



Engagement and learning through social software in finance: *The Trading Room* experience

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The introduction of a social software blog space called “The Trading Room” in an undergraduate Finance unit for an assessment task generated a great deal of activity to support student learning. A subsequent evaluation of this pilot demonstrated that students perceived high value in the opportunity it provided for them to reaffirm theories, obtain individualized feedback and benchmark their work against others. Whilst assessment is generally seen as both the carrot and the stick of learning, and certification; students in the study reported that they would still participate in reading and posting to the “Trading Room” blog even if there was no assessment requirement! Additionally they did not see any value in the environment as a purely social space, reporting that they saw it primarily as a professional educational community. It would appear that just as there are different communities in the real world social space, there are also different types of communities in the online space. Context, structure and activity design, perhaps are the most important facets of online interaction for learning.

Key words: social software, student engagement and learning, weblogs

Introduction

The internet evolved out of a need by defence scientists in the USA to communicate their ideas rapidly with each other. This was the origin of the very first social software designed to facilitate collaboration and social interaction between people who shared a common interest. However the term social software was first used by Clay Shirky in 2002 to describe it as any software supporting group interaction. The living environment of the Generation N (the net generation immersed in digital technology since their conception) includes substantial aliquots of time on social software (Garfinkel, 2003). Social networking software is a powerful new tool to engage Generation N and to increase their learning potential, a refining of e-learning pedagogy.

The use of blogs – a contraction of ‘web-based logs’ or ‘weblogs’ – has increased exponentially – it seems that every one is talking! As of April 2007, the blog-oriented Internet search engine, Technorati, reported an indexing total of over 75 million weblogs worldwide (Sifry, 2007). Educators have been keen to deploy these new technologies in the belief that knowledge generation and reflective learning are enhanced through online group communication. Weblogs are one of the emerging technologies offering flexible opportunities for implementing student-centred pedagogical practices (Instone, 2005), but is any one actually learning?

This paper introduces and reports on the preliminary outcomes of a pilot study on the introduction of social software in a large-cohort 3rd year undergraduate Finance unit within the Bachelor of Commerce at Deakin University. Evaluation is ongoing but initial results offer support for the potential of blogging as an enabling learning tool in higher education. The use of Web 2.0 technologies in the educational landscape, acknowledges that student interaction and activity does not necessarily equate to learning. Our particular interest in this research is whether or not ‘the online talking’ supported student engagement and learning. The aim of the study was to assess if this social software was perceived to be useful by students in their learning experience.

This paper commences with a brief review of literature of the role of weblogs in education, and methods of learning. This is followed by a note on educational learning communities. The social software *Trading Room* is then explained in some detail. The results and conclusions of this pilot study follow.

Literature review

Blogs in education

Weblogs or blogs are chronological online journals where authors publish their thoughts, can be rapidly updated, on topics of interest to the author or the cohort of authors, with readers able to comment in the same online space. They are a popular form of online communication, developing higher order learning skills, active learner centred pedagogy, associative learning and interactive learning communities (Farmer, Yue & Brooks, 2007). The social communication and individual self expression possible on blogs created an interest in their application in e-learning (Williams & Jacobs, 2004). There is widespread experimentation with blogs in many parts of the globe (Burgess, 2006; Farmer *et al.*, 2007; O'Donnell, 2006) as they are seen to be distinct from the literate and oral cultures (Jacobsen, 2002). The empirical studies on the educational use of weblogs, particularly in undergraduate studies is quite limited and have, as Williams and Jacobs (2004) observed, been concentrated in the area of teacher education, journalism and library. Stiler and Philleo (2003) and Deng and Yuen (2007) explored the role of blogs in pre-service teachers. Dickey (2004) reported that the use of blogs in distance learning courses helped students overcome feelings of isolation. Farmer, Yue and Brooks (2007) used educational blogging in an undergraduate liberal arts subject (that overviewed cultural and media studies). In our study we also utilised blogging in an undergraduate unit, to our knowledge, the first in a business and commerce unit.

