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**THE USE OF BLOG TO FACILITATE CLINICAL LEARNING  
DURING PRACTICUM AMONG UNDERGRADUATE NURSING STUDENTS:  
A PRELIMINARY STUDY**

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Blogging has been increasingly used in the education field. This study is the first to explore the use of blogging to facilitate clinical learning for undergraduate nursing students (N=57) with surface or deep study approaches during their clinical practicum in Hong Kong. The findings indicated that blogging is useful in facilitating clinical learning as it fulfills different learning styles and needs of students by promoting information and knowledge sharing, enhancing self-reflection and providing emotional support.

## **1. Introduction**

### **1.1. Background**

Students have different learning styles. Säljö (1979), from his study, classified conceptions of learning into five categories: a) increasing knowledge; b) memorising information; c) acquiring fact and skills; d) making sense of meanings and e) interpreting in order to understand reality. The first three conceptions are closely linked with taking a surface approach of learning, while the last two conceptions belong to a deep approach of learning. Students adopting a deep study approach make a personal commitment to learning, which leads them to search for meaningful associations and theorize about what is being learned, while students adopting surface study approach learning through external consequences, only emphasizing rote memorization of the factual material without seeking interconnections among what has been learned (Biggs, 2003).

Corresponding to the increasing number of students and the diversity of student population with different learning styles and needs, many nursing educators struggle to use innovative ideas to maximize the clinical learning opportunities for nursing students

while at the same time ensuring quality teaching for nursing students' professional preparation. Integration of Information Technology (IT) is one of these strategies and represents a global trend (McLean, Richards & Wardman, 2007).

Blogging (Blood, 2002; Churchill, 2009; Downes, 2004) is one of the most popular informatics in education. A blog is an automated website consisting of updated entries arranged in reverse chronological order regarding a particular topic (Walker, 2005). It is an online journal which enables students' self-reflection, knowledge and experience sharing and evaluation of own performance (Fulwiler, 1987).

### **1.2. *Is Blogging a Tool to Facilitate Clinical Learning***

Maggs (2005) was among the first to discuss the potential use of blogs in nursing education. He stated that blogging would a) enhance students' written communication skills; b) increase knowledge transfer; c) encourage personal reflection, and d) initiate public debate regarding simulations and clinical case scenarios. Keegan's (2007) study further added that blogging during clinical practicum could provide psychological support among students. Although blogging seems to broadly facilitate clinical learning for students with both surface study approach by information and knowledge transfer and deep study approach, by personal reflection and analytical discussion, empirical evidence is seriously lacking, as the former study is a discussion paper and the latter is a case study research whose findings are of low generalizability in comparison to the general population.

### **1.3. *Research Gap***

This study is the first to explore the use of blogs to facilitate clinical learning among undergraduate nursing students with surface and deep study approaches in their clinical practicum through the use of empirical design. The findings are significant in understanding the use of blog to facilitate student-oriented teaching for nursing students during their clinical practicum.

## **2. Methodology**

### **2.1. *Objectives***

This study uses a mixed methods study design (Creswell, 2008) involving both qualitative and quantitative approaches. Based on the literature gap identified, this study has the following objectives:

- (i) To explore the use of blogs as a tool to facilitate clinical learning for undergraduate nursing students with surface and deep study approaches during their clinical practicum;
- (ii) To assess for the effectiveness of blogging in facilitating clinical learning by enhancing information sharing, knowledge sharing, self-reflection and emotional support during clinical practicum.

## **2.2. Sampling**

Undergraduate nursing students (N=57) in the University of Hong Kong were recruited for the study by convenience sampling. They had undergone their clinical practicum from June 2007 to August 2008 in three different periods of time. Among the 57 students, only 31 of them had joined the study from June 2007 to August 2008. Nine students joined the study in June 2007 while 17 students joined in December 2008. The difference in the number of students participating in the study was due to the logistic arrangement of clinical placement of practicum. Those who joined the study in 2007, were all year one nursing students. Those who joined in 2008 were year two nursing students. They were divided into six groups and had their clinical practicum in different clinical placements with three clinical instructors respectively. They were encouraged by the clinical instructors to use the nursing blogs throughout two years, especially in the period of clinical practicum, to support their clinical learning. After a 6-months follow-up period, participants were invited to have telephone interviews, which were conducted in Feb 2009. Finally, 27 students agreed to be interviewed.

