Class blogs as a teaching tool to promote writing and student interaction

Miriam Sullivan, Nancy Longnecker
University of Western Australia

Blogs are a useful teaching tool for improving student writing and increasing class interaction. However, most studies have looked at individual blogs rather than blogs maintained by a whole class. We introduced assignments involving participation in class blogs to four science communication classes with enrolments of between 15 and 36 students. We administered paper-based surveys to obtain student perceptions of the value of the blogging assignment. Based on feedback in semester one, we increased commenting requirements and spent more time integrating the blog with coursework in semester two. In semester two, students had significantly improved perceptions of the blog assignments. The most commonly cited benefit by students in both semesters was that the blog helped to improve their writing. Most enjoyed the opportunity to have increased intellectual exchange with other students and the majority agreed that knowing other students read the blog motivated them to write better. Students disliked being forced to comment and they felt that they benefited just from reading other students’ posts. However, we recommend that weekly commenting should be mandatory, as this increased involvement and perceived value of the assignment.

Introduction

Blogs are becoming more popular as a teaching tool in university teaching. Although not yet well defined in the educational literature (Brooks, Nichol, & Priebe, 2004), blogs can be described as websites containing short posts that are listed in reverse chronological order and can be commented on by readers (Farmer, Yue, & Brooks, 2008). Writing for blog posts tends to be more in-depth and extended compared to a discussion board or email, but less formal than for an essay or paper (Farmer, 2006). In addition to text, blog posts can include pictures, links to other websites and embedded multimedia. Compared to conventional learning management systems, such as Moodle and Blackboard, students find blogs more intuitive to use (Kim, 2008; Tekinarslan, 2008).

Writing blog posts is not the same as writing an essay for an examination or traditional assignment. Acquired knowledge is intrinsically linked to the activity through which it was learned (Brown, Collins, & Duguid, 1989), suggesting that having a student synthesise their knowledge into a post for their peers teaches different skills to regurgitating knowledge for their markers. Used correctly, online tasks should require students to situate their knowledge within a discussion about real life and disciplinary contexts, providing an authentic learning environment (Brown, et al., 1989; Herrington, Oliver, & Reeves, 2003).

Ferdig and Trammell (2004) cite four main pedagogical benefits of blogs; participating (1) encourages students to develop expertise in their subject matter, (2) stimulates student interest and ownership of the topic, (3) creates a community of learners and practice and (4) exposes students to diverse perspectives. The last two benefits, in particular, have been well substantiated in the research literature, with blogs having been shown to increase student interaction (Farmer, et al., 2008; Kim, 2008), motivation (Tekinarslan, 2008), peer learning (Strampel & Oliver, 2009) and understanding of alternative viewpoints (Hemmi, Bayne, & Land, 2009; Philip & Nicholls, 2009). Blogs can be a useful source of peer feedback, but Strampel and Oliver (2009) found students offered peers sympathy and encouragement, rather than constructive criticism. In contrast, Chen, Feng, Shih, Wu and Yuan (2011) found that peer feedback significantly improved writing skills and was appreciated by students when an anonymous feedback system was used.

Blogging can aid teachers by ensuring that students are up-to-date with class material (Kim, 2008; Kumar, 2009) and are prepared for class (Hemmi et al., 2009). Blogs enable teachers to monitor student learning throughout semester and detect misunderstandings earlier (Hemmi et al., 2009), particularly with regards to writing skills (Lansiquot, Rosalia, & Howell, 2009).
The educational use of blogs has limitations that teaching staff should be aware of. The need for ongoing marking can be problematic for staff (Jones & Luck, 2009) and is challenging due to the potentially large variation between students in the number and quality of posts and comments (Farmer et al., 2008). A class blog may be dominated by just a few students (Jones & Luck, 2009) or underutilized if not properly integrated with the course and other assessment (Philip & Nicholls, 2009).

The majority of blog research so far has focused on evaluation of individual student blogs rather than class or group blogs (Philip & Nicholls, 2009). Individual and group blogs have different strengths, outlined in Table 1, with the key benefit of group blogs for teachers being that they can dramatically reduce the amount of time required of teaching staff for marking.

Table 1
Comparison of individual and group blogs (Adapted from Philip & Nicholls, 2009).

