Qualitative Assessment of a Blended Learning Intervention in an Undergraduate Nursing Course

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ABSTRACT

Background: Nurses are experiencing new ethical issues because of global developments and changes in the healthcare environment. Blended learning is one of the various methods used to deliver meaningful learning experiences. Well-designed, properly administered nursing ethics education is essential for nursing students to visualize the role of professional nurses. However, a literature review shows that only a few existing studies have touched on the subject of nursing student experiences with blended learning in a nursing ethics course.

Purpose: This study examines how undergraduate nursing students respond to a blended learning approach in a nursing ethics course and how blended learning affects the learning process.

Methods: We used a qualitative research design with in-depth interviews. Participants included 28 female undergraduate nursing students who had completed the nursing ethics course. Each interview lasted 50–100 minutes. The researcher conducted all interviews in 2009.

Results: The researcher identified six major themes and 13 subthemes from the data. The six themes included (a) enhancing thinking ability, (b) improving problem-solving skills, (c) reflecting in and on practice, (d) perceiving added workload, (e) encouraging active learning, and (f) identifying the value of nursing. Participants felt that the blended learning experience was a generally positive experience.

Conclusion: Most participants appreciated the opportunity to take a more active role in the learning process, think about issues profoundly and critically, and exercise metacognitive powers in the thinking and decision-making process. Study findings may suggest productive ideas for fine-tuning blended learning models.

Key Words: blended learning, nursing course, qualitative study, nursing ethics.

Introduction

Blended learning encompasses a range of activities related to teaching with technology (Orton-Johnson, 2009). The term blended learning refers to a course methodology or learning activity that combines online and traditional face-to-face instruction (de Leng, Dolmans, Donkers, Muijtjens, & van der Vleuten, 2010). The benefits of blended learning are extensive, including increased learning motivation, engagement, collaboration, and higher quality learning. However, there has been little study of the interplay of new pedagogies in higher education development (Donnelly, 2010). Although several studies suggest that students prefer a mixed course structure and that hybrid courses affected students’ learning outcomes (Gunter, 2001; Sanders & Morrison-Shetlar, 2001; Yildirim, 2005), it is also important to see how students feel about e-learning, because their perception could be markedly different from the perceptions of course developers or instructors (Imel, 2002; Martens, Bastiaens, & Kirschner, 2007).

Technology-based learning is becoming mainstream in higher education (Oliver, 2008). Berger, Eylon, and Bagno (2008) proposed that online learning and face-to-face classroom instruction could be combined together to create a variety of effective learning models, viewing online learning as complementary to traditional classroom learning. Online learning is integrated with traditional face-to-face instruction to create a more effective experience for both instructor and students (Shih, 2010). Sung, Kwon, and Ryu (2008) assessed the effect of blended learning on nurse medication application techniques. They found a positive relationship between ease of applying learning approaches and learner satisfaction. Zolfaghari, Negaranpash, Ahmadi, and Eybpoosh (2010) observed that nursing and midwifery students and instructors were more comfortable and satisfied with blended learning because of the easy access to educational content.

Blended learning can also promote collaborative learner-centered knowledge construction and offer a more comfortable...
and less threatening environment for interaction than that provided by traditional classroom instruction and discussion (Dickinson, Eom, Kang, Lee, & Sachs, 2008). Singh (2003) described blended learning as a combination of complementary delivery media designed to promote meaningful learning. Driscoll (2002) and Alonso, López, Manrique, and Viñes (2005) viewed blended learning as a mix of various pedagogical approaches including constructivism, behaviorism, and cognitivism. Constructivism builds upon behaviorism and cognitivism in the sense that learners construct or at least interpret their own reality based upon experience perception (Alonso et al., 2005). In the constructivist learning environment, students are encouraged to actively engage in group learning activities such as discussions and problem solving (Ruey, 2010). Only a few studies have focused on the blended learning experience of nursing students. This study aims to look at different dimensions of the blended learning experience of undergraduate nursing students using qualitative assessments to show how nursing education may benefit from hybrid nursing courses.

Aims
This study assesses undergraduate nursing student responses to a blended learning approach to a nursing ethics course and how blended learning affects the learning process.