Student engagement and learning

People differ in what they are like and differ in their preferred ways of functioning. For student learning, this means that some students currently prefer certain ways of thinking and learning, whereas others prefer different ways (Boulton- Lewis, Marton & Wilss, 2001). Whilst there are numerous definitions of learning, perhaps the most quoted characterisation of the different conceptions of learning and the simplest, are those put forward by Saljo (1979). The value of these categories lies in the fact that they have been shown to be closely related to approaches to learning and to outcomes of learning. Marton, Dall'Alba and Beaty (1993) extended Saljo's categories to include the following distinctively different ways of learning. Learning can be seen as:

1. Increasing one's knowledge
2. Memorising and reproducing
3. Applying
4. Understanding
5. Seeing something in a different way
6. Changing a person

The first and sixth conceptions refers to the effect of learning, the second and fourth conceptions relate to what is acquired in learning and the third and fifth conceptions refer to how use is made of what is learned (Marton & Booth, 1997).

There has been a great deal of interest in the subject of "Engagement" in learning of late, extending from the significant shifts in the understanding of human learning that has occurred over the last century. Stahl (2006) acknowledges the foundational work of Heidegger, Vygotsky, Lave & Wenger, Engestrom, Miettinen and Punamaki, and reflects upon the work of Dewey and many others, in attempts to shift practice from behaviourist influences of drill and practice, to the one of individual intellectual engagement, internalisation and knowledge construction within communities of activity and practice.

Educational learning communities

Human activity in all its forms influences learning. Social situations encourage the development of the mind and influences learning and thinking (Wenger, 1998). This social theory of learning states that learning is a continuous process, without a well defined end point. Learning also occurs in the social environment (such as social networking in the web), and is not confined to the conventional classroom (Brown & Duguid, 1991; Wenger, 1998). Social participation encourages learning by the establishment of an identity, by giving meaning, by practice, and community. This social learning environment is called

the community of practice. Many such communities of practice exist in our lives: at work, at home, in the neighbourhood, at school or university: everywhere that our activity takes us. Therefore engaging students in social communities outside the traditional classroom, by means such as social networking software, may increase their learning potential. These communities of practice provide educators with yet another opportunity to get their message across to students. These communities extend the normal daily interaction into more fruitful intercourses where problem solving and consequently learning becomes a collaborative effort. These communities thrive on peer to peer interactions and should be exploited. These have been conventionally defined as joint enterprise, and mutual engagement producing a shared reserve of communal resources. This is no different to a new employee in any organisation asking another employee for help in filling in a form or learning processes and mechanisms.

Communities of practice evolve through various stages from their infancy where people with similar situations discover one another, then explore each others potential, engagement in joint activities, creating artefacts, adapting and responding to changed artefacts and finally dispersion of the community (Wenger, 1998). The relationships between the members of this collaborative community can be unrecognised, secret or bootlegged, legitimised, strategic or transformative. These communities trade knowledge as a public good, owned and maintained by the community. Therefore knowledge exchange is by moral obligation, community interest, generalised reciprocity and pro-social behaviour (McLure Wasko & Faraj, 2000).

Communities of practice differ from traditional organisations in that they have differing levels of practice co-existing in the community all at the same time. They have aspects of constructivism where there is facilitation and collaborative learning (Johnson, 2001). An extension of this concept is that of the virtual community as is established by social networking or other platforms on the Internet. University or organisation based social networking software can be seen as an evolution of the community of practice into a virtual community. Virtual communities have resulted in large scale collaborative projects with open source communities such as the *LINUX* operating system and *FIREFOX* internet browsers. The role and power of these communities in encouraging and helping in the university-based learning system is largely underutilised.

The *Trading Room*, an online education community, established at a tertiary institution, is one such initiative. The *Trading Room* was designed to complement classroom based learning with an understanding of finance theory and its relations to current practice. It was complementary to the Blackboard Learning Management System by linking students studying this unit in a less formal environment.

