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# Evaluation of Online Course Discussions: Faculty Facilitation of Active Student Learning

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## Abstract

Graduate nursing faculty evaluated their initial experiences with online course discussions after making the transition from traditional use of weekly face-to-face classroom discussions to primarily computer-based interactions with students at distant sites. The online discussion data were analyzed qualitatively. The ways the faculty member communicated to facilitate active student involvement in the online discussions were coded. Six categories were identified that describe the ways the faculty member communicated to facilitate active student involvement in online discussions: assist with navigation, explain expectations, clarify faculty role, stimulate critical thinking, share expertise, and provide encouragement. Examples of each were provided to demonstrate ways faculty promoted student learning in online discussions.

## Key words

Distance education; Internet; Midwifery education; Online course discussions; Web-based instruction

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Online course delivery is becoming increasingly common as a way for educators to reach larger numbers of students at greater distances. A major impetus has been the ability to connect with students independent of place and time. Student access to education using online modalities is viewed as an essential skill in the Information Age. Fallon<sup>1</sup> stated that it is a moral obligation that faculty prepare students for online inquiry. It follows logically that it is equally important for faculty to learn how best to use the new teaching modalities to effectively promote student learning.

Thiele et al.<sup>2</sup> noted that the future includes virtual classrooms. These authors studied web-based instruction of undergraduate and graduate students. The authors identified that this modality requires transformation to directed independent learning from traditional classroom strategies while creating effective interactive learning experiences that can help develop critical thinking. The potential for active learning online motivated faculty members in a master's degree-based nurse-midwifery program (NMP) to offer a substantial amount of the didactic information and classroom discussion using an online format. The authors received grant funds to produce online courses. Committed to evaluate teaching methods, the authors conducted a small beginning evaluation study to explore faculty use of online course discussions to facilitate student learning.

## Overview

The purpose of this study was to identify categories of faculty comments used to promote student participation that were made during online discussions. A qualitative evaluation research approach was used in the study. The study findings may assist other educators to use computer technology, particularly online discussion. It may also stimulate comparative and evaluative research about distance teaching endeavors.

The authors' experiences occurred during a semester in which the NMP faculty changed from traditional use of weekly face-to-face classroom discussions to computer-based interactions with students at distant sites. The students met in the classroom synchronously face-to-face with the faculty member four times out of a possible sixteen for weekly meetings (approximately once per

month or one-fourth as often as the usual classroom-based semester). These meetings were scheduled in advance and allowed for the initial orientation to the computer courseware and later for the students to demonstrate their learning in a group for oral presentations or written examinations, as well as for the final evaluation. Because not all of their other courses were online, the students were on campus for other courses the same days that the face-to-face meetings were scheduled. Therefore, they did not view it as an inconvenience.

After the semester ended, the first author printed all the online discussions that had occurred during two graduate nursing courses and began the analysis. The second author was the faculty member who taught both courses online. She also clarified meanings and assisted with coding as necessary. The faculty and student comments in the transcripts were separated after having been identified with locator codes for verification of context. All faculty comments were then analyzed and categorized according to the variety of communications used to facilitate active student involvement during the online discussions. Six categories of faculty comments were identified: (1) assist with navigation, (2) explain expectations for students, (3) clarify faculty role, (4) stimulate critical thinking, (5) share professional expertise, and (6) provide encouragement. Quotations were selected from each category to elucidate meanings and demonstrate ways faculty enhanced student learning.

## Review of the Literature

Various disciplines, including nursing, have provided a wide range of examples for implementing online teaching. Edwards et al.<sup>3</sup> used problem-based learning in a community health course taught by audio-teleconferencing although these students and faculty connected synchronously when discussing the clinical cases. O'Brien and Renner<sup>4</sup> used online discussion for a detailed values clarification group exercise on health policy in a graduate nursing course. Mastrian and McGonigle<sup>5</sup> used several technology-based assignments to encourage collaborative work among nursing students returning for their baccalaureate degrees. However, more than half of the course time occurred in the classroom. Rogerson and Harden<sup>6</sup> offered students a variety of distance courses allowing single course completion to different levels such as bachelor's or master's degrees. Their approach was more individualized with students working through problem-based and work-based learning study guides and electronically communicating with faculty. Milstead and Nelson<sup>7</sup> delivered the initial health policy course asynchronously in a nursing doctoral program that was to become completely online.

Non-nurse educators have also published about online asynchronous teaching. For example, Schneider<sup>8</sup> taught sociology online and found the immediate updating of assignments and scheduling with an electronic syllabus saved time and repetition. Similarly, Scanlon<sup>9</sup> taught science online and identified the freedom from time and space constraints. She had students directly contact experts, who were working in their laboratories, to enrich the learning experiences. Fallon<sup>1</sup> used online education to teach communication. She recommended online courses because they move educators from traditional teacher-centered classrooms that may foster passive student learning to an environment without walls that requires active student engagement. She also claimed students felt freer and less intimidated when responding.

