

Improving student engagement through a social media platform

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Structured abstract

BACKGROUND

Users of social networking sites can share personal information, connect with other users, upload, tag and share multimedia content (Lockyer & Patterson, 2008). This project investigated the effectiveness of using social networking in a controlled environment using the social networking platform (NING) to increase student engagement in discussion of professional issues. 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. Higher education has been slow in adopting social networking technologies into the curriculum (Brady, Holcomb, & Smith, 2010), despite the proliferation of social networking sites such as Facebook. The researchers were interested in understanding and exploring the potential capabilities and pitfalls of the technology.

PURPOSE

The focus of this project was to explore whether the population of a NING for telecommunication and networking students would assist in increased student engagement and whether academic staff could see any perceived benefits from exploiting the use of social networks and Web 2.0 technologies.

DESIGN/METHOD

We used the NING rather than the University LMS to offer another medium so that we could separate the course materials from the social aspect of student engagement. Since participation in the NING was not compulsory, non-examinable material was posted to encourage and promote topical discussions such as Australia's National Broadband Network. The Telecommunications Engineering staff engaged with the students through the NING by contributing regularly to the forums, uploading pictures, highlighting topics that were of potential interest to students to encourage discussion. The overall goal was to provide students with a broader perspective of their discipline and give them an understanding of the technical and research interests of academic staff. We modelled the skills that we hoped the students would exhibit using social networks (Ozkan & McKenzie, 2008). To evaluate the success of the project, two different questionnaires were administered online using Opinio in the last four weeks of semester to both students and staff. The survey responses were then evaluated to enable quantitative comparisons and draw conclusions.

ACTUAL OUTCOMES

Despite the prediction that the use of social media could lead to increased student engagement with current topics faced by the wider professional community in telecommunication and networking, our trial suggests that this might not be true. Initial engagement was positive with 76 students creating accounts within the system, yet ongoing commitment and active participation was poor. A discussion of why this might be is included in this paper. It is worth noting that lurking, or passive engagement, was quite strong amongst the student members.

CONCLUSIONS

The outcomes of the pilot trial did not suggest that students actively engaged in the staff directed discussions. Nevertheless, there was considerable evidence of passive engagement, from which we are encouraged to believe that the use of social media paradigms could still be useful in increasing student engagement and participation with wider aspects of their ongoing education.

KEYWORDS

Social networking, student engagement, NING

Introduction

The increased pace of current living reflects new needs and wants by modern society. Technology such as mobile phones, computers and digital cameras are generally obsolete within a three year period. Such is the pace of technological advancement and the prevalence of information that the current student's priorities have changed in the past few decades. The authors have observed over the past decade that student engagement has been decreasing and the most common reason given is the re-prioritization of education in the University student's lifestyle. The model of the academic being the sole source of all knowledge for a passive student audience is the old mode of teaching (Johnson, Johnson, & Smith, 1998). There have been many new methods implemented to improve students' engagement. Improved learning spaces, is one such area of improved engagement (Blackmore, Bateman, Loughlin, O'Mara, & Aranda, 2010). An example of improved learning spaces such as a state-of-the-art networking laboratory, and the resulting improvement in student engagement can be found in (Klimovski, Cricenti, & But, 2011). Another popular method is that of engaging students through problem based learning (PBL). This method has been implemented by the authors to varying degrees with varying levels of success. Many research articles identify the value of PBL for improved student engagement (Ahlfeldt, Mehta, & Sellnow, 2005; McKeachie & Gibbs, 1999).

In this research project the effectiveness of using a social media platform in a controlled blended learning environment to improve student engagement was investigated. The particular platform chosen was the NING social networking platform. 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 goal is that principles of social networking sites, such as Facebook are designed to encourage social interaction and information exchange amongst those connected. In turn, the online members 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.

Generally all staff in the Faculty of Information and Communication Technologies at this University use the Learning Management System (LMS), known as Blackboard, provided by the university to communicate with students. The Telecommunications staff decided to use a social networking application to supplement the LMS and face-to-face interaction to enhance students' sense of community and engagement.

Social networking was chosen as a way to promote and facilitate communications with each other by sharing personal information, connecting with other users, uploading, tagging and sharing multimedia content (Lockyer & Patterson, 2008). According to Rovai (2001, p.287), this type of community can be best 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.

Based on this definition and the goals of the Telecommunications staff, the obvious solution of cultivating and nurturing an online community in addition to face-to-face class time was the way forward.

