
Blogging supports learning during internship

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Abstract
Blogging has been suggested as a suitable tool for learning during internship, due to its potential usefulness for collaborative learning, reflection, communication, and social support. This study aimed to contribute to the empirical evidence supporting the use of blogs in higher education. In the framework of collaborative learning blogging was incorporated in the internship activities of two discipline-specific groups of interns: information management (n=53) and nursing (n=28). Using a mixed-methods design, quantitative data was obtained through questionnaires and qualitative data was generated through the interns’ blog contents. Results revealed that interns engaged in regular blogging that were mostly centered on writing their own blogs, and perceived blogs to be useful during internship. Blogging was found to provide the students an avenue for sharing internship-related information and knowledge. Blogging contents indicated the occurrence of cognitive, metacognitive/reflective, affective, and social/collaborative learning processes. However, differences in the nature of the professional discipline may have influenced the usefulness of blogs for shared problem-solving activities. The findings of this study offer evidence that supports the use of blogs during internship as a computer-based support for learning.

Keywords
Collaborative learning; Teaching/learning strategies; Post-secondary education

1 Purpose of this research
The growing interest in using blogs for education has been matched by studies that have examined its impact. While effective use of blogs in higher and basic education has been demonstrated (Buffington, 2007), challenges associated with its use as a pedagogical strategy have also been identified (Krause, 2004). Researchers have suggested that blogs may support collaborative learning (Du & Wagner, 2007), and that its applications appear to have potential beyond classroom education (England, et al., 2008). Blogging has also been recommended as a suitable tool for internship, since they are accessible personal diaries, allowing interaction in a community of users (Levy, 2009). However, limited empirical evidence supports this proposition.

This study aimed to contribute to the evidence supporting the use of blogs in education, with focus on internship. The primary guiding question of this study is as follows: How do blogs facilitate students’ learning during internship? The following are the research questions (RQ):

RQ1: What are students’ reported blogging behaviors?
RQ2: What are students’ perceptions towards the usefulness of blogs?
RQ3: What characterize students’ cognitive, metacognitive, social-collaborative, and affective engagement in blogging?

2 Theoretical Framework
2.1 Collaborative learning
Social constructivist principles support the use of collaborative interactions among students to promote deep learning through exposure to alternative perspectives (Brett & Nagra, 2005).
Two or more people learn something together through communication, negotiation, and production of materials (Gros, 2001). It emphasizes social and intellectual engagement, and focuses on mutual responsibility (Smith & MacGregor, 1992), while increased peer interactions represent an important component of the education experience (Pascarella & Terenzini, 2005). Earlier studies have shown that collaborative learning effectively fosters shared understanding, retention of learned material, and deeper cognitive processing (Johnson & Johnson, 1994). It has also been shown that collaborative learning promotes higher-order learning such as critical thinking (Meyer, 2003).

Vygotsky (1986) determined that social interaction plays a fundamental role in the development of cognition. Collaborative learning places a great emphasis on the extent and quality of the exchanges that occur among students (Dillenbourg & Schneider, 1995), and the discussion that occurs during task engagement is an important component of collaboration (Pressley & McCormick, 2006). Evidence indicates that collaborative learning is successful in online learning environments (Curtis & Lawson, 2001), and allows students to widen their knowledge base through interactions with other learners (Tyran & Shepherd, 2001).

2.2 Online learning environment: blogs

Blogs, which are web-based journals, have been recognized as one of the more popular web technologies for education (Downes, 2004), especially in distance learning settings (Buffington, 2007). An earlier study has analyzed blogs for learning, and demonstrated their suitability in supporting constructivist learning in higher education (Du & Wagner, 2007). It was found that blogs facilitated university students’ involvement in knowledge construction. A number of studies have also found blogs to be efficient reflective tools (Stiler & Philleo, 2003) and it has been suggested that blogs may also serve as online journals (Richardson, 2005), promoting reflection on learners’ experiences (Godwin-Jones, 2003). Reflection has been noted to occur through discussion and exploration that occurred with blogging (Glogoff, 2005), and through access to different perspectives from peers’ comments (Lin et al., 1999).