Methods
Participants
The target population consisted of 99 senior undergraduate nursing students who had completed a professional nursing ethics course as part of their 2-year (RN-to-BSN) nursing program at a public nursing college in Taiwan during the spring semester of 2009. The target population was informed by E-mail and invited to take part and have an interview with the researcher in this study. In the end, 28 nursing students consented to participate.

The professional nursing ethics course
The blended learning intervention in this study combined classroom lectures and online learning. In the online learning component, participants were introduced to an Internet interface consisting of 11 video scenarios illustrating an ethical dilemma (Table 1) that were watched by participants and an online chat room available for participants to exchange their views on the ethical dilemma (Figure 1). The video scenarios covered themes like alternative therapy, DNR agreement and resuscitation, ward situations, truth telling to cancer patients, and healthcare for HIV patients.

Design
An in-depth interview was administered in this study to examine participant feelings about their blended learning experience and self-perceived learning performance. The interview inquired about participants’ (a) demographic information, (b) feelings about the blended learning experience in general and self-perceived effects of blended learning, and (c) comments and suggestions regarding the blended learning model (Table 2). Each interview lasted 50–100 minutes. The interviewer was an experienced research assistant. The researcher monitored the process to ensure procedural rigor. All interviews were digitally recorded and transcribed verbatim. Interview excerpts given below are English language translations of the original Mandarin Chinese texts.

Ethical Considerations
The study was approved by the nursing ethics committee in Taiwan (97A150). Participants were assured that they could withdraw at any time and that their statements would be kept confidential and their identities would not be revealed on research reports or any other publications related to the study.

Data Analysis
Content analysis is a process of identifying, coding, and categorizing themes in the data. Categories were then analyzed for the repeated and recurrent patterns, which were used to derive major themes. In this study, interview transcripts were ready within 2 days after interviews and were sent to participants for proofreading to ensure that content was credible and trustworthy. Transcripts were then analyzed using an approach described by Moustakas (1994). Two researchers further made sure that statements were properly clustered and that all the meaningful themes and subthemes were properly identified. Coding was conducted inductively to ensure

<table>
<thead>
<tr>
<th>Principle</th>
<th>Scenario</th>
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<tbody>
<tr>
<td>Ethical principles in biomedicine</td>
<td>Alternative therapy: charmed water</td>
</tr>
<tr>
<td>DNR agreement and resuscitation</td>
<td>Ward situations</td>
</tr>
<tr>
<td>Ethical regulations</td>
<td>Truth telling to cancer patients</td>
</tr>
<tr>
<td>The old man with syphilis in room 702-2</td>
<td></td>
</tr>
<tr>
<td>Clinical ethical issues and ethical dilemmas</td>
<td>Healthcare for HIV patients</td>
</tr>
<tr>
<td>Pros and cons of organ donation</td>
<td>Life extension</td>
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<tr>
<td>Restriction of patient movement</td>
<td>Testing of new medication</td>
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<tr>
<td>Ethical issues in human gene technology</td>
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all analysis themes and categories were based on the data (Christopher, Dunnagan, Duncan, & Paul, 2001). Through-out analysis, attention to the criteria for evaluating qualitative studies such as saturation, transferability, confirmability, meaning-in-context, and recurrent themes was used to support findings (Leininger, 1995; Lincoln & Guba, 1985). We made every effort to ensure that participants voiced all vital information. Researchers involved in this study were all highly experienced in Web-based learning and capable of identifying important content.

**Results**

Qualitative data analysis identified six major themes from the participants’ learning experience. These included (a) enhancing thinking ability, (b) improving problem-solving skills, (c) reflecting in and on practice, (d) perceiving added workload, (e) encouraging active learning, and (f) identifying the value of nursing (Table 3). A concept map (Figure 2) shows the positive effects of blended learning as reported by participants.

**Theme 1: Enhancing Thinking Ability**

**Self-reflection**

The course reminded learners of the importance of ethics in the field of nursing and encouraged them to reflect upon their own ethical standards. Reflective exercises in the course allowed participants to review the ethical dilemmas presented in video scenarios, identify root causes of these dilemmas, and reflect on a similar experience of their own.

NC98051905: I used to refrain from challenging the decisions of doctors for fear of being in the wrong. Now that I have completed this course, I know how to think and act in the best interests of patients. And I know why I have the ideas I have, and I can give logical explanations to support my ideas.