Given students are "no longer passive consumers but active producers of knowledge" (McLoughlin & Lee, 2008, p. 1) the Telecommunications staff choose to use a private social network, NING (www.ning.com). A NING bundles several separate technologies into a single unified, hosted platform such as a blog, wiki, forum, photo/video gallery, micro feed, events calendar and member management. The customisable appearance and feel of the NING was chosen as the social network of choice for this purpose. A NING enabled the customisable development of 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. As 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 assumed that providing access to a NING would assist their participation in Faculty activities, discussions and communication amongst students and staff.

Additional tools such as blogs, wikis, and media sharing applications can support and encourage informal conversation and dialogue amongst students. These tools can also allow 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 and out of class” (Hung & Yuen, 2010, p. 713).

In using an online social networking platform it is important to understand the various levels of participation by the respective community members. The broad classification of the community members can be expressed as follows: fully engaged (consistent contributions to and starts discussions); moderately engaged (consistent contributions to discussions); partially engaged (makes contributions to discussions and rarely starts own discussions) and unengaged or lurker (never makes contributions to or starts discussions). A major concern in this study was that the students might fall into the last category of lurkers. The online urban dictionary defines *lurker* as; *a person who reads the posts on a forum, message board, etc, but does not post*. Research into *lurkers* in online discussion forums describes them as being characterised in many ways. Mason (1999) defines lurkers as members who are simply not competent to communicate their ideas. Lurkers are also defined as too passive to act, much like television viewers (Morris & Ogan, 1996). They have also been characterised as parasites and free-riders (Kollock & Smith, 1996) where they just take, but contribute nothing to the common good. Other findings related to lurkers and online forums is that a *critical mass* of active users and contributors is needed to allow the *free-riders* to be carried and the community to move forward (Morris & Ogan, 1996). A detailed study aimed at understanding why *lurkers* lurk was undertaken by Nonnecke (2001) with the following findings; “the reasons for lurking are varied and fall into a number of categories ranging from personal to work related reasons” and “lurking is capable of meeting members personal and information needs” (Nonnecke & Preece, 2001, p. 9). They reported that 31 interviewees out of 40 stated that they lurked in the groups they participated in.

The university, like most Australian universities, makes use of a learning management system, Blackboard, for the distribution of course material. Blackboard was considered as a platform for the project but was ultimately rejected. As has been noted by others, designated learning management systems are “very focused and lack the personal touch and networking capacity that social networking sites offer” (Brady, Holcomb, & Smith, 2010, p. 152). Consequently the decision was made to use a specialized social networking platform separate from the one used by the university. It was also important that there to be no confusion as to the separation between prescribed, compulsory activities carried out via Blackboard, and participation in this project which was entirely optional and voluntary. For these reasons the NING system was chosen.

Non-examinable material was posted to the NING in the hope that it would encourage and promote discussion on topical areas, such as the *National Broadband Network, 3G vs 4G mobile communications* and other items that students might be interested in but which was not directly course related, so as to avoid disadvantaging students who did not participate.

Telecommunications academics attempted to engage with students by contributing to forums within the NING, uploading pictures and highlighting topics of broad interest to the profession as a whole. By doing so, it was anticipated that students would gain insights into the broader issues affecting their chosen profession, as well as learning something of the research and technical interests of the academic staff. The aim was that staff would model the behaviours

that students were asked to carry out, and in turn, create engagement via the social network (Ozkan & McKenzie, 2008)

Purpose

The focus of this project was to explore whether the use of a NING social networking platform would provide increased student engagement for a group of telecommunication and networking students and whether academic staff could see any perceived benefits from exploiting the use of social networks and Web 2.0 technologies.

Approach

Students studying Telecommunication and Network Engineering subjects were invited to join the Telecommunication NING with 76 students signing up. The NING social networking platform was available for all members for the complete academic year of 2012. Both staff and student community members used the NING and then a survey about the usage of the NING via an online Opinion was conducted towards the end of 2012. The NING was used as a meeting tool to share ideas and interests by lecturers teaching Telecommunication and Networking subjects. The purpose of the NING tool was many-fold; firstly to improve a sharing of ideas related to the profession the students were studying; secondly to post interesting topics to encourage students to engage and participate; thirdly to increase peer-to-peer discussions amongst the students on interesting professional topics; lastly to increase the vertical engagement between students such as 2nd year students talking to 4th year students. The NING contained only supplementary material of interest to students, and students who chose not to participate in using the NING were not disadvantaged. Core material pertinent to the course was stored on Blackboard: the university's learning management system.