It has also been suggested that the functional features of blogs enable learners to retrieve and manage information efficiently, and exchange information with other online learners (Du & Wagner, 2007). The accessibility of blogs has also been shown to encourage interaction among students and teachers (Yang, 2009), addressing social concerns associated with geographical distance by alleviating feelings of isolation among students (Dickey, 2004).

3 Methods

3.1 Participants

Participants who gave their informed consent included second-year undergraduate students: 53 from the Bachelor of Information Management (BScIM) and 28 from the Bachelor of Nursing (BScN) in the University of Hong Kong. BScIM students took part in an internship programme in various organizations, with a faculty supervisor assigned for each intern. The BScN students were divided into six groups of eight students, in different clinical placements in Hong Kong, with three responsible clinical instructors.

3.2 Data Collection

Interns were asked to create blogs to share their experiences during internships, which were open for access of their classmates and faculty supervisors. BScIM internship requirements included the submission of self-reflections, accounting for 30% of the internship grade, which were represented by students’ blogs. While BScN students were encouraged by their clinical
instructors to use the blog, the contents had no bearing on their clinical grade. The information uploaded on the blogging systems were then captured for qualitative data analysis. A telephone interview, conducted after the students’ internships, included questions on their blogging experiences. Close-ended questions with response choices on a 4-point Likert scale were used.

3.3 Data analysis

Students’ blogs were analyzed qualitatively, where a unit of analysis was an individual blog entry by a student, on a specific date and time. Each comment was also considered as one unit of analysis. An analysis of learning processes in an online environment has been suggested to consider knowledge construction, metacognition, posing questions, and responding to questions (Hmelo-Silver, 2003). In addition, the social aspect of learning has also been examined in qualitative studies of online learning systems (Zhao & Chan, 2009). Using an iterative coding process, we examined whether each blog entry related to cognitive, metacognitive/reflective, social/collaborative, or affective themes. Preliminary coding was done by the first author and two research assistants using 44 randomly selected blogs of five students, clarifying the operational definitions of the coding themes (Table 1). Students’ responses to the interviews were summarized, illustrating their perceptions on the usefulness of the blogs.

Table 1 Operational definition of terms

<table>
<thead>
<tr>
<th>Theme</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive</td>
<td>References that discuss key professional concepts, share information sources, or illustrate problem-solving processes.</td>
</tr>
<tr>
<td>Metacognitive/Reflective</td>
<td>References that recount events, knowledge, actions, strategies, or insights, and expounds on the patterns and connections within and among experiences that they deem meaningful in the professional or personal domains.</td>
</tr>
<tr>
<td>Social/Collaborative</td>
<td>References that pose questions or provide feedback/responses to questions.</td>
</tr>
<tr>
<td>Affective</td>
<td>References that describe feelings or emotions (negative/positive) or express emotional support for peers (e.g., encouragement)</td>
</tr>
</tbody>
</table>

4 Findings

4.1 Blogging behaviors

Independent samples t-tests showed that the average number of blog entries for a BScIM student ($M = 45.8$, $SD = 28.5$) was significantly higher ($p < .01$) than the average number of blog entries for a BScN student ($M = 18.5$, $SD = 22.3$). The total (871) number of blogs by BScIM students ($n = 53$) was also considerably higher than the total number (113) of blogs by BScN students ($n = 28$). The blog output of BScIM students contributed to their course grade, whereas, nursing students’ blogs had no bearing on their clinical grade. This may explain the difference in the volume of blogs made by the two cohorts. Furthermore, the nature of the students’ tasks during the internship may have influenced the volume of blogging output as well. Nursing students were engaged in clinical tasks in hospitals, whereas BScIM students spent greater amounts of time working with computers and online information sources.