OC98052216: When I was a student nurse, I once let a patient take his medicine at the wrong time... I decided to tell him the truth because his life was at stake.
TABLE 3. **Themes and Subthemes Identified in the Blended Learning Experience**

<table>
<thead>
<tr>
<th>Theme</th>
<th>Subtheme</th>
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<tbody>
<tr>
<td>I. Enhancing thinking ability</td>
<td>1. Self-reflection</td>
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<td></td>
<td>2. Dimensions of thinking</td>
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<tr>
<td>II. Improving problem-solving</td>
<td>1. Solutions</td>
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<tr>
<td>skills</td>
<td>2. Psychological adjustment</td>
</tr>
<tr>
<td>III. Reflecting in and on practice</td>
<td>1. Understanding ethical dilemma</td>
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<td></td>
<td>2. Reexamining the role of an ethical nurse</td>
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<td></td>
<td>3. Similarities between video scenarios and real-life experience</td>
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<tr>
<td>IV. Perceiving added workload</td>
<td>1. Learning pressure</td>
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<td></td>
<td>2. After-school activities</td>
</tr>
<tr>
<td>V. Encouraging active learning</td>
<td>1. Resources for individual learners</td>
</tr>
<tr>
<td>VI. Identifying the value of nursing</td>
<td>1. Timely communications</td>
</tr>
<tr>
<td></td>
<td>2. Do right things</td>
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**Dimensions of thinking**

By constantly thinking and exchanging ideas, participants gave more profound consideration to ethical issues and considered the various dimensions of an issue. Some students described the course as instrumental in boosting their critical and logical thinking abilities. Scenario-based videos provided all the information they needed to begin discussions and make decisions.

NI98052524: The best thing about this course is that it changed the way I think about an issue. I used to focus only on the solution to a problem, but now I have learned to look at problems from different perspectives. I also learned about the importance of ethics in clinical work, something I hadn’t thought much about before.

MC98052004: The materials and videos on the course website are a kind of thought-provoking tool that allows me to think about what I should do in the face of ethical dilemmas. The online forum is a good place for me to exchange ideas and learn from my classmates.

**Theme 2: Improving Problem-Solving Skills**

**Solutions**

Presentation and discussions of ethical dilemma scenarios helped participants associate theories with clinical work, picture themselves in similar situations, and think about how they would react. Participants commented that videos gave them a realistic sense of situations and the ethical issues involved.

MI98072415: Many of the videos we watched in class deal with ethical issues involving the so-called charmed water, DNR, and organ donation—issues we might see in actual clinical work. Now that we have talked about these issues, we know how to deal with them better.

NB98051914: I read about the experience of my classmates on the online platform, the problems they ran into, and their ways of solving the problems. I picked up some good ideas from my classmates to be used in the future. The exchange of viewpoints really helped me.

**Psychological adjustment**

Before the course, participants worried about the challenges that awaited them in clinical work. By learning to

**Figure 2.** The effectiveness of blended learning as a catalyst for improved learning performance.
make ethical judgments in class, they prepared themselves psychologically for similar situations.

OD98052525: The most important thing I learned from this course was to think about what to do about ethical dilemma. When a problem is examined theoretically, it is easier to identify the root cause and look at the problem with the right mindset. Teachers discussed ethical issues with us in class and on the online platform right after we watched the videos. We were able to learn faster through the exchange of insight and experience. It also helps to know a little about psychology to be mentally prepared for the challenge.

Theme 3: Reflecting in and on Practice

Understanding ethical dilemma
Nogueras (2002) observed that professional nurses frequently encounter ethical dilemmas that require ethical decision-making. Ethical dilemmas are common in the professional life of a nurse.

MG98052512: The videos presented us with some questions we need to think about. In some of the videos we watched, we were not shown how dilemmas were resolved until the very end. All the scenarios we watched are real-life cases. These are what you would see in the clinic.

MM98052705: I wish I could have learned more about the things I’m interested in, things that are common in clinical situations, such as when a nurse has to tell the patient the truth about his condition, the nurse’s role in emergency care, and maybe the testing of new drugs, too.

