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Exploring the role of weblogs in supporting learning communities: An integrative approach

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This study explores into the role of weblogs in supporting preservice teachers during their teaching practice and the key factors determining their engagement with weblogs. Underlying our study is an integrative approach that puts weblogs alongside with other popular media in use. An online community was intentionally built with weblogs to facilitate reflection and social interaction among dispersed preservice teachers. In parallel, multiple channels of communication were employed for peer interaction. Weblogs were perceived as valuable in relieving isolation, documenting their experience, and expressing their personal feelings. Instant Messenger and phone were rated as the most frequently used media. This study sustains our conviction that the integrative approach is vital to have a comprehensive picture of interaction among a community. Our study deepens the insights into the distinct benefit of weblogs as educational media and informs the future development of an online community with weblogs.

Keyword: weblogs, learning community, blogging, preservice teachers

Introduction

In the past decade, blog has become an increasingly popular and versatile medium (Fiedler, 2004). As a light-weight, cost-efficient and flexible Internet medium, blog attracts growing interests and attention among teachers and researchers. There is a small yet growing body of empirical studies on the use of weblogs in various learning environments (Martindale & Wiley, 2005). Both theoretical validation and empirical evidence on the educational benefits of weblogs have begun to accumulate. However, most of the current investigations on weblogs presented only the anecdotal evidence (Du & Wagner, 2007). What we need is more systematic study on how to use weblogs to support teaching and learning. In particular, weblogs should be studied within a broader social and media context (O’Donnell, 2005) rather than as an isolated phenomenon.

The main objective of our study is to identify the role of weblogs in supporting a learning community among preservice teachers. An integrative approach is taken by examining weblogs alongside with other popular media – email, instant messenger (IM), phone and face-to-face (F2F) meeting. Through identifying the niche of blogs as an educational medium, we can make a big step towards the optimal combination of various tools to serve diverse learning needs. In this study, our inquiry is guided by the following questions: (1) what distinct role can weblogs serve for student teachers during their teaching practice? (2) What are the key factors that influence student teachers’ participation in the blog-supported learning community? The aim of this study is to deepen our understanding of the distinct affordance of weblogs in the context of preservice education. Meanwhile, we can glean valuable insights into how a group of preservice teachers use various media to maintain social interaction and learn together.

Literature review

Blogs in education

The unique benefit of weblogs is the combination of both self-expression and social interactions (Richardson, 2006). In another word, weblogs are both individualistic and collaborative (Huffaker, 2004). Among others, the most apparent benefit of blogging in supporting teaching and learning might be the opportunities it affords for self-expression and self-reflection (Brescia & Miller, 2006; Ferdig & Trammell, 2004). As a self-publishing tool, blogging enables and facilitates multi-modality expression. In addition to text, bloggers can post pictures, audio or even video files (Farmer, 2004). Unlike online discussion forum shared by many, blogs are more individual-centered. Bloggers have full control over content, means of representation (Ferdig & Trammell, 2004) and whom to share with. Motivation, responsibility and sense of ownership can also be heightened since there is real audience they can write to...
and expect comments back. In addition to its affordance for self-expression, weblogs can also promote social interaction. Unlike private journals, blogs can be socially reflective medium (Farmer, 2004). Social interactivity is enabled through commenting and linking to other websites or weblogs. Journal writing has been used extensively in enhancing reflection in traditional classrooms. However, weblogs could transform the process and outcome of reflection (Sevelj, 2006) with its reach at global scale and accessibility at anywhere and anytime. In this way, weblogs offer ample opportunities for users to project themselves socially and emotionally (Farmer, 2004).

The empirical studies on the educational use of weblogs are quite limited. Williams and Jacobs (2004) observed that the educational application of weblogs concentrated in the area of teacher education, journalism and library. Stiler and Philleo (2003) explored into the use of blog in pre-service education and noted that the depth and breadth of student reflectivity were positively affected through blogging. Dickey (2004) reported that blogs helped students in distant learning courses overcome the sense of isolation through enabling expression of feelings and exchange of support. In our study, we also aimed to use weblogs to strengthen connection among preservice teachers and involve them in reflection on their teaching practice.