<table>
<thead>
<tr>
<th>Individual Blogs</th>
<th>Group Blogs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unwieldy amount of marking</td>
<td>Manageable for marking</td>
</tr>
<tr>
<td>‘Stream of consciousness’ writing style</td>
<td>Structured writing for an audience</td>
</tr>
<tr>
<td>Own workspace, complete control</td>
<td>Shared workspace, some students can dominate</td>
</tr>
<tr>
<td>Teachers track individual students</td>
<td>Students monitor each other</td>
</tr>
<tr>
<td>Can become a soapbox</td>
<td>Must accommodate diverse opinions</td>
</tr>
<tr>
<td>Good for reflection</td>
<td>Good for group work</td>
</tr>
</tbody>
</table>

To date, most researchers have assumed that individual and group blogs provide similar benefits to students. However, this is not necessarily a valid assumption. Students are likely to be required to do less work when the blog is collaborative, so they may not get the same amount of practice writing. Farmer (2006) argues that having an individual writing space is one of the key benefits of blogs over other online tools, because it helps to foster recognition of individuals and allows students to develop their own social presence. It is possible that group blogging may be more similar to discussion boards, removing the need for students to develop their own voice. For these reasons, Kim (2008) predicted that students would be less interested in group blogs, although Phillip and Nicholls (2009) found group blogs extremely helpful in facilitating group assignments.

Our research aimed to evaluate group blogs as a teaching tool. We surveyed university students in four different science communication classes that utilised similar group blogging assignments to examine their perceptions of the value of class blogs.

**Methods**

Class blogs were first introduced as assignments in four science communication classes at The University of Western Australia during 2011. Two of these classes were run in first semester (Communication Strategies for Change and Science Writing) and two in second semester (Science and the Media and Displays and Exhibits). The classes were coordinated by the authors and had enrolments of between 15 and 36 students. Both postgraduate students and final year undergraduates participated in the blogs. The blogging assignments aimed to:

- Provide writing practice for students,
- Encourage familiarity with examples of relevant literature by asking students to post about specified readings,
- Help students to understand how academic theories can be applied to real world problems,
- Provide a shared experience with classmates,
- Enable peer feedback, and
- Motivate students to produce their best work.

This assignment fits squarely within current pedagogical recommendations for authentic learning in Web 2.0 environments. It provides real-world context; requires sustained activity; allows multiple perspectives; collaboration; and articulation of knowledge (Herrington & Kervin, 2007; Herrington, et al.,
This development of understanding through weekly participation in the blog contributes to the hard work and hours that are necessary for development of expertise (Adams & Wieman, 2011).

The blogs were set up in free accounts at Wordpress.com. Each student in the class created an account and was added as author to the class blog page. This gave students the power to write and publish their own posts, but not to edit the posts of others. Teaching staff administered the site, which allowed them to view and edit all posts and check site statistics.

The blogging assignment was explained in the first class of semester and a short video explaining how to join and post to the blog was made available at http://vimeo.com/20594320. Students chose their blog post topic from a list of specified readings and associated due dates. For all classes, students were marked on both their posts and their responses (comments) to posts of their classmates, but specific assignment requirements and readings differed between the four classes as outlined in Table 2.

Table 2
Class requirements for the blogging assignments

<table>
<thead>
<tr>
<th>Name of class, semester and blog site</th>
<th>Posts required</th>
<th>Comments required</th>
<th>% value</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Strategies for Change Semester 1 Communicationstrategies.wordpress.com</td>
<td>1</td>
<td>Three over the semester</td>
<td>10</td>
<td>Read a scholarly article from the reading list and post about some aspect of the article as it related to class material and assignments</td>
</tr>
<tr>
<td>Science Writing Semester 1 Sciencewritingblog.wordpress.com</td>
<td>1</td>
<td>Three over the semester</td>
<td>10</td>
<td>Read an excerpt from a given popular science book and critically analyse its effectiveness.</td>
</tr>
<tr>
<td>Science and the Media Semester 2 Scienceandmedia.wordpress.com</td>
<td>2</td>
<td>Weekly</td>
<td>20</td>
<td>One post based on a required reading of academic or grey literature and one post on topic of student’s choice</td>
</tr>
<tr>
<td>Displays and Exhibits Semester 2 Exhibitsdisplays.wordpress.com</td>
<td>1</td>
<td>Weekly, best three marked</td>
<td>10</td>
<td>Read a scholarly article from the reading list and post about some aspect of the article as it related to class material and assignments</td>
</tr>
</tbody>
</table>

A paper-based survey was created based on the unit outcomes and the benefits of blogging cited in the literature. The survey was administered in the final class of semester. It used a mixture of Likert scale questions (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree) and open-ended questions. Website metrics and visitation data provided by the blog host were also examined.