Reexamining the role of an ethical nurse
A nurse is generally required to work independently to assess a patient’s condition, provide nursing services, and follow up with patient progress. In this study, participants had the opportunity to think about what an ethical nurse would do to resolve ethical dilemmas.

NA98051927: When I watched the videos, I, like many of my classmates, usually pictured myself as one of the characters and thought about what I would do in that situation. When I did this, I found that the scenarios portrayed in the videos were close to real life.

Similarities between video scenarios and real-life experience
By watching videos showing real-life ethical dilemmas, participants learned to identify with the characters in the videos and discuss topics beyond those presented in the videos.

MD98052117: The videos were fantastic, in my opinion. Sometimes, things got really exaggerated in the videos, but I still liked them because they made us more enthusiastic and motivated learners. Besides, the videos were short and concise enough for us to quickly understand what’s going on in the scenarios. The videos also provided food for thought.

Theme 4: Perceiving Added Workload

Learning pressure
In the blended learning module administered in this study, participants were exposed first to classroom teaching, followed by a session of self-administered, independent online learning. They reported feeling pressure arising from spending too many hours learning in class and online.

MB98052012: I think there’s a need for blended learning to exist, but sometimes I had neither the time nor the drive to complete the online learning sessions. I know we could choose whenever we wanted to complete assignments. But it’s still too much pressure for me because most of the nights when I got home, I was too exhausted to even think about writing down my thoughts online.

After-school activities
Blended learning was more time-consuming for learners. Consequently, the blended learning module administered in this study often had to compete with other courses and after-school activities for the students’ time.

MI98052519: There are so many things a student can do after class. Doing odd jobs, reviewing materials for other subjects, reading books on subjects related to nursing, learning other things, doing shopping, and spending time with boyfriends. Each of these little things eats a portion of our time. Now, suddenly we had yet another thing (online learning) on our to-do list. None of us would have bothered with it at all had it not been for the grades.

Theme 5: Encouraging Active Learning

Resources for individual learners
Students in this study had 24-hour access to online learning resources. They made their own choice as to when and how to make use of them.

MJ98052615: I think it (the online learning platform) is more or less helped because it allowed me to relearn the things that slipped from my memory. I could talk to teachers over the platform...
outside class hours, instead of having to stick to their office hours to talk.

NF98052012: Being a heavy user of the Internet, I found this blended learning module quite convenient. We could take short breaks and resume learning at the time of our choosing. We could also return to the parts we didn’t understand and learn them over again. We could pace our learning.

**Online resources**

Participants expressed through an online ballot that learning materials they had used should be more sophisticated and that the discussions should be of greater scope and depth.

OE98052617: I would like to see some of the world’s latest ethical issues on the homepage of the online learning platform. It would be nice if we could click to read the news, to see what’s happening on the ethical front outside Taiwan. Perhaps, this might help us build up some global perspective. It would be helpful to see how those in other countries deal with ethical issues and learn from others.

**Theme 6: Identifying the Value of Nursing**

**Timely communications**

Participants perceived that exchanging views over the online platform was inspirational in helping them think about why others may think differently and consolidating their ideas with the views of others.

MM98052707: In Taiwan, doctors are generally considered socially superior to nurses, so few nurses have the courage to report the misconduct of doctors.

**Doing right things**

In this study, participants were asked to propose solutions to real-life ethical dilemmas concerning professional nurses. Some students noted that, although they tried to consider the interests of all parties concerned, sometimes, it was difficult to decide between doing the right thing and doing the easy thing.

MC98052024: Our training was more like an apprenticeship to me. We did exactly as told and shown by the veteran nurses. So when I discovered that something they did happened to be wrong, I had to shut up and put up because they had a powerful say in my future....

**Discussion**

This study focused on the blended learning experience of nursing students in a nursing course. According to the participants, the blended learning experience motivated them to think profoundly and deeply. Yeh (2009) made a similar conclusion that a combination of asynchronous online learning with classroom teaching has a powerful effect on improving critical thinking skills. Gillingham (2009) also concluded that asynchronous discussion is a better catalyst for the learning environment than classroom lectures. However, in this study, some participants still preferred to think on their own instead of collaborating with others. Thompson and Ku (2005) pointed out that Taiwanese students were in general not very outspoken and not very actively involved in traditional classroom discussions, although they were more comfortable expressing themselves online.