The Trading Room

Gaining an understanding of how and when learning occurs is important for educators when using these technologies; in particular, engagement is seen as a priority to promote deeper learning. To achieve this, a multi-participant blog assessment task was introduced, requiring students to introduce themselves by creating a personal profile in a blog. Students were required to interact with an avatar “Alfie D” who represented an international money trader. Students were required to post regularly to this community blog space as well as comment on other students’ work.

A created environment, called “The *Trading Room*” provided for participant membership in a professionally focused learning community in Finance. The technology employed to create the *Trading Room* was an installation of Drupal; a Web 2.0 social software product supporting content management and community communication. It allowed the creation of avatars, buddy lists, and personal profiles, also notifying members of content updates via email. The aim of the *Trading Room* was to increase engagement of students in the learning process through the creation of an educational community that simulated a professional finance community. To achieve this all students were provided with a personal blog where they could load their photos, write something about themselves, identify buddies, and post regular blogs on matters pertaining to finance, and comment on the postings of others. The “rules” for engagement and postings of blogs and the following information about the learning community were placed on the home page (see Figure 1).

The environment included the creation of an avatar called “Alfie D” as an international money trader, who would regularly post views on international finance activity and was introduced to the students via his own personal blog.

Important Tip...

“Soft on Person, Hard on problem”

You have an opportunity to establish a learning community of finance professionals, and initiate connections that will stay with you throughout your career. Building networks and friendships are one of the best facets of University life, and online, unlike face to face, is not dependent upon time, place and space, however courtesy and a professional demeanour is primary for constructive thinking and learning in your discipline.

Figure1: Tip from the home page of the *Trading room*.

Who is Alfie D?

Alfie D was the modern day online avatar of Alfred Deakin, the second prime minister of Australia, created for the *Trading Room*.

About the unit

The unit International Finance and Investment was an elective third year unit within the Finance Major, offered in semester two, 2007. It aims to develop a knowledge base and range of professional skills that support the management of the foreign exchange exposure of financial institutions or multinational corporations. The unit focuses on international financial and foreign exchange markets, foreign investment, country risk analysis and management of international portfolios and risk and as such is important to any student considering a banking, investment banking career or to be involved in multinational company management of foreign exchange exposure. It was delivered solely in an on-campus mode in the semester of this study. However, all students were required to participate in online activities and post to the *Trading Room* as part of their assessment tasks.

Using the *Trading Room* for assessment

In the light of the existing literature's arguments for the educational values of blogging, the authors determined to trial blogging as an integral component of the learning program for a large cohort third-year subject they teach in the Bachelor of Commerce program at Deakin University. The *Trading Room* assessment task required students to adopt the role of the finance professional and critically reflect upon emergent international finance issues and case studies introduced by the avatar, Alfie D. To ensure optimal participation and learning outcomes, it was decided to integrate blogging into the subject as an assessment exercise. For 15% of their final assessment grade, students were asked to maintain a blog throughout the 13 week semester. A stipulation set for the exercise was that students were told to post regularly – with a minimum of fortnightly blog contributions required by students – there was no restriction on the number of posts made. Apart from posting to their own personal blog, the main assessment task consisted of a 400 word blog worth 10% to be completed in Week 5. Modelled on standard criteria for assessable components in a course, it included frequency and consistency of the activity, reference to and demonstrated knowledge of subject content; active and respectful engagement with the ideas opinions of others; and appropriate use of supportive materials and referencing (Farmer *et al.*, 2007). This required reviewing Alfie D's first post on foreign exchange intervention by Central Banks, to reflect on it and critically analyse it, based on the theory provided in lectures and their reading in the subject. Additionally they were required to incorporate comments from posts of two other students and integrate this into their blog. The ongoing fortnightly blog contributions were assessed over the remainder of the semester for the remaining 5%.