Data were analysed using nonparametric statistics in SPSS (IBM, 2010). Effect sizes (r) were calculated; 0.1 is considered a small effect, 0.3 medium and 0.5 large (Cohen, 1988). Not all data are completely independent, as some students enrolled in multiple science communication classes and therefore could have completed the survey several times (although in response to different blogging assignments). Content analysis of open-ended questions was conducted to reveal common themes (Krippendorff, 2004). A preliminary analysis was done after semester one and feedback from students was considered in refining the blog assignments for semester two.
Results

Overall, 62 individual students took part in the blogging assignments. Participation in the blogging assignment was high (>86%) and over half of the students in each class completed the survey (Table 3).

Table 3
Student participation in blogging assignments of four different classes.

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Communication Strategies</th>
<th>Science Writing</th>
<th>Science and the Media</th>
<th>Displays and Exhibits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of students enrolled</td>
<td>36</td>
<td>31</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>Number of students who blogged</td>
<td>31</td>
<td>28</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>Survey return rate (for total student enrolment)</td>
<td>61%</td>
<td>71%</td>
<td>56%</td>
<td>60%</td>
</tr>
<tr>
<td>Total number of posts</td>
<td>35</td>
<td>29</td>
<td>34</td>
<td>17</td>
</tr>
<tr>
<td>Average number of comments per student</td>
<td>5</td>
<td>5</td>
<td>19</td>
<td>9</td>
</tr>
<tr>
<td>% of students subscribed to updates by RSS or email feed</td>
<td>50%</td>
<td>16%</td>
<td>94%</td>
<td>40%</td>
</tr>
<tr>
<td>Number of views during semester</td>
<td>1670</td>
<td>3054</td>
<td>3279</td>
<td>1246</td>
</tr>
<tr>
<td>Total number of views by Dec 31, 2011</td>
<td>3005</td>
<td>9311</td>
<td>3618</td>
<td>1270</td>
</tr>
</tbody>
</table>

There were no significant differences in responses of postgraduate (n = 21) and undergraduate (n = 41) students, but the blog assignments in semester two were rated far more positively compared to the first semester (Table 4).

Most students agreed that the blog helped improve their writing skills and that they were motivated by knowing others would read their posts (Table 4). Responses to open-ended questions supported this, with most favourable comments focusing on writing skills (Table 5). Students were less likely to agree that a blog should be used in other classes (Table 4) although agreement with this statement increased in the second semester. Many of the negative comments related to having to respond to other students’ posts (Table 5).

Discussion

Integrating and development of the blog

The changes that were made to the blog assignment in response to feedback from semester one classes seemed to improve the student experience. Students enrolled in semester two classes participated more often and responded more favourably to the blogs. There are several possible reasons for this, including:

- In first semester only three comments were required, whereas in second semester students had to contribute comments weekly. Increasing regular involvement may increase the value of the blogs for students.
- Class sizes were smaller in semester two and had a higher proportion of students majoring in science communication; both factors may have increased engagement.
- Based on feedback from students in semester one, more time was spent talking about the blog during class in semester two.
Table 4
Students’ level of agreement with survey statements compared between first (n = 44) and second (n = 18) semesters. Agreement was measured using a five-point Likert scale and p-values using the Mann-Whitney U-test.