**Media convergence**

Early research on the Internet media tended to set the Internet in juxtaposition to and competition with face-to-face communication (Baym, Zhang, & Lin, 2004). The past two decades have witnessed the increasing integration of computer-mediated communication in our everyday life (Wellman & Haythornthwaite, 2002). Traditional media – TV, radio, phone – are blended with Internet with accelerated speed and intensity. As Henry Jenkins (2006) remarked, “ready or not, we are already living within a convergence culture” (p. 16). Accompanying this convergence trend is the growing recognition that studies on the cyberspace should not treat it as an isolated social phenomenon (Wellman & Gulia, 1999), but contextualised in the local context and social webs (Boase & Wellman, 2005). As Haythornthwaite (2001) noted, it’s important to approach computer-mediated communication (CMC) in its local context examining the breadth and depth of its use and its place among other media (p. 212). In light of this, the study on specific type of medium shouldn’t lose sight of other parallel channels of communication and the underlying social structure.

**Blended learning**

The Internet has brought about drastic change in the educational realm. E-learning becomes an important trend in schools world-wide. Blended learning which utilise CMC tools to support traditional classroom teaching becomes the most pervasive type of E-learning (Harrington, Gordon, & Schibik, 2004). The blended learning is based on three fundamental premises: 1) face-to-face (F2F) interaction might not always be rich, deep and inherently superior (Baym, Zhang, & Lin, 2004); 2) the relationship between the technology-supported and F2F interaction is supplementary (Osguthorpe & Graham, 2003); 3) the thoughtful integration of various media can provide richer learning experience through supporting diverse learning needs and styles (Harrington et al., 2004). According to Driscoll (2002), blended learning might mean different things for different people. In our study, we centered on the mixture of various media in support of a learning community when it was temporarily dispersed.

Meanwhile, many researchers (e.g. Haythornthwaite, Kazmer, & Robins, 2000) advocated providing multiple means of communication - asynchronous and synchronous, traditional or web-based, to support various communication needs. As Weller and associates (2005) noted: “we come to view dialogue in the learning environment as multi-channeled, with particular tools providing affordances for specific forms of communication…” (p.71). The newly emergent media don’t replace old media, but add in the pool of communication tools at our disposal. As a result, our ways of communication become much more dynamic and complicated. This poses great challenges for teachers and instructional designers to integrate and blend various media for diverse learning objectives, contexts and audience.

**Research gap**

Having said this, blended learning has not been sufficiently attended to (Kerres & Witt, 2003). Meanwhile, research attention paid to the communication dynamics of a community, online or offline, is still limited (Haythornthwaite & Nielsen, 2007). Farmer and Bartlett-Bragg (2005) also observed that little research has been conducted to examine the significant difference between blogs and other forms of web-based tools. Those back-channels of communication, for instance, instant messenger, email, were rarely documented, yet play a critical role in connecting and sustaining social relationships (White, 2006).
To address this issue, an integrative approach was employed in our study by contextualising blogs alongside with other media. Central to our approach is the conviction that each technology has different affordances and constraints (Norman, 1993) and Internet-based media shouldn’t be studied in isolation (Wellman & Gulia, 1999). A better understanding of the distinct affordances and constraints of blogs can warrant their meaningful and rewarding utilisation in learning settings.

Methods

Our study focuses on a group of preservice teachers from the Bachelor of Education (BEd) program at the University of Hong Kong. The participants were purposefully chosen on class basis. There are 15 students in the class; 13 of them participated in the project. Blogging was voluntary and not included in the assessment. During the 10-week teaching practice, students were scattered in various placement schools. In many cases, there were several students in the same school, and peer support was strongly encouraged during their teaching practice. Yet for the whole class, regular face-to-face meeting became difficult, if not possible. Blog was used as the main community building vehicle while students were encouraged to use other media for person-to-person communication. Students were strongly encouraged to write one blog per week to document and reflect on their teaching, read and reply to their peers’ blogs.