Some participants felt the videos were invaluable learning resources. By watching real-life clinical situations, students felt themselves more psychologically prepared for the challenges of their future career. Another good thing about online learning, according to participants, was that they were able to share views with each other. This point was also observed by Steele (2001), who described video scenarios as meaningful contexts for the application of knowledge and problem-solving skills. Cooner (2010) also found multimedia a useful aid to learning. Several other studies also showed that learners favored real-life case studies because of their relevance to practice and down-to-earth nature (Cooner, 2010; Yadav et al., 2007).

Some participants noted that online learning combined with extracurricular activities constituted quite a formidable demand on their time and energy. This result is congruent with the study of Zolfaghari et al. (2010), which indicated that most students complained about the time-consuming nature of blended learning tasks. In addition, ethical decision-making is a vague skill that is often difficult to explain. Doing so effectively requires a certain degree of mental maturity on the part of students to be able to face ethical issues with calmness and a clear mind (Nogueras, 2002). In this study, participants were exposed to a learning model structured to induce their tackling ethical issues step by step through a reflective process. During this process, they used logic to develop a macroscopic view of various ethical issues in pursuit of logical, meaningful, and viable solutions.

Some participants remarked that the exchange of views via the online platform had helped them form well-rounded views about an issue and offered a realistic sense of the nursing profession and of some strategies for tackling ethical issues. Glaze (2001) identified similar findings regarding reaffirmation of the value of nursing. Placing the patient at the center of healthcare was a positive development that facilitated practice growth. Reflection induced by blended learning appears to have brought new legitimacy to proposed nursing actions. By doing reflective thinking exercises throughout the course, participants became more skilled in analysis and attribution and learned to ask meaningful, relevant questions to keep discussions from straying from the main point.
Conclusion

Blended learning helps students engage effectively in a range of situations and allows them to fit different activities together with more flexibility based on specific circumstances (Aspden & Helm, 2004). With appropriate design in a blended course, Web-assisted instruction and networked technologies can contribute significantly to student learning (Tsai, Shen, & Tsai, 2011). This study showed the effectiveness of online learning in enhancing undergraduate nursing students’ analytical thinking capabilities. It has been showed that students can be guided to think coherently and logically about an issue as long as teachers are there to provide necessary instructions.

As a learning medium, asynchronous scenario-based online discussion is useful in that it is easily administered, highly interactive, and thought inducing. Salmon (2002) argued that structured reflection in online environments has an important role to play in providing learning and qualitative research opportunities. Truly reflective activities would be part of learning and evaluation processes and require self-evaluation tools to determine how individuals and the group perceived their own learning and understanding (Riley, 2006). This study leaves room for future research to examine more closely the effects of learner-centered and constructivist approaches to blended learning as well as for a longitudinal examination of student perceptions of blended learning.

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References


混成學習介入大學護理課程之質性評估

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背景 全球健康照護環境的發展及變遷，使得護理人員面臨新的倫理議題。由於混成學習的多元性，使其適用於傳遞有意義的學習經驗。因此，應用混成學習於護理倫理教育是必要的，得以協助護理學生揣摩專業護理人員的角色。然而，經文獻查證少有研究探討護理學生參與混成學習倫理課程的學習經驗。

目的 本研究在於瞭解護理學生對混成學習於倫理課程之反應及對學習之影響。

方法 研究方法採質性研究，以深度訪談法訪談28位已修習護理倫理課程的女性護理學生；訪談時間約50－100分鐘。研究者於2009年以深度訪談進行資料收集。

結果 內容分析顯示，護理學生結合混成學習於倫理課程經驗，可歸納出六個主題及十三個次主題，包括：增強思考能力、改進問題解決技能、引導實際反思、知覺作業負荷、鼓勵主動學習、識別護理價值。總結護理學生對混成學習於倫理課程之經驗是肯定的。

結論／實務應用 大部份學生於學習過程變得更主動，而且思考更具批判性，學會後設認知能力及決策能力之運用。此外，護理學生之學習經驗將可作為未來混成學習模組規劃之指引方向。

關鍵詞：混成學習、護理課程、質性研究、護理倫理。