<table>
<thead>
<tr>
<th>Survey Item</th>
<th>% Agreement (Strongly agree + agree)</th>
<th>% Disagreement (Strongly disagree + disagree)</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>The blogging assignment helped me to improve my writing skills.</td>
<td>73 89</td>
<td>9 0</td>
<td>p = 0.069</td>
</tr>
<tr>
<td>Knowing other students would read the blog motivated me to write better posts.</td>
<td>68 94</td>
<td>18 0</td>
<td>p = 0.003, r = 0.38</td>
</tr>
<tr>
<td>Knowing the general public could read the blog motivated me to write better posts.</td>
<td>68 72</td>
<td>23 6</td>
<td>p = 0.026, r = 0.28</td>
</tr>
<tr>
<td>The class blog increased meaningful intellectual exchange between students.</td>
<td>64 83</td>
<td>11 0</td>
<td>p = 0.023, r = 0.28</td>
</tr>
<tr>
<td>The blog helped me to meet the learning outcomes for this unit.</td>
<td>52 83</td>
<td>25 0</td>
<td>p = 0.003, r = 0.38</td>
</tr>
<tr>
<td>The percentage weighting of the blog was appropriate for the workload required.</td>
<td>48 94</td>
<td>14 0</td>
<td>p = 0.000, r = 0.46</td>
</tr>
<tr>
<td>The introductory video was helpful for learning how to use the blog.</td>
<td>41 72</td>
<td>11 0</td>
<td>p = 0.053</td>
</tr>
<tr>
<td>I found the comments from other students about my post helpful.</td>
<td>36 67</td>
<td>27 0</td>
<td>p = 0.215</td>
</tr>
<tr>
<td>The class blog should be freely accessible for anyone to read on the internet.</td>
<td>36 61</td>
<td>11 0</td>
<td>p = 0.394</td>
</tr>
<tr>
<td>The blogging assignment was well integrated with the rest of the course.</td>
<td>34 89</td>
<td>30 0</td>
<td>p = 0.000, r = 0.52</td>
</tr>
<tr>
<td>The blog encouraged me to keep up with the set readings.</td>
<td>32 61</td>
<td>27 11</td>
<td>p = 0.019, r = 0.3</td>
</tr>
<tr>
<td>Blogs should be used more widely as a learning tool in other units.</td>
<td>30 61</td>
<td>27 0</td>
<td>p = 0.003, r = 0.38</td>
</tr>
</tbody>
</table>
Table 5
Themes emerging from student comments about blogging in response to an open-ended question asking for the best and worst aspects of the assignment.

<table>
<thead>
<tr>
<th>Topic</th>
<th>n</th>
<th>No. positive</th>
<th>No. negative</th>
<th>Neutral or constructive</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing Skills</td>
<td>21</td>
<td>19</td>
<td>1</td>
<td>1</td>
<td>&quot;Good tool for writing&quot;, &quot;Learning to take something quite complicated and write an engaging and accessible blog post about it&quot;, &quot;Very restrictive word limit.&quot;</td>
</tr>
<tr>
<td>Others’ perspectives</td>
<td>17</td>
<td>12</td>
<td>2</td>
<td>3</td>
<td>&quot;Thinking about the articles from other people's perspectives&quot;, &quot;learning from the insights of others&quot;, &quot;Many people having different views confuse you more.&quot;</td>
</tr>
<tr>
<td>Readings and blog topics</td>
<td>19</td>
<td>8</td>
<td>7</td>
<td>4</td>
<td>&quot;Interesting topics to blog on&quot;, &quot;the readings were either very long or difficult&quot;, &quot;Allow students to pick any topic from any reliable source instead of having fixed set of readings.&quot;</td>
</tr>
<tr>
<td>Discussion</td>
<td>7</td>
<td>6</td>
<td>1</td>
<td>0</td>
<td>&quot;It facilitated the spirit of reading and interactive learning among students&quot;, &quot;It was a good opportunity for students to form their own opinions on communication issues and to form a discussion with others.&quot;</td>
</tr>
<tr>
<td>Commenting on other’s blog posts</td>
<td>28</td>
<td>5</td>
<td>15</td>
<td>8</td>
<td>&quot;Made me think more about my comments and reading the material first&quot;, &quot;Peoples comments seem forced- which they are&quot;, &quot;Having to post when posts for that week didn't necessarily interest me.&quot;</td>
</tr>
<tr>
<td>Learning opportunities</td>
<td>6</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>&quot;Getting a 'snapshot' of a lot of different research condensed into short, accessible formats&quot;, &quot;Read up on a lot of new authors, expand my horizons.&quot;</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>&quot;Could be more lenient with due times?&quot;, &quot;What about online/classroom forums or 'focus group'-type discussions and activities instead?&quot;, &quot;Introduced us to the world of blogging.&quot;</td>
</tr>
<tr>
<td>Online</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>&quot;I think handing in a blog to a teacher would be better&quot;, &quot;I don't like that it's public- google my name and it shows, don't like that.&quot;</td>
</tr>
</tbody>
</table>
In first semester, about a third of students felt that the blog was poorly integrated with the rest of the unit and did not encourage them to keep up with set readings. In semester two we put more emphasis on referring to the blog during class, for example by pointing out links to other content and assignments. We based our methods of improving integration of the blog on literature that showed that student involvement was improved by mentioning the blog in class (Lansiquot et al., 2009), participation by tutors with the blog (Kumar, 2009), matching the readings better with other assessments (Williams & Jacobs, 2004) and increased participation (Hristinkski, 2009). The changes in semester two appear to have been effective, with nearly 90% of second semester students agreeing that the blog was well integrated with the course compared to just 34% of first semester students. Smaller sample sizes in semester two and changes to assignment requirements are a limitation of our study, as it makes it difficult to determine exactly which of the interventions was most effective. However, we believe this is an inescapable problem caused by conducting research in realistic teaching situations and could have been avoided without detrimental outcomes for the students.

