

Promoting Reflective Learning: The Role of Blogs in the Classroom

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Abstract. The enthusiasm for adopting social media technologies should be tempered by a critical, empirical understanding of how they facilitate an effective learning environment. This study analyzed blog use in two graduate-level university courses, specifically identifying reflective learning markers in 279 blog entries. This analysis was deepened with follow-up interviews of several top bloggers. The reflective bloggers were characterized as being comfortable with their audience, having a deeper thought process, enjoying the interaction, and progressing well throughout the semester. Our results suggest guidelines for effective use of blogging in the classroom to support reflective learning.

1 Introduction

Web 2.0 technologies like web blogs (blogs) and wikis have received great interest as a means of innovation in the classroom. The enthusiasm for adopting these technologies should be tempered by a critical, empirical understanding of how they facilitate a conducive learning environment. Ideally, students should take active roles in constructing new knowledge and have skills to critically examine their assumptions and beliefs. These are known as reflective learning skills, which have been recognized as a essential component of life long learning [6].

Some researchers have claimed that blogs are “effective at supporting reflective learning more so than other technologies” [26, p. 1656]. Despite the attractiveness of these arguments, many of the studies claiming the appropriateness of blogs for reflective learning fail to provide evidence from student’s blog entries to support their assertions [23][27]. There is a dearth of empirical work that can thoughtfully guide educators on the correct use of blogs to support reflective learning. For example, in a study involving 56 students in a teacher education program, only five expressed any interest in incorporating blogs in their own classrooms after experimenting with blogs. The primary reason cited was that they were unable to see how the blogs could facilitate reflective learning [11].

Contributing to our understanding of the impact blogging can have on reflectice learning, this study examines actual students’ blogs entrees for identifying markers of reflective thinking, and does not rely merely on self-report perceptions of blogging.

2 Background

2.1 Reflective Learning

Reflective learning has been recognized as one of the most important lifelong learning skills as it empowers students to wrestle effectively with complex ideas [6]. Reflective learning can be summarized as a process of conscious thought as to what is being learned, which means that the learner is not simply a passive recipient but rather an active contributor within the learning process [22]. Through reflective thinking, the learner becomes intellectually responsible and can make informed, accountable decisions [9].

One means of fostering reflective learning among students is through writing reflective journals. Journaling has been recognized as effective in developing students' meta cognitive and reflective skills [18]. This approach has been widely adopted in nursing and teacher education as it has been found to be helpful in promoting deeper understanding [15]. Through journaling students become aware of their thought process and the consequences of their experiences. However, students need to be encouraged to be critical in their reflection, in which mere description of events and experiences in journals is not sufficient; students should be able to synthesize the new experience or knowledge and able to relate with previous knowledge, forming a coherent perspective towards an issue or phenomenon [10].

2.2 Blogs as Tool for Reflective Learning

Traditionally hard-copy learning logs have been used to document experiences and reflective thoughts. The rise of blog publishing gives new aspiration for reflection learning. Unlike traditional journals, which only serve the instructor, blogs have the ability to engage a larger audience, forming a close knit community of learners. The public nature of blogs within the class encourages the students to view each other work, hence promoting collaborative writing and reflection among students [1]. Researchers have emphasized the needs for collaborative reflection in enhancing the development of professional knowledge [17]. Furthermore, a blog is interactive in the sense that readers can respond with comments which will be beneficial in promoting a collaborative learning environment [7].

Initial studies showed that blogging can support reflective thinking, critical thinking, and collaboration, allowing students to take ownership of their learning [2][20]. However, there is very limited evidence showing the levels of reflection that are demonstrated in the students' blogs. Some papers made substantial contributions providing arguments of the appropriateness of blog features for reflective learning, but did not demonstrate the real implementation in a class [12][25]. The majority of these studies relied on students' self-report data on their perceptions of blog usefulness, not their actual blogging activity or content of their entries [27]. Although there have been a few papers demonstrating initial indicators of reflective learning in blogs, these studies were mainly conducted in a very small classes, ranging from five to twenty students [19][21]. Thus, we still do not know whether similar findings can be reached in a larger population of learners. This study attempts to address call for more in-field studies of the informal nature of blogging to foster reflective learning [1][16][19].