## **2.3. Measurement**

The revised two-factor Study Process Questionnaires (R-SPQ-2F) (Biggs et al., 2001) were used. Students were asked to rate on a 5-point Likert scale from 1 (never) to 5 (always) the learning strategies they usually use. This questionnaire was previously tested and found to be valid for university students in Hong Kong (Biggs, Kember & Leung, 2001).

The telephone survey was a 31-question self-developed semi-structured questionnaire including open-ended questions and lists of statements for students' responses on 4-point scale ranging from 1 as 'strongly disagree' to 4 as 'strongly agree'. The questions include (a) blogging behaviours; (b) learning through own blogs; (c) learning through other blogs; (d) emotional support; and (e) recommendations for future development.

## **2.4. Procedure**

Enrolment of the students was conducted before the commencement of their clinical practicum. After obtaining the written consents from the students, a ten-minute training session was provided by corresponding clinical instructors explaining the issues of purpose, access, privacy, voluntary posting and manner of opinion expression in blogging. Also, an instruction sheet indicating the steps of access, blog entry, blog viewing, examples of tags and methods of technical support were given to each participant. In this study, students would be using two different blogging systems: a) in 2007, a free software package named Drupal, which was managed by the Center for Information Technology in Education (CITE) of the University of Hong Kong <<http://blog.cite.hku.hk/>> and b) in 2008, a commercial blogging system named Youblog managed by one of the project team members <<http://www.youblog.cc/>>. Moreover, each student was asked to fill out the R-SPQ-2F (Biggs et al., 2001) in order to understand the study approaches of the individual participants once they joined the study.

Throughout the time frame, the clinical instructors regularly reviewed, monitored and responded to the blogs, comments, and other blogging activities, such as photos, informational charts and webpage URL uploaded on a daily basis. Both blogging systems

were well-designed to allow the blog posting to be private, public or available for group viewing. As students in different groups were assigned to different clinical sites, blogging allowed sharing and discussion on their placement learning experience even though they were geographically dispersed. All students, although it was not compulsory, were highly encouraged by their respective clinical instructors to write or view the blogs.

After a 6-month follow-up period, all of them were invited to have a 10-minute semi-structured telephone interview conducted by a trained research assistant. The questionnaires included both open-ended questions and lists of statements for their responses on 4-point scale ranging from 1 as 'strongly disagree' to 4 as 'strongly agree'.

### 2.5. Data Analysis

Qualitative data consisted of two types: a) from the posts on students' blogs and b) from the open-ended questions of individual telephone interviews. Students' blogs were downloaded from both blogging systems. Telephone interviews were audiotaped and transcribed. All data was analyzed and the themes were subsequently extracted to address the objectives by using computer software NVivo version 8.

Quantitative data obtained from the semi-structured questions in telephone interviews and their rating of R-SPQ-2F were coded and entered into Statistical Package for the Social Science (SPSS Version 14).

## 3. Results

### 3.1. Blogging Behaviours

In general, the participants welcomed blogging during the clinical practicum, which was reflected from the telephone interviews. They preferred to write their own blogs (1.4 times a week on average) or even read others' blogs (1.6 times a week on average) rather than giving comments on others' blogs (0.8 times a week on average). Table 1 summarizes the blogging behavior of participants during the clinical practicum.

Table 1: Blogging behavior during the clinical practicum (N=27)

	MEAN <sup>a</sup>	SD	AVERAGE TIMES PER WEEK <sup>b</sup>
Frequency of writing blogs	2.85	1.23	1.4
Frequency of reading own blog entries	2.78	1.22	1.3
Frequency of reading classmates' blogs	3.04	1.19	1.6
Frequency of giving comments to classmates on the blog	2.26	0.86	0.8
Frequency of receiving comments from classmates on the blog	2.37	1.08	0.9
Frequency of receiving comments from clinical tutor on the blog	2.70	1.30	1.2

<sup>a</sup> Participants answered according to a scale of 1-5, with 1 as 'Once a month or less', 2 as 'Once every two weeks', 3 as '1-2 times a week', 4 as '3-6 times a week', and 5 as 'Once every day or more'.