The design of the online community with weblogs was guided by Preece’s (2000) framework of online community development which consists of two dimensions: usability and sociability. The usability dimension focuses on interaction design or choosing appropriate technical tools or media. The sociability dimension deals with issues such as community goal, rules, memberships and roles of participants. A vital part of community design and development was the construction of the community blog. The underlying assumption was that such a community blog could connect individual student’s blogs and enhance the sense of community. The community blog hosted content such as messages from the tutor, weekly summary of students’ blogs and other community announcement. One of the researchers in the present study also took the role of the online facilitator. Her responsibility included maintaining the community blog space, monitoring students’ performance and providing technical assistant when necessary.

The main instrument used for data collection was survey. We conducted two paper-based surveys – one at the beginning; the other one at the end of the study. At the outset of the study, we conducted the needs assessment survey to get to know students’ technical proficiency, habit and preference. The results informed our community design in an important way. The post-survey explored into students experience and perceptions of blogging. The questionnaire consisted of both structured and open-ended questions. An informal interview was conducted with the tutor in which she shared her impression of students’ performance. During the teaching practice, students were also invited to take a very short online survey on weekly basis reporting the various media they used to communicate with peers and the frequency of usage. An email reminder was sent to student each week with the link to the short online survey.

Results

Blogging activities

During the 10-week teaching practice, 13 preservice teachers posted 59 weblogs and 69 comments altogether. The following figure illustrates the number of blog entries posted by each student and the tutor. The most productive blogger (S13) posted 11 entries. All the other preservice teachers posted between 2 to 6 entries.

Furthermore, we explored into the pattern of interaction in students’ blogs. Among the 59 blog entries from students and 3 by their tutor, 31 received one or more comments. That is to say, about half of the blog entries didn’t get any feedback or comments. The highest number of comments received were 9 (S11 and S13). There are two students (S3 and S9) who didn’t receive any comment from their fellow students. Another thing worth noticing is that, within the total 69 comments received, 15% were from either outsiders of the class (7) and from the facilitator (10). The following figure shows the distribution of comments received by the students and their tutor. We excluded the comments made by the outsiders and the facilitator to present a clearer picture of the interaction within the community.
Reasons for blogging

Thirteen students completed the post survey. The main purpose of the survey was to get to know their experience and perception of weblogs. The results reported below were from the Likert-scale questions ranging from 1 to 5 with 1 stands for strongly disagree, 3 for neutral stance and 5 for strongly agree.

<table>
<thead>
<tr>
<th>Reason for blogging</th>
<th>Strongly Agree &amp; Agree (%)</th>
<th>Neutral (%)</th>
<th>Strongly Disagree &amp; Disagree (%)</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documenting my experience</td>
<td>77</td>
<td>15.4</td>
<td>7.7</td>
<td>4.00</td>
</tr>
<tr>
<td>Relieve stress</td>
<td>61.6</td>
<td>7.7</td>
<td>30.8</td>
<td>3.54</td>
</tr>
<tr>
<td>Getting in touch with peers</td>
<td>92.3</td>
<td>7.7</td>
<td>0</td>
<td>4.31</td>
</tr>
<tr>
<td>Exchange ideas with peers</td>
<td>77</td>
<td>15.4</td>
<td>7.7</td>
<td>4.00</td>
</tr>
<tr>
<td>Share pictures</td>
<td>69.3</td>
<td>15.4</td>
<td>15.4</td>
<td>3.85</td>
</tr>
<tr>
<td>Other classmates are blogging.</td>
<td>61.6</td>
<td>38.5</td>
<td>0</td>
<td>3.77</td>
</tr>
<tr>
<td>The tutor urged us to blog.</td>
<td>38.5</td>
<td>38.5</td>
<td>23.1</td>
<td>3.00</td>
</tr>
</tbody>
</table>

