



## A Pilot Trial of Social Media in a Technical Area

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This paper reports on a project undertaken to trial social networking with Telecommunications students and staff from Swinburne University of Technology. Web 2.0 technologies including social networking sites can encourage informal conversation, dialogue, collaborative content generation, and knowledge sharing, giving students access to a wide range of ideas. A Ning was used with the intention of engaging students and staff in informal discussions relating to the Telecommunications industry in general, rather than course material directly. Although staff contributed enthusiastically and a large number of students enrolled, student participation was low. Follow-up surveys and informal discussions revealed reasons for the low student participation included the risk of appearing foolish in front of peers and teachers, and an intention to use the Ning in a passive manner by seeing what others are doing without necessarily contributing themselves. We conclude that social media in education may be useful but needs some incentive for it to be adopted by students.

Keywords: Social networking, student engagement, Ning, community

## Introduction

This project investigated the effectiveness of using social networking in a controlled blended learning environment using the Ning platform. Telecommunication Engineering staff in the Faculty of Information and Communication Technologies used social networking to communicate with students, in addition to the Learning Management System (LMS) that the university provided. Social networking was used to supplement both the LMS and face-to-face units as a means of enhancing students' sense of community. Social networking is defined by Gunawardena et al (2009) as "the practice of expanding knowledge by making connections with individuals of similar interest" (p. 4). The principles of social networking sites such as Facebook, designed to encourage social interaction and information exchange amongst those connected should form the basis of communities of practice, especially in a controlled educational environment. However, higher education has been slow in adopting social networking technologies into the curriculum (Brady, Holcomb, & Smith, 2010), despite the

proliferation of social networking sites.

Typically, users of social networking sites can share personal information, connect with other users, upload, tag and share multimedia content (Lockyer & Patterson, 2008), thus facilitating communications with others. The Telecommunications Engineering staff wanted to create an online community for students studying their subjects so they could have a sense of belonging and the ability to meet other students who shared this common interest. This type of community can be described as “a specific type of psychological community based on the following characteristics: (a) the setting is the world of education; (b) the primary purpose is learning; and (c) the community is based on a fixed organizational tenure, that is, a set length of the course or program in which members are enrolled” Rovai (2001, p. 287). Based on this definition, the Telecommunications staff wanted to foster an online community in addition to the face-to-face class contact times for their students. As students are “no longer passive consumers but active producers of knowledge” (McLoughlin & Lee, 2008, p.1) a platform that utilised Web 2.0 technologies was chosen. A private social network, Ning ([www.ning.com](http://www.ning.com)), satisfied this requirement as the online platform to create the Department’s own social network. The customisable appearance and feel of the Ning was chosen as the social network of choice for this purpose. A Ning delivered the medium to create a community website with common social network features such as the ability to share photos, upload videos, create a profile page and participate in forums and blogs.

Given that students “are finding new ways to contribute, communicate and collaborate using a variety of tools that empower them to share ideas” (McLoughlin & Lee, 2008, p. 1) it was envisaged that providing such a medium would assist their participation in Departmental activities, discussions and communication amongst students and staff. Tools such as blogs, wikis, media sharing applications and social networking sites can support and encourage informal conversation, dialogue, collaborative content generation, and knowledge sharing, giving learners access to a wide range of ideas and a sense of community building (Dennis, 2008). Whilst students know how to use social networking sites, “the challenge is to apply it to education” (New Media & EDUCASE, 2007, p. 12) and as a supplementary learning tool, social networks “holds promise for enhancing students’ sense of classroom community, which contributes to their classroom community of practice in an out of class” (Hung & Yuen, 2010, p. 713).

Blackboard, the University’s designated learning management system where course materials are stored, tends to be “very focused and lack the personal touch and networking capacity that social networking sites offer” (Brady et al., 2010, p. 152). It was for these reasons that the Department chose to offer another medium to separate the course materials from the social aspect of the platform. Additionally, as participation in the Ning was not compulsory, unlike Blackboard, non-examinable material materials were posted to encourage and promote topical discussions such as Australia’s National Broadband Network, but not to disadvantage those students who did not want to participate. The Telecommunications Engineering staff engaged with the students through the Ning by contributing regularly to the forums, uploading pictures, highlighting topics that were not examinable but rather of interest to students to encourage discussion. The overall goal was to provide students with a broader perspective on their discipline and also give them an understanding of the technical and research interests of academic staff. The Departmental staff modeled the skills themselves and engaged students with a 21st century approach to teaching using social networks (Ozkan & McKenzie, 2008).

## **Method**

### **Research Question**

This project, explored the possibility of whether the population of a Ning for Telecommunications students would assist in increased student engagement. It also investigated the views of academic staff and the perceived benefits from exploiting the use of social networks and Web 2:0 technologies.

### **Participants and Settings**

Students studying telecommunications engineering subjects were invited to join the Telecommunication Ning with 81 students signing up. The Ning was active for the entire 2012 academic year. Staff and students used the Ning throughout the semester and then were surveyed about the usage of the Ning via an online Opinion survey. The Ning was used as a teaching tool by lecturers teaching Telecommunications subjects and contained supplementary material of interest to students. Students who choose not to participate in using the Ning were not

disadvantaged, as it did not contain core course material. Core material pertinent to the course was stored on Blackboard: the University's learning management system.

The Ning was used as a medium to encourage communication and engagement of Telecommunications topics that may be in the popular media such as the NBN. Staff posted blogs, activities, Twitter feeds and information about happenings in their area, which were of interest to students. Academic staff did not initiate posts on their curriculum to ensure that students who did not participate in the Ning were disadvantaged. Upon acceptance of the invitation to join the Ning, students created their own member page, and interacted with the staff and other students through forums and blogs.