Weblogs and interaction with Alfie D

The development of an educational community in finance was integral to the online environment and in order to set the tone and framework for activity Alfie D acted as instigator and moderator of the site. To offer encouragement and guidance to students, teaching staff maintained their own blogs pages and engaged actively with student blogs through the system's comments function. Student weblog postings

and interaction with Alfie D are demonstrated by the following post précis made by two different students.

Week 3 Post: How much can intervention really do? Hi guys, Continuing on from my comment on **Alfied's** post I researched a bit further and pondered to myself how much ... Dominguez K. and Frankel J. n.d., ' Does Foreign-Exchange Intervention Matter? The Portfolio Effect', ...blog entry – student xxxx- 2007-08-02 18:38 - 5 comments
Alfie D case review- Week 5 Assessable blog: Student xxxxy Submitted Sat, 2007-08-18 17:02. central bank intervention

Alfie D's blog 'Central Bank Intervention in FX markets' posted on 14 July 2007 raises an important point on the acceptability of central bank intervention, in particular sterilised intervention, as a monetary policy tool. The key point *Alfie D* makes is that central banks should not change money supply when they undertake sterilised intervention.

All of these blogs demonstrate the ease and familiarity with students approached the *Trading Room*. In a manner similar to that used on other social networking software/ weblogs, colloquial language and grammar is used freely. Use of colloquial language is common in day to day interaction and may well facilitate the learning process, laying the foundation for more formal presentation of ideas and concepts in the traditional learning environment.

Methodology

A survey instrument, consisting of 13 questions (many with multiple parts), was delivered in hardcopy form in a lecture environment in week 9 of a 13 week semester.

The survey gathered demographic information as well as information on the students' general attitude to blogs and to the use and perceived value of this specific blog. It attempted to assess their perception of the roles the blog played in their learning for this Unit. It used a combination of rating, ranking and open ended questions. The rating questions used a five point scale where "1" was either "strongly disagree" or "not important" and "5" was either "strongly agree" or "extremely important". The ranking questions required the item judged most important to be ranked "1".

Results

There were 280 students enrolled in the Unit and 251 responses were received (a response rate of 90%). An indication of the current generation of students use of online community spaces can be ascertained by the fact that 64% of respondents indicated they owned a blog, or some equivalent space (such as a MySpace or FaceBook site) and that 81% of those who owned such a site still accessed it at least once per week.

While assessment was listed as the strongest motivation for participating in the *Trading Room* (and personal interest as the lowest motivation) it was noteworthy that 32% of respondents indicated they would have participated in the site even if participation had not been assessable. This is a strong indication that a significant proportion of students viewed the site as valuable to their learning experience rather than being just for assessment. This is reinforced by 67% of students responding positively to the question "How important has your participation in the blog sphere been in helping you with your learning?" and 68% responding positively to the question "How important has the *Trading Room* been in understanding and applying theory and examples from lecture topics?"

Other questions with strong positive responses that indicate the *Trading Room* was viewed as a positive learning experience were:

- I wanted to receive feedback from teachers and other students,
- I found it engaging to exchange information and knowledge with others, and
- The environment and individual posts stimulated my thinking in this unit.

The student perception of what the purpose of the *Trading Room* was can be judged by the responses to the question that ranked the alternative purposes of the blogs. The students ranking of the alternative purposes are shown in the following table:

Table 1: Ranking the purposes of blogs in the *Trading Room*

	Mean rank	Rank
Reaffirm theories and work covered in lectures and tutorials	2.90	1
Discuss general knowledge in finance	3.04	2
Review lecture concepts	3.14	3
Allow students to ‘test’ their understanding of the lecture material and related concepts by posting blogs	3.19	4
Assist in discussion relating to assessment tasks	3.73	5
Socialise and network with other students	5.00	6

While the overall response to the *Trading Room* was positive there are some responses that need to be noted by teaching staff.

Only 19% of students did not feel comfortable and safe communicating in a blog, the vast majority feeling safe in the online environment.

87% of respondents thought carefully about what they wrote and how they represented themselves in this environment suggesting that these students are willing to take responsibility for their online expression and treat it seriously.