Students expressed mixed opinions about the set readings they were given to blog about. Positive opinions were expressed by comments like “I learned lots of theories of science communication” and “[I liked] learn[ing] about the readings within [the] context chosen by individual students. This took the academic edge off[f] them and placed the theory in the real world”. In contrast, some students expressed negative opinions such as, “The readings didn’t provide me with any new ideas or information.” The decision to set readings or allow students to choose their own is a challenge, as many students find it difficult to decide what to post about (Farmer et al., 2008; Tekinarslan, 2008). This was also demonstrated in quotes from Homik & Melis (2006, p. 8), whose students reported that “The blog is too complex and unstructured” and a student in Lansiquot et al.’s (2009, p. 2) study who stated that “most of the time I had no idea what to write.” Having a well defined topic and objective with a set reading for the blog can help those students (Muwanga-Zake, Parkes, & Gregory, 2010). However, highly self-motivated students can feel constrained by set topics and defined criteria (Williams & Jacobs, 2004). This creates a tension between the need to support students while encouraging independent learning (Farmer et al., 2008). We addressed this in the Science and Media unit by asking students to contribute one post about a set topic and one post on a topic of their choice. It is difficult to tell how successful this was based on the small sample size of comments, but we received no negative feedback on the readings for this unit and a similar amount of positive feedback to the other units.

**Writing Posts**

Our group blogs required students to write just two posts per semester, far fewer than the minimum requirements reported in the literature for individual blogs (eg. weekly posts in Farmer et al., 2008; minimum of seven posts in Lansiquot et al., 2009; weekly posts in Top, 2012). In spite of this, students commented that that the primary benefit of the blog was in improving their writing skills. This is not unexpected, given that any frequent writing practice is thought to improve skill and increase student engagement with university courses (Bernstein, 2004; Light, 2001). Lansiquot et al. (2009) also reported qualitative evidence for the improvement of writing skills in a blogging assignment. However, it would be interesting for future research to examine whether blogging results in a quantitative improvement in writing grades or whether students just perceive that their writing improves. Student perceptions do not always reflect reality. For example, nearly 70% of students state that they can learn just as well from online lectures as face-to-face lectures (Preston et al., 2010), but this is not backed up by quantitative studies of results that suggest online lectures are only effective when combined with attending face-to-face lectures (Williams, Birch, & Hancock, 2012).

Anecdotaly, it seems likely that both writing their own posts and reading other student’s posts were important for improving writing skills. Students wrote that, “Reading other student’s blogs helped me to improve my writing,” and that “It was just interesting to be exposed to what others wrote about.” As noted by Ellison and Wu (2008), students appreciated the opportunity to read other’s posts and gather diverse opinions about a reading. Reading the perspectives of other students was the second most frequently cited benefit of the blog, after improving writing skills. This is an important point to share with students, as many are unsure what to comment on in posts, or are concerned about giving critical feedback (Ellison & Wu, 2008). These fears might be allayed if students were encouraged to give their opinion on the readings themselves, rather than critiquing the author of the post, and if students were reassured that other students are likely to find their opinions useful.
Although students did state that their writing improved, there was some disagreement and confusion over the best writing style for the blog. For example, one student stated that, "It was a bit confusing at the beginning because I didn't know anything about blogs." In particular, our students appeared to disagree over the level of formality required in a blog post. Several students stated that they enjoyed the informal nature of the blog (e.g. "INFORMAL communication = good") while other students struggled (e.g. "I think I would prefer more comments on blogs based on references, rather than very subjective feelings about certain situations. It sometimes changed a discussion into a format possibly too informal to learn from.")