<sup>b</sup> Average values for each category were used for data analysis, i.e. rating 1 refers to 0.25 times a week, rating 2 refers to 0.5 times a week, rating 3 refers to 1.5 times a week, rating 4 refers to 4.5 times a week, rating 5 refers to 7 times a week.

### 3.2. *The Effect of Surface / Deep Study Approaches on Blogging*

#### 3.2.1. *Surface and deep study approaches*

The mean score of surface approach of all participants (N=56) is 25.25 (SD=5.31) while the mean score of deep study approach of all participants (N=56) is 30.80 (SD=4.29). The majority of participants (N=38, 66.7%) have similar scores in both surface and deep study approaches. Some participants (N=16, 28.1%) have a significantly higher score in deep study approach (the difference between deep approach score and surface approach score is larger than or equal to 10) and only 2 participants (3.5%) have a significant higher score in surface study approach (the difference between surface approach score and deep approach score is larger than or equal to 10).

#### 3.2.2. *Blogs content in relation to surface / deep study approach*

When the blogs' content was analyzed, a special pattern became evident in relation to study approaches. Those who used deep approach (N=16) were more involved in writing and responding to blogs (81.25%). Their blogs posted were mainly on self-reflection (N=9, 56.25%) and sharing clinical knowledge (N=10, 62.5%) based on case scenarios during practicum. Some of them (18.75%) also wrote sympathetic messages to others for emotional support during clinical practicum. For those who had similar scores in surface and deep approach (N=38), their blogging activities was rather low compared with those used deep approach (55.26%). Their blogs posted were mainly focused on information and knowledge sharing; no self-reflection blogs were found in this group of participants. Some of them (N=23.68%) also wrote blogs to provide emotional support to others. For those with surface approach (N=2), only one was involved in blogging activities, and the posts on the blog also focused on information and knowledge sharing without self-reflection.

### 3.3. *Potential Use of Blogging in the Nursing Students' Clinical Practicum*

From the self-report telephone interviews, it was found that blogging was perceived as generally helpful in information or knowledge sharing, self-reflection and emotional support among students during the clinical practicum (Table 2).

Table 2. Participants' self-perception on the use of blogs regarding information or knowledge sharing, self-reflection and emotional support

	MEAN <sup>a</sup>	SD
INFORMATION OR KNOWLEDGE SHARING	3.03	0.28
SELF-REFLECTION	2.89	0.56
EMOTIONAL SUPPORT	3.00	0.46

<sup>a</sup> Participants answered according to a scale of 1-4 in a Likert scale ranging from 1 'Strongly disagree' to 4 'Strongly agree'.

### 3.3.1. *Information or knowledge sharing*

Participants were asked about the kind of information they had shared on the blogs during interviews. There were a variety of responses: academic resources (N=12), drug knowledge (N=10), clinical procedures and skills (N=6), medical treatments (N=2), laboratory results (N=2) and nursing care plans (N=3).

Apart from clinical information and knowledge sharing, participants also learned other things through blogs. For example: working attitude (N=6), communication skills with patients (N=2), cultural practice among different hospitals (N=2), effective methods to cope with stress (N=2) and perspectives towards death (N=1).

### 3.3.2. *Self-reflection*

When asked during the telephone interviews to indicate whether the blog was a suitable platform for them to maintain their reflections regarding clinical experiences, most of them (N=24, 88.89%) gave positive comments. For example,

*After work I would write something about my experience on the blog and share with my groupmates information about something I did well, something I felt unhappy with, or problems I encountered.*

*... but with blogging, after work, I can take time to think about what to say. Giving comments via blog is also less embarrassing.*

*The information wouldn't be deleted. So, I think blogging can maintain my reflections.*

*Without the blog, there are fewer communication channels with tutors.*

*When there is a blog, other people could view what I wrote and I could also re-read it to refresh my memory.*

*After one week's work, the tutor would encourage us to write something on a blog so that we could share experiences. You can put things you want to say on a blog, such as your experiences, and your perspectives, and you can also read other people's entries*

### 3.3.3. *Emotional support*

From the telephone interviews, there were many positive comments suggesting that blogging can facilitate encouragement with other students during practicum and provide a channel for them to ventilate feelings, show understanding, comfort and support each other. For example,