The students’ view on the future direction of such a space can be seen from the strong positive responses received to questions about allowing students from other Finance Units and Alumni into the *Trading Room* (77% for both). What was seen as a shortcoming of the *Trading Room* was that it was not seen as strongly building any professional community or help in preparing students for professional life. However, it does appear to have been successful as an education community. Students reported that the continuous assessment format was less stressful but demanded continuous engagement and involvement. We found that students used the environment to seek feedback and self assess their performance within a professional community. From this perspective it would seem that the *Trading Room* achieved “talking and learning” by students as evidenced by the following student comments:

The best part was keeping up with the subject and also seeing what other people wrote down because I did get the opportunity to occasionally have a read of what other people—and sort of just to see if I’m on par because having a year break for me it was important to get back into it. (Student comment, Semester 2 2007)

I think it was a good platform professionally to communicate because you had a chance to read what other people were writing and you could also post. And people you’d normally not get a chance to talk to maybe because you don’t see them on campus or you don’t see them in lectures or tutorials or anything so it was good in the sense that you also got a different understanding of how other people like see, saw the [unit as that]. And I didn’t really use it as a social platform, I didn’t really socialise but it was more for communication within the unit (Student comment, Semester 2 2007)

I believe greater marks should be awarded for assessment work relating to the *trading room* and group assignment and less to the MCQ test. Much more work was spent on preparing assessment blogs and the group assignment and should be awarded accordingly. I believe the concept is very innovative and modern, bearing in mind the environment we live in these days. Bravo for introducing this interactive and new concept. (Student comment, Semester 2 2007)

It was also very pleasing to see that only 18% encountered any technical difficulties using the site.

The *Trading Room* actively promoted the increase of ones knowledge, application and seeing something in a different way, three of the six categories of learning described by Marton, Dall’Alba & Beaty (1993). This is demonstrated from student comments and the survey results, which ranked in first place that the *Trading Room* reaffirmed theories and work covered in lectures and tutorials and ranked second that its purpose was to discuss general knowledge in finance (See Table 1).

Conclusions

This study strongly supports the view that social community spaces, such as blogs, can be a valuable tool in promoting student learning. It also support the view that students will use these spaces even if they are not used for assessment purposes, although based upon a question about students' opinions of the *Trading Room* after a basic introduction versus after using it for the semester, it may be justified to have an early compulsory exercise, such as an assessable exercise, to introduce students to the value of such spaces. Thorough evaluation of the data and, in particular, detailed content analysis of the many student blogs and the resultant survey has not yet been completed. The study yielded copious amounts of data including qualitative data that is still in the process of being analysed. But it is our expectation that further research will strengthen our understanding of the learning outcomes of the *Trading Room*.

As with any other study evaluating online education tools there is an inherent bias: students who do not use the online learning community or are uncomfortable in the online environment are poorly equipped to assess its impact and usefulness to their learning experience. Any study like this tends to make an assumption that all students are equally computer literate and participate in online social communities, irrespective of whether or not they have their own blogs or not.

It would be relevant to run a control group of students where assessment was not a part of the process and then to see how many students actually participated in any such venture and what proportion found it useful. Even though in this study 32% of respondents have stated that they would have participated in the online community even in the absence of an assessment.

While the *Trading Room*, as used in this Unit, proved a valuable learning tool students are suggesting it would be even more valuable if it extended across multiple Units and even more widely into alumni. The use of similar software across multiple units and disciplines would allow the assessment of this new adjunct teaching tool in the wider teaching community. Constructive feedback from students can be used to modify the set up of future online communities for learning with perhaps *both* student and staff moderators. This could be extended even further into employers of Finance graduates. This would also help build the professional community that was seen as lacking in the *Trading Room* environment. This research has been extended to create *Finance Central* another online learning community with a broader focus, currently under investigation. This broader online social community includes students from many finance units, all staff from the School of Accounting, Economics and Finance and guests from the industry who visit the site to respond to queries and postulate challenges.

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