3 Study Design

This study is based on the blog implementation in two sections of a graduate course within the Information Systems Department at UMBC. This course, called Online Communities, employed a hybrid approach in which there were a face-to-face academic lectures and discussions every week for 3 hours supplemented with significant online activities. Prior to every week's class, students were given an assignment to be explored and they were required to blog about their experiences. These personal blogs were managed using the Blackboard course content management software's blogging tool. These posts were private within a "neighborhood," and accessible only by participants and instructional staff for the two classes (and researchers after the conclusion of the semester). Basic sets of reflective guideline questions were included in each week's activity. Guided by these questions students were free to explore the assignments and be reflective in their blogs. These blogs were graded and contributed to student's overall course grade. In total there were 279 distinctive blog entries posted by 31 students across the two classes. The majority of the students had not created a blog before, and none had ever been asked to produce a blog for a course assessment.

4 Analysis

We conducted a content analysis on the weekly blog posts to classify them into reflective and non-reflective posts. We used a deductive approach in analyzing the data, guided by an established reflective coding framework by Kember et al. [13]. We used the following definition of reflective learning to guide our coding process:

Reflective learning is the process of internally examining and exploring an issue of concern, triggered by an experience, which creates and clarifies meaning in terms of self, and which results in a changed conceptual perspective [3, pp.100].

We also examined the interaction among the students through the commenting capabilities supported by the Blackboard blog system. Following this analysis, we conducted contextual interviews with seven individuals, talking through their blog entries from the prior semester.

5 Results and Discussion

We start off this section by describing the characteristics of the reflective bloggers. This is followed by an examination of their reflective posts.

5.1 The Reflective Bloggers

For classifying the reflective and non-reflective bloggers, we used the total number of entries classified as reflective, using the method described above, as our indicator. Students who had more than 6 reflective posts (out of 9¹) were classified as reflective

¹ For this study, we excluded the blog entries from weeks 1 and 13 as they were largely introductory. Posts from weeks 10, 11 and 12 were also excluded as they focused on structured debates.

bloggers. In total, there were 8 (26%) students classified as reflective bloggers. Among the non reflective bloggers, 12 of them had 4 to 5 entrees classified as reflective. The rest of 11 students had lower than 3 entries classified as reflective posts. Figure 1 illustrates the total coded reflective posts for each student.

Comfortable with Peer Audience. In our interviews with the top reflective bloggers, they explained how they were comfortable in blogging their thoughts and experiences. They enjoyed blogging for known audience, in this case, their peers. Blogging in a close knit community that shared the same purpose motivated them to be more reflective:

"I am comfortable blogging in that environment because it was a small community and I knew the people there." Josh²

"The audience was interested in this stuff from the getgo, so that makes it easier." Jay

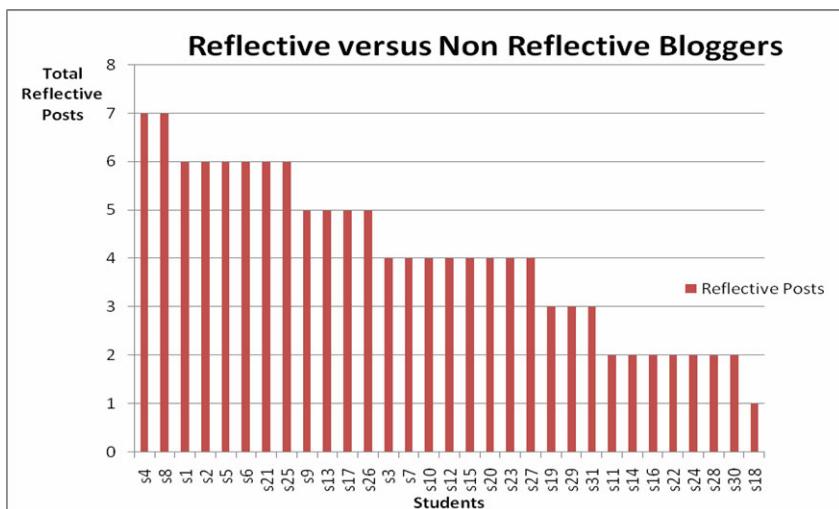


Fig. 1. Total Reflective Posts by Student

Deeper Thoughts. The students appreciated the process of blogging which motivates them to critically review their learning experience [8]. Being required to blog encouraged them to systematically think about their experiences:

"It does help my thinking process. In thinking about posting, it triggered some thoughts that I wouldn't have thought about or looked over if I was just thinking it and not writing it down." Josh

"I think you always learn more and get more out of an experience if you have to explain it or share it with others." Sara

² Our stylistic convention is to identify quotations from the interviews in italics and direct excerpts from student blog entries in Courier font.

"Dr. Z would give us certain things to do each week and since we had to blog about it, it allowed us to really think about our experiences and what we were observing rather than just going through the motions." Tom

Interaction is Important. In reference to Stahl's social theory of computer-supported collaborative learning [22], learning is argued as more a process of knowledge creation process through interactions or conversations. In blogs, conversations can take place through commenting features which allows for personalized feedback and allow subsequent referencing and revisions. All our reflective bloggers were enthusiastic in receiving comments and feedback from their peers especially constructive feedback that allow extended discussions in their blogs as described:

"Yeah. I recall really looking forward to when people would ask engaging questions within the comments. I always enjoy a compliment, but it was fun to "extend" discussion into the comments" Jay

"If someone just posted "I agree" that's not as much value. I prefer feedback that contains content and adds value to the topic." Josh

Positive Evolution. Students thought their blogs were progressing well when they learned to understand more about the audience and the dynamics of the class mainly from the interactions within blogs. The topic of the assignment plays significant role, in which the latter assignments allow them to be more personalized in writing something they can relate more and having real experiences:

"It's gotten longer and I'm a bit more comfortable voicing more opinions after spending time with the other classmates." Sara

"There was a feeling of "improvement," for sure. At the start I didn't really bother with a lot of style (as I can recall), but I like to think I was a lot more free. I got more comfortable asking research questions, adding formatted text, pictures. I also like to think I got better with the research questions." Jay

5.2 Reflective Posts

As demonstrated by Figure 2 there was no uniform distribution of reflective posts although there was a slight positive trend toward more reflective posts over the course of the semester. Most students were reflective in their week 2 entrees followed by week 10 entrees. We will further describe the potential factors that influenced their reflective process.

Guiding Questions. We argued that blogs alone might not be sufficient for promoting reflective thinking. We echoed Chen's [5] recommendation that students should be aware that reflection should be demonstrated in their blog posts. Students need to be provided with a common ground topic or issue to initiate their reflective writing process [16]. Anecdotal evidence in previous studies suggested that students faced difficulty writing an online diary whose inputs they were (relatively) free to determine [8][21]. Among the problems faced by the students were difficulty in finding the topics to talk about and attracting others to talk on the particular topic. Our students shared the importance of the guided questions as quoted:

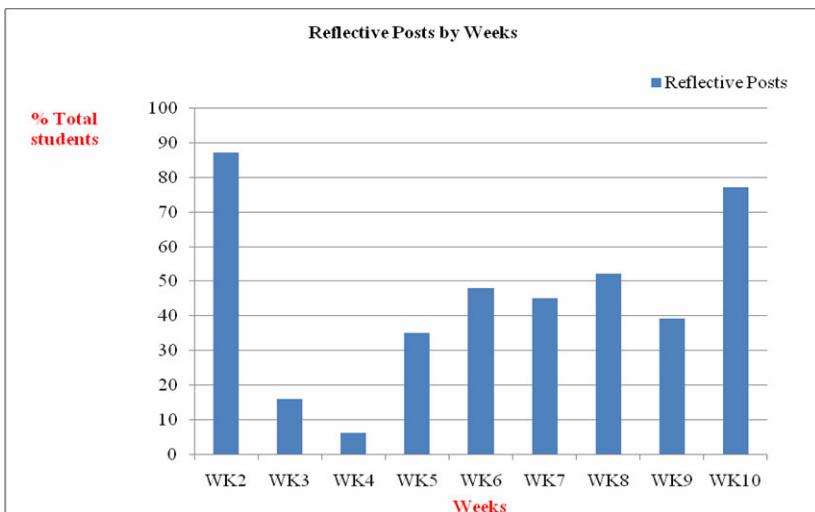


Fig. 2. Percentage of Reflective Posts by Week

I think one of my main issues with blogging is having something to blog about. So when we had assignments and topics that my fellow classmates might be interested in reading about, it was fairly easy to blog. Tom

The exercises were very helpful since it gave us a topic to discuss and for people like me who haven't blogged, it was a starting point. Sara

Most of the time, especially in second week, the guiding questions stimulated the students to be more reflective in their blog posts. The instructor would supplement the assignments with guiding reflective questions for example:

We have all had experiences with online communities and social computing over the years. Think back over your history and provide a retrospective on your blog. In which communities have you participated? What tools have you used? Think critically. What has changed over time? What has remained the same? What general questions arise from these specific experiences?

In respond to these guiding reflective questions, students were able to reflect on own their experience and formed perspective on the evolution of soial computing. Following is one exceptrt that demonstrates the kind of reflective response:

It is interesting to look at how social computing has evolved over time. The core method of communication (text line chat) hasn't changed much, the environment in which the communication occurs has. Individual representation has evolved from a screen name, to a buddy icon, to 3D avatars. It also appears that there is a wider age gap in the social computing scene. Ben

Similarly in another activity from week 8, the guiding questions required users to explore behind the scenes of the Wikipedia editing process and provoked them to think on the stability and reliability of Wikipedia. This resulted numerous reflective posts such as:

I was skeptical of Wikipedia.org at first because of the validity of information, because Wikipedia.org was not a credible source and if you think logically it is not a credible source until information in it is cited with a credible source. I got over my paranoia and became more of an avid user. Overall the user base is what Wikipedia.org's strength is people; who have passion for information and not only information but correct information. User's put some good quality time in their posts and are passionate for sharing information. There is definitely an overly more positive user base than negative which helps Wikipedia.org to remain accurate and free of ambiguity.

Matthew

Immersion and Learning. We proposed that the type of learning activities may influence the reflective learning process. In week 10, for example, the students were required to blog on their experiences in massive multiplayer online role playing games. Students were able to articulate and analyze the components for an engaging virtual world as demonstrated by this excerpt:

While both Secondlife and MMORPGs have social interaction, they are very different. The MMORPG games give users a common starting point for communication. They are all in the game trying to complete a set of goals. These games also have guilds which are tiny communities within the game that players belong. I believe these guilds give the user a sense of belonging and therefore foster more in game communication/interaction. In my experience, Second Life is too open and doesn't give players a sense of belonging

Ben

The immersion in virtual worlds triggered some of the deepest reflective moments of the course which led to individualized knowledge construction demonstrated by most of the students.

6 Recommendations

This study examined the role of blogs in promoting reflective learning. Some practical guidelines emerged that would be useful for anyone seeking to incorporate blogs for this purpose or to fine-tune their existing implementations.

- *Define and bound the audience.* The greatest utility came from having the blogs open to more than just the instructor, but limited to the students enrolled in the class. By knowing their audience students were able to tailor their blog entries and felt more comfortable than posting for world-wide readers on the Internet.
- *Provide thoughtful prompts.* The exercises and guiding questions were essential to provide a common ground among the students and make reflection a clear goal of the learning experience.
- *Encourage active peer feedback.* While the blog entries were evaluated by the instructor, the most valuable feedback came from the peer discussions that emerged in the comments surrounding student posts.
- *Make blogging a routine, ongoing activity.* It is critical for students to be able to see development in their own thinking and that of their peers. This is not possible with a one-off blogging activity.

Further research is required to understand the effective design of reflective prompts and peer commenting processes.

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