The participants also reported their blogging frequency through the survey, and it was measured in terms of blog-writing, reading their own and others’ blogs, and giving comments (see Table 2). The participants reportedly gave comments to other interns’ blogs less frequently, relative to writing their own blogs, and reading their own and others’ blogs.
Table 2 Median frequency of the students’ reported blogging behaviours

<table>
<thead>
<tr>
<th>Blogging Behaviours</th>
<th>BScIM (n=53)</th>
<th>BScN (n=28)</th>
<th>Sig. Mann-Whitney</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Writing one’s own blog</td>
<td>3.21 (.79)</td>
<td>2.86 (1.21)</td>
<td>0.27</td>
</tr>
<tr>
<td>- Reading one’s own blog</td>
<td>2.83 (1.05)</td>
<td>2.79 (1.19)</td>
<td>0.88</td>
</tr>
<tr>
<td>- Reading classmates’ blogs</td>
<td>3.04 (.96)</td>
<td>3.07 (1.18)</td>
<td>0.82</td>
</tr>
<tr>
<td>- Commenting on classmates’ blogs</td>
<td>2.19 (.94)</td>
<td>2.29 (.85)</td>
<td>0.64</td>
</tr>
</tbody>
</table>

Notes: Participants answered according to a scale of 1-5: 1 - ‘Once a month or less’, 2 - ‘Once every two weeks’, 3 - ‘1-2 times a week’, 4 - ‘3-6 times a week’, and 5 - ‘Once every day or more’.

4.2 Students’ perceptions on learning through blogging

Students perceived the blogs to be a useful platform for learning. BScIM and BScN students generally gave similar ratings on the different criteria (see Table 3). However, nursing students gave higher ratings for the usefulness of blogs for learning through problem-solving experiences of others. Internship tasks of BScN students are generally more similar regardless of the students’ placement. Hospital-based duties are expected to be consistent, while the tasks of BScIM interns have greater variability due to the different business natures of their placement companies (e.g., library, bank, publishing company, police force). Consequently, an intern’s problem-solving experiences may have less potential to be applicable in other settings.

Table 3 Students’ overall rating on the usefulness of blogs as a platform for learning.

<table>
<thead>
<tr>
<th>Survey items</th>
<th>BScIM (n=53)</th>
<th>BScN (n=28)</th>
<th>Sig. (p&lt;0.05)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Reading others’ blogs during internship is useful</td>
<td>2.91 (.66)</td>
<td>3.11 (0.42)</td>
<td>0.18</td>
</tr>
<tr>
<td>- Classmates shared problem solving experience on blog</td>
<td>2.75 (.67)</td>
<td>2.96 (0.51)</td>
<td>0.19</td>
</tr>
<tr>
<td>- Blog is useful for learning other’s problem solving experiences</td>
<td>2.58 (.69)</td>
<td>2.96 (0.51)</td>
<td>0.02*</td>
</tr>
<tr>
<td>- Blog is suitable for learning other’s internship experience</td>
<td>2.94 (.69)</td>
<td>2.88 (0.57)</td>
<td>0.35</td>
</tr>
<tr>
<td>- Blog facilitated information sharing</td>
<td>3.09 (0.53)</td>
<td>2.93 (0.54)</td>
<td>0.19</td>
</tr>
<tr>
<td>- Blog facilitated knowledge sharing</td>
<td>2.86 (0.48)</td>
<td>2.89 (0.63)</td>
<td>0.83</td>
</tr>
</tbody>
</table>

Notes: Ratings are based on a 4-point Likert scale: 1 - “Strongly disagree” and 4 - “Strongly disagree”. * statistically significant at p<0.05

4.3 Learning through the blogs

A total of 984 units of analysis (BScIM: 871; BScN: 113) were identified and coded into the themes. Table 4 summarizes the number of blogs that were categorized into each theme, and the findings are compared between BScIM and BScN students. The total number of coded blogs (BScIM: 868; BScN: 125) was not equivalent to the total number of identified units of analysis since some blogs were not coded into any theme, while some other blogs were coded into more than one theme. Substantial numbers of coded blogs illustrate the cognitive knowledge construction theme (BScIM: 34.6%; BScN: 22.4%). The cognitive aspect of learning was apparent in blogs where students appeared to share information and knowledge, and engage in problem-solving. While pieces of knowledge and sources of information were shared to the rest of their peers, students’ also allowed them to share their experiences at addressing internship problems. This process has been known to cognitively engage students in learning (Chickering & Gamson, 1987). As a means of knowledge construction, problem-
solving that is shared in a community has been described as a representation of knowledge exchange (Yang, 2009) and was apparent in the blog contents of interns in this study.

Table 4 Comparison of the number of blogs representing the learning processes of BScIM and BScN students.