The leading reason for blogging was to keep in touch with their peers when they were dispersed in various schools during teaching practice (TP). Documentation of their TP experience and exchange of ideas with peers were also identified as the main drivers for blogging. For many students, blogs also provide a platform for sharing pictures. Meanwhile, they tended to participate under the social influence, as one student put it, “I'm not really fond of blogging. But in order to check out all your days in TP schools… here I am”. Also 61% of the students saw blogging as a channel to relieve stress.
**Barrier to blogging**

As to the barrier to blogging, lack of time was identified as the leading reason. Unanimously, our respondents felt great pressure of time while they served the dual role as both teacher and student. For more than half of the students, access to computers and comfortable level with the technology didn’t pose as a problem. No one preferred to use other blogging services. It was also revealed that 53.9% of students preferred to use other media for social interaction among peers. The same percentage of students also preferred to write in their own blog space. The following table illustrates students’ responses to possible barriers to their blogging.

<table>
<thead>
<tr>
<th>Perceived barriers to blogging</th>
<th>Strongly Agree &amp; Agree (%)</th>
<th>Neutral (%)</th>
<th>Strongly Disagree &amp; Disagree (%)</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of time</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>4.62</td>
</tr>
<tr>
<td>Limited access to computer and Internet</td>
<td>38.5</td>
<td>7.7</td>
<td>53.9</td>
<td>3.00</td>
</tr>
<tr>
<td>I am not comfortable with technology</td>
<td>7.7</td>
<td>38.5</td>
<td>53.9</td>
<td>2.46</td>
</tr>
<tr>
<td>There is no need for sharing.</td>
<td>7.7</td>
<td>46.2</td>
<td>46.2</td>
<td>2.46</td>
</tr>
<tr>
<td>I have enough peer support in my placement school.</td>
<td>46.2</td>
<td>23.1</td>
<td>30.8</td>
<td>3.31</td>
</tr>
<tr>
<td>I prefer to write my own personal blog/diary.</td>
<td>53.9</td>
<td>30.8</td>
<td>15.4</td>
<td>3.69</td>
</tr>
<tr>
<td>I prefer to use other blogging services.</td>
<td>0</td>
<td>46.2</td>
<td>53.9</td>
<td>2.08</td>
</tr>
<tr>
<td>I prefer to use other media to communicate with peers.</td>
<td>53.9</td>
<td>30.8</td>
<td>15.4</td>
<td>3.54</td>
</tr>
</tbody>
</table>

We also asked questions concerning their blogging patterns. The results were shown in the upcoming table. The majority of students read others’ blogs regularly. However, nearly 70% of them keep a separate personal blogs. Around half of the students also prefer using other media to respond to peers’ blogs.

<table>
<thead>
<tr>
<th>Patterns of blogging</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I read others’ blogs regularly.</td>
<td>84.6%</td>
</tr>
<tr>
<td>I have a separate personal blog.</td>
<td>69.2%</td>
</tr>
<tr>
<td>I tend to commend on my friends’ blogs.</td>
<td>53.8%</td>
</tr>
<tr>
<td>I prefer to respond through other media after read his/her blogs.</td>
<td>53.8%</td>
</tr>
</tbody>
</table>

In order to unveil the pattern of usage of various media, students were asked to rate the frequency of using various media to communicate with peers during their teaching practice. The frequency rate takes a Likert-scale with 0 standing for no use, 1 for least frequent and 5 for the most frequent. The result is reported in the following table. All of our respondents used blog and phone; as to email, instant messenger and face-to-face meeting, only one student rated no use for each medium. Instant messenger and phone were the most frequently used media; while email was rated as the least used one.