The main purpose of the NING platform was to increase student engagement with topics of interest in their chosen fields of study. The idea was to encourage students to form and communicate opinions on topics of relevance to Telecommunication and Networking professionals (eg. NBN). Forum and blog entries, twitter feeds, and announcements of upcoming events were posted on the basis of perceived relevance by the academic staff. At no time did Academic staff initiate posts on any curriculum content, this ensured that students who did not participate in the NING were not disadvantaged. All students were informed that participation in the study would have no impact on their current or future results.

All telecommunications and networking students were invited to join the NING, those that accepted created a personalised home page, and were then able to interact with staff and other students through forums and blogs. Students were also encouraged to initiate their own discussions and to form groups of students with similar interests within the NING community. One group of students used the NING as a vehicle to communicate the extracurricular activities of the Telecommunications and Networks Student Club.

At the conclusion of the project, students and staff were surveyed via (separate) online Opinion questionnaires. These questionnaires were available to participants for a month and regular reminders were sent to the NING participants to encourage the provision of feedback. Despite the reminders, the questionnaire was completed by only eight students and four staff. The lack of response from student members could possibly be attributed to "research fatigue" experienced by over-committed students (Clark, 2008; Schuh, 2009).

The student survey asked students to comment on their evaluation of the use of the NING as a technological tool, and to compare it with their previous experiences and any expectations. As the project received University Human Research Ethics approval, all participation was subject to a number of conditions:

- All participants contributed on a voluntary basis;
- All questionnaire results were made anonymous;

- All participants were aware that the results of the study were to be used solely for research purposes to improve student engagement, and studies into teaching and learning methodology.

The questionnaires for the students consisted of 24 questions that had a combination of radio buttons and pull down lists to facilitate the answering of the questions. Text boxes were also provided, so that longer comments or feedback could be supplied. The staff's questionnaire had a similar format to the student survey, however; in this case there were 18 questions. Both survey questionnaires were administered using the Opinio on-line survey tool and were open to both students and staff during the last four weeks of the semester. Participation in this survey and the NING was strictly voluntary. Of the students that joined the NING, only eight completed the questionnaire. This constituted a response rate of 10%. Four of the five staff members who were contributing to the NING completed the staff questionnaire (80% of the staff participants).

The members of this project discussed the analysis of data several times to ensure internal validity of the process and to arrive at an agreement with respect to its interpretation. The work of Boyatzis (1998) and Bogdan and Biklen (2007) was used to inform the method used for analysis of the qualitative data. This consisted of the project team members repeatedly reading the free text entries in order to enable the coding and categorisation of the responses, these were then counted to be able to have meaningful quantitative comparisons. The survey tick data entries were compiled to provide quantitative data.

Findings

Initially students enthusiastically enrolled in the NING, however their level of contribution was disappointingly low. Nevertheless, passive engagement of student members was much greater. The NING member database was analysed and a number of the findings are presented below.

Figure 1 shows the breakdown of the level of participation in the NING project. It clearly shows that 50% of the student members did absolutely nothing other than just join the online community, whilst another 41% of the students went one step further and added a photo to identify them. In total, 91% of the student members may be classified as *lurkers*. This finding is quite high and consistent with the high percentage found by Nonnecke (2001). The academic staff believed that the number of lurkers was too high and that there were insufficient contributors to reach *critical mass*.

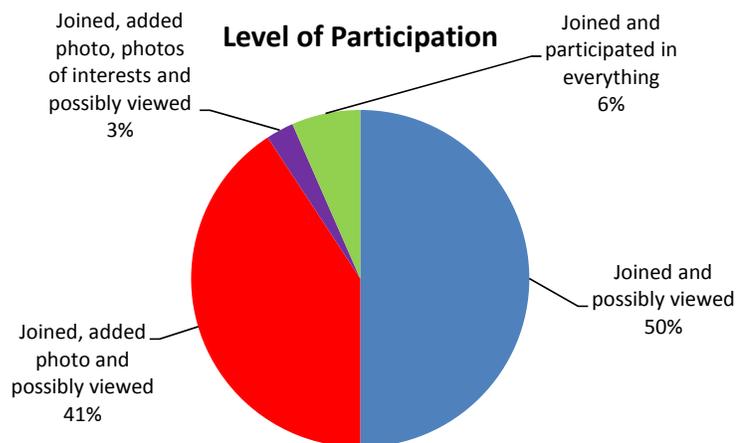


Figure 1: Participation level

The students' sporadic use of the NING social network coupled with their lack of interaction suggested that they were not interested in engaging with staff and other students on the majority of topics posted on the discussion boards. Nevertheless Figure 2 shows that there

was one topic of immense interest and three topics with greater than 20 views. A possible conclusion was that the staff needed to think more carefully about the topic choice.

