and access problems experienced which also contributed to participants’ poor first impression. They were asked to ‘explore’ the software and reflect on its use for learning and teaching in general as well as from an individual disciplinary perspective rather than in response to specific assessed tasks, and without directed guidance the motivation to use it was low. Participants reported that the threaded discussions in DSO were familiar, easier to understand and work with than the communication and collaboration in the Drupal or the Wiki. Having the DSO discussion as a place for discussion detracted from the centrality of the social software as the only communication space, as participants conveniently used the familiar DSO discussion forums. The GCHE participants were aware that there was no defined and assessed collaborative task which they considered may have increased or forced their participation.

As one respondent suggested. “if the unit of study had been constructed so that you had to use the Wiki/Drupal to complete it, then it might have been more purposeful”. They needed such motivation to use the technologies, particularly in the face of barriers such as time and workload. One participant responded: “It was a struggle to put aside personal time to go and explore the Wiki”.

The participants were pragmatic and agreed that professional development in the area of Web 2.0 applications in teaching and learning were important particularly because they needed “to move with the times” and provide appropriate learning experiences for their students. They preferred professional development that was incremental and felt that they would benefit by inspiring demonstrations of how technology could be applied in teaching and learning situations, supported by explanations. Participants felt that some staff could lack the confidence to explore these technologies and consequently be reluctant to expose their limited skills and understanding of them leading to a resistance to their use. They suggested that such individuals be paired with mentors or buddies as a useful professional development approach. Other professional development approaches participants suggested were to provide authentic learning experiences which participants can directly use in their own teaching, create teams and peer groups with a leader, provide time release and a regular time slot to engage with professional development activities, and showcase examples of good practice with a view to develop an understanding of the potential of the technology. Participants also suggested that in order to increase the likelihood of the success of such professional development initiatives, they should be adequately resourced, well supported and that social contact should be established (among the group that would receive the professional development) as a preamble. It was also pointed out that before efforts are made to develop pedagogical expertise, support should be given to master the technology.

**GCHE Teaching team response**

The GCHE teaching team essentially learned to use the project’s technologies while running the project and though the collaborative community nature of the project was explained to the GCHE participants, they seemed to express a need for a traditional teacher directing role of technological leadership and competence. Such a level of competence was hard to attain through the short professional development workshops the GCHE teaching staff attended and the short timeframe of the project. The demonstrations by experts who had already acquired the technical competency and the ‘language’ of the technologies including the application of the collaborative software (such as iPods, video cameras and audio
Discussion

The notion of an online community of practice has gained much support throughout the higher education sector and to some extent the basis of such a community was established in this project. However the notion of teachers as experts and the learners as new members of the community did not exist in the technological context, possibly because it was new to all members. The time limitation of one semester was another stress on the formation of an effective community among GCHE teachers and GCHE participants who were all busy academic staff with regular teaching loads. In general, the professional development exercise from the GCHE teachers’ perspective was useful as they worked together as the teaching team to redesign and introduce the new generation of technologies to the course. The blended community of inquiry they worked in should have allowed them the opportunity to discuss, reflect and make decisions when they met face-to-face and continue that ‘conversation’ online though this was inhibited by the fact that lead times were short. This also inhibited the GCHE teachers from exploring models or applying collaborative approaches to assessment such as those recommended by McConnell (2006) which would have been more appropriate in the Web 2.0 environments. The consequence of this was that the activity of collaborating and co-creating knowledge in the Wiki had no extrinsic reward or motivation for the GCHE participants. Predictably therefore, their engagement with both the Wiki and the Drupal were at a minimum level as was participation from some GCHE teachers who were also learning and providing the professional development for their students simultaneously.

From the GCHE participants’ perspective, it was useful to “contextualise how social software could be used for teaching”. The degrees to which participants experimented and contributed to the discussion and reflection demonstrated that they were at different positions on an adoption continuum as well as not meeting Lewis and Allen’s (2005) skills for online community effectiveness. These particularly included time management and commitment to participating in the online community, as well as confidence in a new online environment. Though they were all confident users of DSO, they had to ‘unlearn’ the teacher controlled delivery model determined by the learning management system before they could learn a different approach. Such differences of skills and aptitudes for trying new technologies would also apply to student clientele with skilled (and motivated) online users having better opportunities than others to make effective use of these technologies. As Generation Y students who make up the largest numbers of the university entrants were considered the greatest users of these technologies, GCHE participants were keen to learn to use the technology to apply to their own teaching. The greatest inhibition for this was time and workload. Most GCHE participants are new staff to the university and as one said, they were “just coping and cannot do more”. These comments seemed to suggest that participants were aware that they should be keeping up with the technological advances but not much more than that. This view could be linked to the idea that the GCHE itself is mandatory and participants were keen to do the required minimum and gain their qualification.

Conclusions

Staff development must not only enthuse teachers about the technology but provide clear opportunities to link theory to the individual’s practice, and most importantly provide the time, to do this. The two models discussed in this paper, the community of practice model by the GCHE participants and the blended
community of inquiry model by the GCHE teachers have at their heart the collegial sharing and reflection that leads to a deeper understanding. These are sound models for professional development in relation to acquiring pedagogical and technological skills before teachers go into their classrooms, virtual or physical. However time to apply this theoretical knowledge, to practice and gain confidence in an unthreatening environment is essential for this to be effective.

The educational technology landscape is constantly changing and establishing clear purposes for its use involves understanding both the technical and pedagogical possibilities. The professional development models discussed in this paper enable this to occur in an unthreatening environment with a collegial community that have produced greater understanding of the potential of social software use in higher education courses.

References


Authors: Dr Gayani Samarawickrema, Institute of Teaching and Learning, Deakin University, Burwood, Victoria 3125. Email: Gayani.Samarawickrema@deakin.edu.au
Associate Professor Elizabeth Stacey, Faculty of Arts and Education, Deakin University, Burwood, Victoria 3125. Email: Elizabeth.Stacey@deakin.edu.au
Colin Warren, Faculty of Business and Law, Deakin University, Warun Ponds, Victoria 3216. Email: Colin.Warren@deakin.edu.au


Copyright 2008 Gayani Samarawickrema, Elizabeth Stacey and Colin Warren
The authors assign to ascilite and educational non-profit institutions a non-exclusive licence to use this document for personal use and in courses of instruction provided that the article is used in full and this copyright statement is reproduced. The authors also grant a non-exclusive licence to ascilite to publish this document on the ascilite web site and in other formats for Proceedings ascilite Melbourne 2008. Any other use is prohibited without the express permission of the authors.