Since there is no defined stylistic form for a blog, it is understandable that students can struggle to understand what is required of them (Brooks et al., 2004). The students recognized this problem and one student suggested this solution:

Lots of students didn't really understand how to construct a blog post (eg. Formal or informal?)- this should be talked about in class & students should be encouraged to read other popular blogs to have an example of what to do.

(Undergraduate student, semester one)

Although we did have a short introductory tutorial where students learnt about blogging and looked at some examples, this needs to be expanded to include class discussion about appropriate language. One tutorial class spent some time arguing over whether emoticons (e.g. 😊) were acceptable in the class blog and eventually agreed that they could be used in comments, but not posts. We suggest that conversations like these are the best way to resolve disagreements over style, because the discussion helps to build the class community and integrate the blog with in-class activities. These group conversations fit the pattern of engagement reported by Herrington et al. (2003) where students were initially frustrated by ill-defined, learner-centred authentic learning activities, but after a few weeks became immersed and wanted to discuss their learning. Lack of explicit rules can encourage students to generate their own consensus, which helps them to develop a professional vocabulary and increase their skills in reflection and collaboration (Brown et al., 1989).

**Commenting**

The most contentious aspect of the blog from the student perspective was the requirement to comment on other students’ posts. This was cited as the worst aspect of the blog in 15 of the 28 student responses about commenting. For example, one student noted, “comments were far too lengthy and detailed” while another wrote, “some of the comments are too casual.” Some students appeared to grasp the goal of comments is to create discussion, while others did not. For example, one student said the least valuable aspect of the assignment was, “Commenting back to a comment on your own blog. Why?”, while another student was annoyed that, “People don’t comment on other people’s comments. No continuous discussion is created.”

Although most students found the comments on their own post helpful, many resented being forced to comment on others’ blogs. “Mandatory commenting was a bit stressful,” said one. This may be because students felt they benefitted from reading the blog even if they did not actively participate themselves (Kim, 2008; Williams & Jacobs, 2004). One study of online discussion groups showed that the number of posts students make is linked to student achievement, but that the overall amount of time viewing the discussion is an even better predictor (Morris, Finnegan, & Wu, 2005). This provides evidence that commenting is not essential for students to benefit from the blog.

However, we chose to maintain compulsory commenting in the blog assignments for several reasons. From a practical perspective, comments allow teaching staff to monitor student participation and understanding (Jones & Luck, 2009). However, commenting is also an integral aspect of blogging that contributes to other aspects about which students responded positively, such as increased discussion and intellectual exchange (Farmer et al., 2008; Hemmi et al., 2009; Kim, 2008; Philip & Nicholls, 2009; Top, 2012). For example, most students in our study reported that they found the comments on their own blog helpful. This was also found by Kerawalla, Minocha, Kirkup and Conole (2009) and Top (2012). Comments give feedback to the author of the post and clearly demonstrate to them that other students are...
reading their work. Both our survey, and the work done by Tekinarslan (2008), indicates that students are motivated to write better when they know their blog posts will be read by classmates. Increased motivation has also been observed on other online activities where group work and feedback are required, such as podcasts (Bartle, Longnecker, & Pegrum, 2011).

Requiring weekly comments means that students are more likely to regularly read and contribute to the blog. Active participation in online activities is known to improve student satisfaction and retention of information (Hrastinski, 2009), which may help to explain why our students were more likely to agree that the percentage weighting was appropriate for the assignment in semester two, even though they were actually required to do more work compared to semester one. Despite complaints about commenting, students actually commented more than they needed to, with an average of over four comments per student when the assignment only required three.

Previous studies have found that the majority of students do not engage with blogs if commenting and posting are voluntary (e.g., Homik & Melis, 2006; Kerawalla et al., 2009; Top, Yukselturk, & Inan, 2010; Williams & Jacobs, 2004). One of our students showed insight into this problem when they wrote:

I wish there were some way to encourage students to, well, comment when they have comments, not just because it is required … Essentially, what I am getting at is, encouraging participation for participation's sake, not for marks.