## Data Collection

A questionnaire was administered towards the end of the project via an online Opinio survey for students and a separate one for staff. The designated questionnaire for students was structured in such a way to determine whether they regularly used social media such as Facebook, Kik, Snapchat and the extent of use calculated over an average week. This then allowed the researchers to determine if the Ning was a natural extension to their current social media usage. Specific questions relating to the Ning were also asked such as:

- Did you engage more through the Ning, then what you might have in person?
- Did you find the Ning helpful in assisting you make contacts within the Telecommunications discipline?
- Do you have a greater understanding of your lecturer's interests?
- What did you find most useful in using the SwinTelecoms Ning?
- Do you think it increased your engagement in this subject by using a Ning?

The purpose of the questionnaire was to allow some subjective input from the students and to determine their perception of the value of the Ning. Student responses could then be correlated with quantitative measures of active participation via student contributions to the Ning website.

The questionnaire remained open for a month and several reminders were sent out during that month to encourage as many students & staff as possible to participate. Despite the reminders, eight students and four staff voluntarily completed the questionnaires. The lack of student participation in the questionnaires can be attributed to research fatigue experienced by students who have been over committed (Clark, 2008; Schuh, 2009). The study did not ask students to comment on the actions of staff members, but merely the use of the Ning as a technological tool compared with what they experienced and/or expected. The questionnaires were anonymous, and any identifying information was removed. Participants were assured that the results of the study would be solely used for research purposes to improve the teaching and learning methodology, and would have no effect on their current or final results. The project received Human Research Ethics approval from the University and all participants contributed on a voluntary basis.

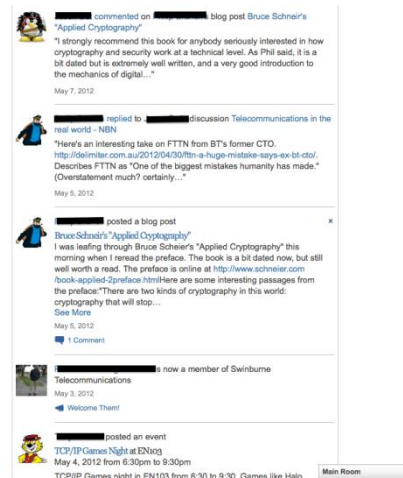
The questionnaires were administered online using Opinio in the last four weeks of semester to both students and staff. The student questionnaire had 24 questions, whereas the staff questionnaire had 18 questions, with both having a combination of pull down lists, radio buttons and text boxes for further comments. The participation in the Ning and the subsequent questionnaire was voluntary. 81 students joined the Ning, however only eight students completed the questionnaire, which represented approximately 10% of the participants. Four staff members completed the staff questionnaire.

The research team met regularly and discussed the analysis of data several times to ensure internal validity of the process and agreement about the interpretation. Entries to survey tick data were compiled to provide quantitative data. Free text entries were read repeatedly to enable the coding and categorisation of responses, then counted to enable quantitative comparisons. This qualitative data analysis method was informed by the work of Boyatzis (1998) and Bogdan and Biklen (2007).

## Findings

While students initially enthusiastically enrolled in the Ning their level of contribution was disappointingly low. Their sporadic use of the social network coupled with their lack of interaction suggested that students were not interested in engaging with staff and other students. The survey we carried out towards the end of the trial and informal discussions with some of the students later, pointed to the following as possible reasons why the Ning did not foster a community of practice amongst students. Some participants said they found contributing to an online discussion on technical matters with their instructors intimidating. There was some fear that they might

appear foolish. Some participants felt that they did not have anything more to add to the discussion and that they did not believe their contribution would be valued. This was potentially exacerbated because their student name was used and there was no anonymity in use of the Ning as can be seen in Figure 1.



**Figure 1: Students names are blanked out in this forum**

Students enrolled in the Ning in large numbers, very soon after the project was announced, yet very few contributed after enrolling. The surveys and informal discussion suggested that the purpose of the Ning was not clearly understood. It was made very clear that from the outset of the project that the Ning was not going to be a venue for discussing course material. However some students appeared to have enrolled in fear that they may miss out on material directly relevant to their studies. Many of the students preferred to lurk, rather than contribute to the online community for fear of missing out.

Finally, times pressures were experienced by both staff and students. Both groups noted how pressed they were for time which meant they didn't contribute as much as they would have liked. Students stated that they had other venues for social interaction so if the Ning was not directly related to their study, it would be dropped. The Ning was not seen as a priority by the students, and they did not have time to devote to it given it was not directly related to their course material and participation in the Ning did not contribute to their final grade.

The pilot trial indicated sufficient engagement to encourage staff to explore further avenues to continue with the program. As a result, staff are currently investigating how to best incorporate the Ning into a suitable subject in the early years of their academic program to encourage further student participation. It is hoped that this will lead to more visible evidence of student membership and engagement.

## Conclusions

From the above we can draw several conclusions regarding the use of social media in education.

Social media may well have a place in Education but it needs to be integrated within existing courses. Students already have social networking sites such as Facebook that they use to discuss matters, including study related topics, with their friends. Another site sponsored by instructors with no clear benefit to them is unlikely to be used unless there is some incentive to do so. Such incentives might include assessment of what a student believes to be their best contribution to an ongoing discussion and the best topic initiated for discussion by them.

If there is to be no linkage to assessment items, then the ability to post anonymously, thus limiting the potential level of intimidation should be considered. This would remove a layer of inhibition and perhaps promote more interaction. Conversely, it could encourage unsocial behavior, which is not desired in a closed community.

Social networks used as supplementary learning tools to enhance a community has promise, and we had hopes that the Ning might be used as a vehicle in which students could learn more about their profession. We still believe this to be the case. However, it needs to be used in a more structured way, with improved integration into the students' study programme for this to occur.

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