*If we did not do very well in practicum or were unhappy because the tutor was not satisfied with how we performed during practicum, we could share our feelings through blogs, provide support and give advice to each other.*

*When we felt depressed, we would comfort and encourage each other.*

*Some students are shy and don't want to share their unhappy experiences in front of the tutor or in public. They don't want others to think they are incapable. But with blogs, they would have less difficulty in sharing their experiences and feelings*

*I would consider the comments by groupmates and tutors a form of support.*

*A student whose grandpa passed away was sad during his practicum period. We left messages to comfort him.*

*Only classmates in this nursing department could understand what it was like to have clinical practicum during summer holidays, and situations of facing life and death during practicum.*

*When I did clinical practicum in the next year without using blogging, we (she and her group) did not understand each other's feeling and perspectives towards certain things.*

#### 3.3.4. Negative comments

According to the telephone interviews, however, there were also some participants who disagreed that blogging can facilitate information sharing (N=5), knowledge sharing (N=6), problem solving (N=3) and provide emotional support (N=2). Some of the negative comments were:

*We shared feelings rather than knowledge. Some students did not share much on blogs. I think discussion forums were more convenient and useful than blogging.*

*There was not much academic stuff. We had post-conference everyday during clinical practicum. At the meeting, we exchanged the information and resources we found and photocopied them*

*It is not as interesting to share information through blogs as it is to find information by myself. This kind of information sharing is not efficient compared to making phone calls and sending e-mails.*

*Whether the blog is useful depends on how many people write. Some people did not write much, so it could not facilitate learning.*

*Since the blog would be read by clinical tutors, I don't want to report my performance or unhappy experience during work to the tutors*

#### 3.4. Association between Frequency of Using Blogs, Information or Knowledge Sharing, Self-reflection and Emotional Support via Blogs

Correlations of frequency of using blogs, knowledge sharing, self-reflection and emotional support are summarized into Table 3.

Table 3. Correlations among knowledge sharing, self-reflection and emotional support by using of blogs

	FREQUENCY OF USE	INFORMATION OR KNOWLEDGE SHARING	SELF-REFLECTION	EMOTIONAL SUPPORT
FREQUENCY OF USE	1	0.20	0.39*	0.57**
INFORMATION OR KNOWLEDGE SHARING		1	0.31	0.60**
SELF-REFLECTION			1	0.43*
EMOTIONAL SUPPORT				1

\*Correlation is significant at the 0.05 level (2-tailed)

\*\*Correlation is significant at the 0.01 level (2-tailed)



The frequency of using blogs was significantly associated with enhancing self-reflection ( $r^2=0.39$ ,  $p<0.05$ ) and emotional support ( $r^2=0.57$ ,  $p<0.01$ ) via blogs. Also, emotional support from blogs was significantly associated with knowledge sharing ( $r^2=0.6$ ,  $p<0.01$ ) and self-reflection ( $r^2=0.43$ ,  $p<0.05$ ) on blogs.

#### 4. Discussion

This study is the first to explore the use of blogging among undergraduate nursing students with different study approaches during their clinical practicum. The findings are consistent with Säljö's (1979) and Biggs's (2001) philosophy of student learning. A closer look at the blogs content revealed that students with surface approach mostly used blogging for information transfer as they mainly learnt by memorizing facts and routine procedures. Therefore, blogs could provide a platform for them to share the information they found. One student even mentioned that blogging helped to save time because it helped to avoid searching for the same information regarding clinical problems. Students with a surface study approach did not appreciate reflection on different kinds of clinical experience and the generation of new knowledge from others' experiences (Biggs, 2001). On the other hand, students adopting deep study approach tended to understand new things, to give them interpretations and to relate them to previous knowledge learnt in the classroom (Biggs, 2001). This has also been confirmed with the present study, since all the blogs with self-reflection were posted by the students with deep study approach. Hence, blogs can provide an excellent medium for student-centered learning, since they facilitate clinical learning for a diversity of students with different study approaches.