<table>
<thead>
<tr>
<th>Frequency of usage of various media</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>use of email</td>
<td>0</td>
<td>5</td>
<td>2.31</td>
</tr>
<tr>
<td>use of IM</td>
<td>0</td>
<td>5</td>
<td>3.85</td>
</tr>
<tr>
<td>use of blog</td>
<td>1</td>
<td>4</td>
<td>2.62</td>
</tr>
<tr>
<td>use of phone</td>
<td>3</td>
<td>5</td>
<td>3.85</td>
</tr>
<tr>
<td>use of F2F</td>
<td>0</td>
<td>5</td>
<td>2.50</td>
</tr>
</tbody>
</table>

Additionally, there are some open ended questions asking students to write down the typical scenario of media usage. In so doing, we hope to elicit students’ perceived affordance and preferences of various media. The questions takes the form of “I prefer to use X (various media) to ____________ when ________”. The upcoming summary represents students’ answers concerning their typical use of weblogs, email, instant messenger, phone and face-to-face meeting.
Typical use of weblogs:

- to share pictures I've taken
- to talk about my personal feelings when I am stressful
- to leave comments for my peers
- to express my feeling or looking for support when I am feeling down
- to check my peers' news in their TP schools

Typical use of email

- to send teaching materials and lesson plans
- to contact teachers or tutors
- to communicate with peers when there is something that needs to be done
- to do some more formal and serious work
- to contact a big group of peers
- to inquire when I have a question that needs to be answered quickly.

Typical use of IM

- to casually chat with my peers
- to talk to my peers during spare time when I need some support
- to keep in touch with my classmates
- to send or receive small files

Typical use of phone

- to share my unhappiness with my peers when I feel sad.
- to talk with my close friends when I want to share a lot of things with them.
- to have long talk
- to seek help when I encounter urgent matter
- to contact my peer immediately

Typical use of F2F meeting

- when I need to show personal concern and care.
- to have other activities/have important things to discuss.
- to build up the rapport when I have time.
- to exchange ideas/experience
- to share my thoughts or feelings when we are free

**Discussion**

In our study, when a community of preservice teachers became far-flung during their teaching practice, they used multiple media to maintain interaction and exchange social support. The primary reasons for students’ blogging were to get in touch with their peers and to document their experience. However, there were not many comments exchanged within the group through blogs. It seemed that weblogs served mostly as a channel for one-way broadcasting, and the sense of connection was maintained through reading fellow students’ blogs. At the same time, self expressions afforded by blogs was emotional charged and social-oriented. As one student put it: “(I used weblogs) to express my feelings or look for support”. The informal interview with the students’ tutor also confirmed this. During her school visits, she noted that students engaged in blogging tended to have less complaints and emotional outburst, possibly because they got a channel – blog – to “get off the stream”.

When we probed deeper into the barriers to students’ engagement with blogs, we found time constraint as the biggest inhibiting factor. Indeed, the problem of time pressure was prevalent and prominent. Besides time pressure, the use of other media did act as interference with their blogging. Majority of the preservice teachers used multiple media - email, instant messenger, phone and face-to-face meeting - to maintain peer interaction. As a manner of fact, about half of them admitted that they preferred to use other media to communicate with each other. After reading peers’ blogs, some switched to other media to respond. Among the media they employed, phone and Instant Messenger were the most popular ones. The
A plausible explanation might be that the pressure of time made the immediacy of media really important and asynchronous communication less favorable.

The open-ended questions in our survey also provided a glimpse into students’ perceived affordances of various media. Email basically represented a rather formal way of communication. It was perceived as an important tool to communicate with teachers and other peer students concerning “more formal and serious work”. Its salient affordance was to send teaching materials and lessons plans as attachments. Instant Messenger, for most of our respondents, supported informal and spontaneous online chat. This type of casual small talk enabled them to keep in touch, seek help or support and exchange files. Likewise, Quan-Haase and Wellman (2005) maintained that IM represents a casual, transient form of exchange and tended to support strong social ties. Telephone was found to be the most frequently used medium simply because it afforded immediacy and extended conversation. Students opted for phone when they were emotionally stressed and in need of just-in-time support. The face-to-face meetings, according to our respondents, enabled interaction at more personal level. As one of the respondents put it, “I favor face-to-face meeting when I need to show personal concern and care.” F2F was also favored to discuss important issues and build social rapport. But the major disadvantage of F2F is its physical proximity. For this far-flung group of preservice teachers, their hectic schedule made it quite difficult to meet in-person.