<table>
<thead>
<tr>
<th></th>
<th>BScIM</th>
<th>BScN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of Blogs</td>
<td>Percentage</td>
</tr>
<tr>
<td>Cognitive knowledge construction</td>
<td>300</td>
<td>34.56</td>
</tr>
<tr>
<td>Metacognition/Reflection</td>
<td>278</td>
<td>32.03</td>
</tr>
<tr>
<td>Social/Collaborative aspect</td>
<td>27</td>
<td>3.11</td>
</tr>
<tr>
<td>Affective aspect</td>
<td>263</td>
<td>30.30</td>
</tr>
<tr>
<td>TOTAL</td>
<td>868</td>
<td>100.00</td>
</tr>
</tbody>
</table>

The volume of blogs containing metacognitive/reflective themes (BScIM: 32%; BScN: 41.6%) appears to support the suggestion that blogs during internship are useful, constituting an online form of reflection journals (Godwin-Jones, 2003; Richardson, 2005). Stiller and Philleo (2003) further suggested that blogs were effective in promoting reflection in learning when they take on an analytical nature. Reflections on work strategies were found in the blogs, and it was evident that the students analysed their discipline-specific knowledge in relation to their future professional work. Reflective blogs on personal experiences were also found, which offer evidence that blogs may indeed be useful in internship, where students are expected to integrate real life experiences for future professional use (Clarke, 2004).

Social/collaborative blogs indicate that students use blogs to pose questions to their peers, and received feedback through online responses. While this theme accounts for a relatively small portion of the coded blogs (BScIM: 3.11%; BScN: 4.8%), students were found to post questions and provide responses through the comments function of blogging systems. This supports the notion that gaining beneficial feedback from their peers is possible through blogs (Ladyshewski & Gardner, 2008).

Blogs with affective contents were also found to be substantial (BScIM: 30.3%; BScN: 31.2%), implying the potential role of blogging in managing the emotional aspects of learning. The contents of affective blogs support the findings of a previous study where blogging has been shown to facilitate communication among interns, thereby reducing fears, anxiety, and the sense of isolation (Ladyshewski & Gardner, 2008). Such negative emotions were vented out through the blogging platform, while positive feelings such as inspiration, success, satisfaction, and motivation were shared. Students also used the function of giving comments to other students’ blogs to express social support for their peers.

The most prevalent overarching theme that was found among BScIM interns’ blogs was the cognitive construction of knowledge. This contrasts with BScN interns whose blogs showed the metacognitive/reflective aspect of learning as the most dominant theme. This difference may be related to the nature of work in the two disciplines, and the instructional design of the distinct internship programs. BScIM interns who were placed in different industries, generally managed tasks such as searching, collecting, storing, and sharing information and knowledge. On the other hand, nurses were tasked to care for ill people, thereby dealing directly with life. Consequently, the dominant aspects of learning that are facilitated by blogs demonstrate some degree of variability between discipline cohorts.
5 Significance of the study findings

In the constructivist learning paradigm, learning has been seen to occur through an active exchange and interpretation of information in the process of knowledge construction (Vygotsky, 1986; Duffy & Cunningham, 1996). Along the lines of this theoretical framework, blogging has been suggested to address the discursive nature of knowledge construction (Ferdig & Trammel, 2004). Furthermore, the feedback system of the blogging interface naturally positions the students at reflective opportunities. This study has shown that interns can be engaged in regular blogging, with greater activity in writing their own blogs that in commenting on their peers’ posts. By synthesizing students’ perceptions and blog contents, this study offers evidence that supports the utility of blogging as a tool for learning during internship through knowledge construction and reflection. While we found that blogging also addressed the self-analytical aspects of constructivist learning, we further propose that this study illustrates the potential utility of blogging for addressing the affective needs of students during internship.

The increasing number of bloggers has been paralleled by a growing body of research that has explored the impact and use of blogs among different user groups (Schmidt, 2008). This research builds on the understanding and development of the blogging phenomenon, emphasizing educational purposes in the context of internship. Essentially, our findings offer empirical evidence that lends support to the notion that blogging has its place in teaching and learning, with possible effects on professional training, constructivist learning, and reflective practice. As such, this study may serve as an impetus for further investigations that might examine the use of blogging in diverse educational settings.

References