The most promising finding in this study is the emotional support students gained via blogging. From the telephone interviews, findings showed that emotional support from blogs was significantly associated with frequency of blogging, knowledge sharing and self-reflection on blogs. It was interpreted that the more students wrote and shared, the more they perceived the beneficial effect of emotional support via blogs, regardless of the clinical knowledge or personal reflective perspectives and opinions. Add to this the fact that this study focuses on novice nursing students who were in their first and second year of nursing study, in which clinical practicum was particularly stressful for them (Murray-Harvey, 2001), and it was no surprise that the participants in the telephone interviews agreed that blogging provided opportunities for providing emotional support.. Therefore, blogs can provide rich opportunities for participants to offer and obtain peer support during the clinical practicum. Similar to the findings in a case study in the UK, the students actually took up the role of comforting and encouraging each other, much like what the tutors did for their students (Keegan, 2007). It is also interesting to find out that the students who were much more eager to provide emotional support for others in this study were those taking the deep study approach. This might be due to the possibility that the students who had a more comprehensive understanding of clinical knowledge and problems were those engaging in deeper learning (Sandberg & Barnard, 1997). Therefore, they tended to be more capable and could support other students who were comparatively weak. However, further studies are needed to investigate the relationship among study approaches, clinical practicum performance and blogging behaviours in providing support.

McAllister (2001) stated that clinical learning, especially for professional preparation, certainly needs deep learning to ensure ability of problem solving for their patients. Students should be motivated to engage in seeking personal understanding and practical knowledge, seeing the whole picture of patient care, making sense of clinical experience and relating evidences to conclusions. Therefore, reflection is essential for deep and meaningful learning (Moon, 1999). However, in the present study, the effect of blogging during clinical practicum on increasing students' deep study approach is not investigated. Also, writing blogs was not part of the course assessment during clinical practicum and students were not asked to write blogs regularly. Nevertheless, it was noted from the findings that the frequency of writing blogs and self-reflection via blogs were significantly associated. It might reflect that the more they wrote the more reflection they had. Further study is needed to explore the use of blogs on promoting self-reflection on clinical learning.

Traditionally, nursing students were encouraged to write reflective journals to facilitate their self-directed learning, self-reflection and evaluation of their personal performance (Fulwiler, 2007). However, blogging in this study seemed to serve an additional value of reflective journal keeping as the peers and clinical instructors could provide on-line feedback without geographical limitation and in a timely manner. When a student initiated a topic, for example, and encountered a problem from the clinical experience, students could post their reflections on the blogs. The content would be enriched when the clinical instructors and other students joined in with comments, which further sparked individual and joint reflection (Eisen, 2001). It establishes on-line communities for social interaction among students and instructors so that the knowledge can be shared and created for the group of learners (Hsu, 2007; Sauer, Bialek, Efimova, Schwartlander & Neuhaus, 2005). Some students mentioned that as they were able to view the blogs of other student groups working at other hospitals, they could learn different cultures and policies in other clinical settings through the blogs, which could in turn promote scholarly exchange of nursing knowledge (Magg, 2005). Moreover, one student mentioned that blogging served as a very important channel of communication with peers and clinical instructors. This is supported by Knouse (2001) that blogging could provide a training opportunity to enhance interpersonal skills and communication capability. This would improve the learning environment of clinical learning in terms of collaboration and support.

Although many positive results are noted in this study, blogging as a clinical education tool still faces many challenges. Encouragement to write blogs has to be regularly reinforced. Otherwise, students might not write or contribute comments on others' blogs after a tiring clinical practicum day. Some students were reluctant to express ideas and discussion in the group.

Also in the present study, some students raised their concern of privacy. It is important that students must feel safe to publish their personal experiences and feelings (Salmon, 2000). In this study, bloggers actually could decide whether the blogs were posted in private or in public. It is understandable that the participants might not want the clinical instructors to see their blogs, as they were also the assessors of their performance during the clinical practicum. Another privacy issue is the concern of posting patients'

information on blogs (Boulos, Maramba & Wheeler, 2006). To tackle this problem, clinical instructors had consistently reminded and monitored on the protection of patient's personal information on the blogs.

## **5. Conclusion**

This study shows that blogging could facilitate clinical learning among undergraduate students with diversity of study approaches. This study has also highlighted the importance of blogging to provide opportunities for self-reflection, a channel for ventilation of feelings and the possibility of providing emotional support for nursing students during the stressful environment in clinical practicum. Blogging would be able to provide a platform for information and knowledge transfer which serves its clinical educational value. With an eye towards future development, blogging is one of the student-centered educational activities to facilitate clinical learning in nursing.

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