Views of discussion topics

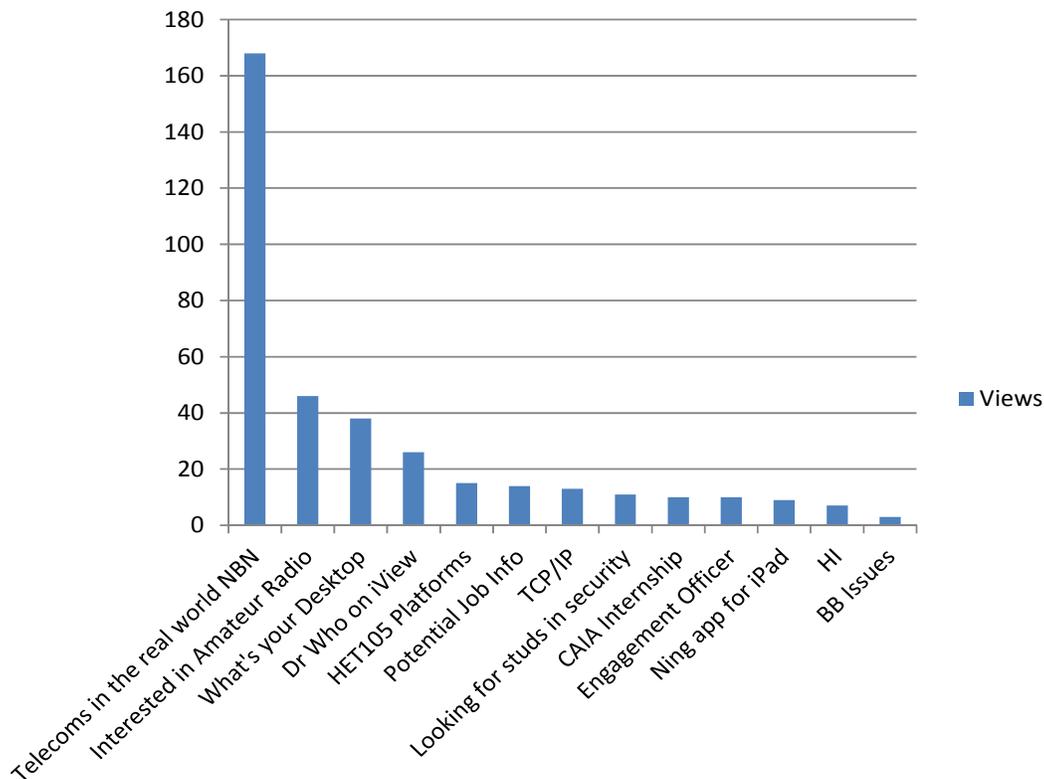


Figure 2: Number of views of discussion topics

Figure 3 shows that blogs were not as popular as the discussion topics, with many topics having greatly reduced views. Again this could be due to the poor choice of blog topics.

Views of blogs

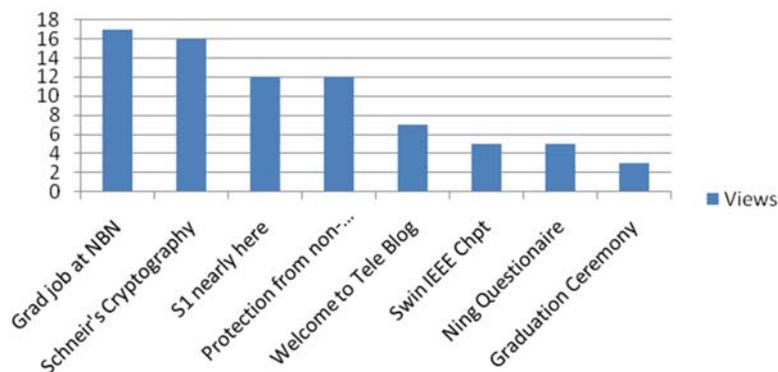


Figure 3: Number of views of blog topics

The questionnaire was carried out towards the end of the trial and informal discussions with students 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 students felt that they might appear foolish. Some participants' believed that they

did not have anything more to add to the discussion and that they did not think 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 4. These findings are the same as those found in Nonnecke (2001).