Besides the tension between weblogs and other media, we found a tension between personal blogs and academic blogs. Half of our respondents remarked that they preferred to write their own personal blogs. For the project, we deliberately chose a commercial blogging service – Xanga (http://www.xanga.com) – because it was the platform most of the students used. To our surprise, almost all the students set up a new account just for the sake of the blogging project. It seemed that they tended to draw a line between their personal blogs and academic/professional blogs. This might because that they felt more at ease writing personal blogs. Or it could be that they were not comfortable with sharing their thoughts or experience in public space. The existence of personal blogs made the already complex media landscape even more complicated. The following diagram can help to illustrate media used by this group of preservice teachers. We deliberately made a dotted and curved line between online and offline world on the account that the line between these two worlds is getting blurry.

![Figure 3: Media landscape](image)

To sum up the proceeding discussion, the distinct benefits of weblogs are identified as documentation of experience, self expressions and maintaining a sense of connection within a dispersed group. Yet, the busy life of student teachers significantly impeded their engagement with blogging. Besides time pressure, students’ preferences and perceived affordances of media affected their attitude and actual use of blogs to a large extent. This is consistent with Tan’s (2006) findings that effectiveness of blogs as reflective medium depended on students’ preferences and perceived affordances of the tools. He also argued that blogs might be a good choice for individual reflection; while discussion forums or wikis might be more appropriate for collective reflection. In echo with this, Krause (2004) put into question the validness of weblogs as dynamic discussion tools based on his unsuccessful experience of using weblogs in his writing class. He denoted that compared to mailing list, weblogs couldn’t support truly interactive and dynamic discussion within a learning community. He concluded that blogs had the unique benefit as personal publishing tool, whereas mailing list might be more effective as a community discussion medium.
Conclusion

The proliferation of Internet-based media has opened up new opportunities for communication. It also poses challenges for instructional designers or teachers to choose appropriate media to support teaching and learning. We believe a better understanding of the distinct affordances of CMC tools is vital to utilise and blend them meaningfully and effectively. In our study, we explored into the role of weblogs in connecting a group of preservice teachers through situating weblogs in the fabric of media convergence. The salient benefits of weblogs lie in their affordance for self expressions and connecting dispersed groups. However, online dialogue in blog space was not adequate mainly due to students’ busy schedule. Besides weblogs, several media – email, Instant Messenger, phone and in-person meetings – were used for peer interaction. The multiple media served for diverse communication needs and styles. However, an important lesson we learn here is that the synergy among various media won’t come naturally. This is probably more so when the use of certain media is externally initiated and its adoption is voluntary. Therefore, the intentional development of an online community with certain media should take into consideration the intersection with other media. When we introduce a new medium, the existing media context should be put under scrutiny. Emphasis should be made on those communication needs that are not met adequately or effectively by media in use. At the core of the intentionally-built blended community is the balance among various media. When chosen, designed or deployed properly, various media can come together to create the synergy; otherwise, the tension might prevail.

As a precursor to a larger scale study, the present study boosted our confidence in the role of community blog and the integrative approach employed. We believe the integrative perspective constitute a promising approach of studying the distinct benefits of various media. It has provided us with more comprehensive picture of students’ interaction. However, there are several methodology issues to be tackled. The weekly online survey that aimed to collect quantitative data on media use turned out to be futile. In the future study, we need to come up with a more effective and systematic way to document the back-channels of communication among students. The ethnographic approach might be more appropriate to collect the rich and in-depth data on media usage pattern over an extended period of time. In the next cycle of our study, we intend to expand the scale to involve more students and encourage blogging over longer period. We hope this project can serve as an opportunity to cultivate the habit of blogging among the preservice teachers so that they can carry on with reflection and sharing with blogs even after their graduation.

References


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