(Undergraduate student, semester two)

Based on our own experience and the literature, we are not aware of an ideal solution to the dilemma of stimulating deep learning in student blogs without use of extrinsic motivation. As a result, our recommendation for other class coordinators is to mandate minimal requirements for posting and commenting, and to set those minimal requirements relatively high. Although students can benefit by reading the blog without commenting, few students are likely to read the blog unless commenting is mandatory.

Public versus Private Blogs

Good teaching is good teaching, regardless of the medium that is used. We could have used a private discussion board to achieve the same aims as the blog. In fact, for pragmatic reasons one author has subsequently used a discussion board on the university learning management system for class ‘blog’ assignments in two of these classes, due to increased class sizes and time constraints. Anecdotal feedback from students using the discussion board has been consistent with that reported in this paper. However some students in subsequent classes have expressed a preference for returning to Wordpress. It is therefore important to establish whether features that are facilitated by public blogging, such as public access, ease of insertion of multimedia and RSS feeds provide significant benefits to students over restricted access discussion boards.

An important source of motivation for most students in this study was knowing that other students would read their blog post. “[The blog] made me think more about my comments and reading the material first.” They were far less motivated by knowing that the general public could read their posts, although most agreed that the blog should be publically available on the internet. Yet the high number of visits to the class blogs and continued visitation after the end of semester indicates that the general public are reading the blogs. For example, one post alone (on 3/25/11) attracted over 4000 views because it mentioned the Big Bang Theory (a popular science-themed sitcom, being aired on television at the time) as an example and readers were directed there by Google search. It may be that students do not realize how popular the blogs can potentially become and we recommend that teaching staff emphasize this in class and keep students up to date with site statistics. This also raises the possibility that longer-term blogs maintained by consecutive classes could achieve a sustainable internet audience.

A few students raised minor privacy concerns, namely that they might be identifiable. Students were encouraged to use a pseudonym (e.g. student number or first initial-last name), but not all did and this has subsequently been added as a requirement on the assignment handout for classes still using a public blog. Privacy concerns provide a valuable opportunity to discuss the topic of online identity and protecting individuals’ security online. Cameron, Morgan, Williams and Kostelecky (2009) reported that students
often express a desire for anonymity in online activities, especially when they are being asked to critique each other’s work, but that complete anonymity can hinder the development of a sense of community within the group. It is therefore suggested that students should be encouraged to use pseudonyms that protect their identity online, but are still recognizable to classmates.

One of the useful features of blogs is that students can subscribe to receive new posts via email or RSS feed (Kim, 2008; Kumar, 2009). Classes responded very differently to this feature, with a range from 16-94% of the students subscribing. The highest proportion of subscriptions was 94% in Science and the Media, where the lecturer promoted subscription and demonstrated in class how to subscribe. As students may be more likely to keep up to date with the blog if they subscribe, it is recommended that this feature is prominent on the blog and encouraged in class. Future research should also examine whether subscribing improves readership. Although both pieces of data were collected in this study, the anonymous survey data is impossible to match to subscriptions.

Interestingly, only one student commented on the capability to add links, pictures and multimedia to the blog, saying that, “Using visuals was not mandatory, but encouraged [and] that took me [a] bit [of] extra effort.” Since easily adding multimedia is one of the more powerful features of blogs compared to discussion boards, it would be interesting to question students further about whether they found this useful or perceived that it encouraged more comments on their posts.

**Conclusion**

Overall, students enrolled in these science communication classes responded positively to blogging assignments, as long as they felt the assignment was well integrated with the rest of the class. However, students often disagreed about the best way to run the assignment, particularly with regards to the set readings, the need to comment on posts and the informal writing style. We recommend that unit coordinators set class time aside for students to discuss and negotiate readings, writing style and commenting. Website statistics of the number of views and subscribers should be shared with students to increase their motivation. We also recommend weekly comments as a minimum requirement. Students may find this arduous, but it will ultimately increase their appreciation and involvement with the blog and learning from the assignment.

Our research suggests that class blogs have similar benefits for students to those observed in individual blogs, such as improving writing skills and exposing students to diverse perspectives. This allows teachers to design pedagogically sound assignments while minimizing their marking workload. Future research could fruitfully compare class and individual blogs as well as restricted discussion boards and public blogs, as benefits may vary.

**References**


---

**Corresponding author:** Miriam Sullivan, miriam.sullivan@uwa.edu.au