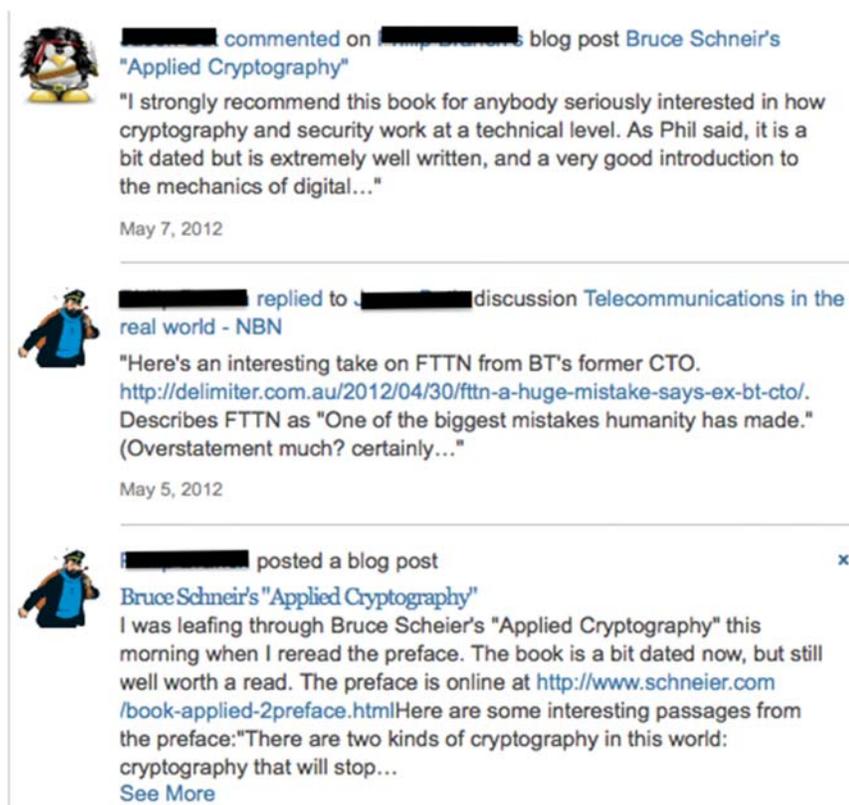


Figure 4: A Sample of topics with student names blanked out for privacy

After the project was announced large numbers of students enrolled in the NING, but very few of them contributed in the form of either starting or responding to discussion topics. Results collected from the student surveys and a number of informal discussions showed that the purpose of the NING was not well understood. The guidance provided to the students from the outset of the research project was that the NING was only going to contain material of interest and not course related material. Nonetheless, a number of students believed that if they did not enrol they would not have access to material directly related to their studies. Contribution to the online community by many of the students was non-existent, instead preferring to lurk to ensure they did not miss out on any valuable postings.

The worded responses from the surveys showed that both staff and students were pressed for time, and hence did not make as many contributions as they would have liked. Students pursued other avenues for social interaction, and since the NING was not directly related to their study and their grades, they were more likely not to participate.

All the conversations, bar one were initiated by the academics on the NING. This was a disappointing outcome as students did not take the initiative to ask questions, or put forward comments or start discussion threads on topical telecommunications issues. Nevertheless, the extent of lurking and obvious interest in topical areas provided hope that technology may still have a role in improving student engagement.

Conclusions

The project explored whether the use of a social media platform would increase student engagement. It may be concluded that the NING social media platform did not increase

active student engagement; however, the large number of lurkers suggested that perhaps that it did increase engagement to some extent. The evidence indicates that a significant percentage of students created an online presence and viewed the various discussions. The percentage of lurkers was too high to reach *critical mass* and allow the online engagement to continue with minimal input from the academics.

The reasons for the lack of active participation from students included, a fear of appearing foolish, concern for their anonymity and that their contribution may not enhance the discussion. Other reasons for students not engaging included being time poor and social media overload.

Using social networks as supplementary learning tools may have promise and the outcomes of this project indicate that for social media to be successful in education, discussion topics need to be carefully chosen. Additionally academic staff need time to make regular positive contributions and anonymity for student contributions should be considered.

The challenge for the future is to convert lurking into active participation and thereby improve student engagement.

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