Most nursing and non-nursing authors examined the perceived benefits and disadvantages of distance learning. A compilation of major reasons to use online discussion as suggested in the literature were:

- increased active participation by everyone [1,4](#)
- decreased tendency for some to dominate or interrupt [4,9](#)
- decreased tendency to be judged according to visual cues or culturally based perceptions of status [7,10,11](#)
- decreased chance for some to remain passive learners [1,7](#)
- equalized access to professor with unlimited office hours [1,7](#)
- streamlined time for announcements and decreased redundancies of one-to-one messages [8](#)
- focused attention without distracting interactions, such as gossiping or arguing [4](#)
- increased time for reflection and synthesis, rather than immediate responses [8,11](#)
- increased time to develop ability to organize thoughts when problem solving collaboratively [1,4,9](#)
- documented written record of participation [10,11](#)

Online classrooms have potential disadvantages. These include loss of nonverbal communication cues, student isolation, information overload, reliance on learner initiative, a requirement for technical skills, and access to the Internet. [1,7,10,12](#) Unfortunately, faculty may attempt to address these concerns by increasing face-to-face classroom discussions. This strategy may backfire by diminishing the online discussions in the course. These concerns are better addressed by using varying online teaching strategies such as establishing goals for learner participation and implementing debates and critiques. [10](#)

In summary, distance educators have published primarily on various ways to integrate these modalities into courses and on the benefits of online education. However, systematic investigation of the faculty role in online discussions was needed to explore the ways to facilitate learning outside the face-to-face classroom.

## Background of Project

The shift from traditional classroom activities to computer-based distance education was enabled by a state grant funded by the Robert Wood Johnson Foundation Partnerships for Training (PFT) project. PFT grants are awarded to promote distance education technologies and thereby enhance participation of students who have historically been unable to attend university-based curricula. In addition, PFT grants were intended to increase collaborative educational experiences among health professionals. The NMP at Marquette University in Milwaukee, Wisconsin, is one of the educational partners in this state initiative.

An NMP faculty member taught two nurse-midwifery courses online for the first time during the spring semester of 1999: postpartum/newborn and advanced practicum. Students also completed specified amounts of time in supervised clinical sites and required course assignments to demonstrate competency and synthesis.

The graduate students in the NMP were full-time, postbaccalaureate registered nurses who completed the program within two years. The NMP faculty member and the entire enrollment of graduate nurse-midwifery students were using distance technology for class discussions for the first time in their educational experience. The particular courses had been taught at least three times in previous years using primarily face-to-face classroom interactions during course discussions. It was during the fourth time these courses were taught that the faculty first transitioned to distance delivery and that both NMP faculty and students had the new experience of online discussions.

The NMP faculty primarily used case-based or problem-based learning. This is a method in which a clinical situation is proposed and the students discuss approaches. Students apply their readings and develop their critical thinking abilities. Lecture is not the focus of this strategy. Case-based learning requires active learners. It is a strategy that adapts well to online courses, particularly in clinical disciplines.<sup>3</sup> The case-based discussion method was used for both courses. The clinical cases chosen for discussion in the first course were about midwifery care during the postpartum time, including care of the newborn. This course also included didactic course material that was delivered online. The cases in the advanced practicum course were from all nurse-midwifery scope of practice areas, including antepartum, intrapartum, gynecologic, and related primary care. The advanced practicum course was taught exclusively as case-based. The postpartum and newborn course was generally taken by first-year students in their second semester of graduate study. The advanced practicum course was taken exclusively by second-year, final-semester students.

## Sample and Data

The sample consisted of all the online responses communicated among the faculty member and the 16 students, eight in each of the two classes during one semester. The sample comprised 604 double-spaced pages of transcribed online discussions. The data that were analyzed consisted of one faculty member's comments contained in 215 entries. Although the courses had different foci, the faculty member's participation was similar in both. Therefore, no differentiation was made between the courses for analysis. The faculty member not only gave full consent to the use of her comments for this study but also helped analyze these data.

## Data Collection

With the assistance of the design consultant, all student and faculty interactions that occurred online during both courses were collated and printed, forming the narrative data of this study. Only faculty comments were coded for the purposes of this evaluation research. If specific references to students were made in transcripts, the identifiers were removed to protect the confidentiality of the students.

## Data Analysis

An NMP faculty member who was not directly involved in the courses provided independent analyses of the data during the two months after the semester was completed. She read and reread the online interactions in context with the student responses and then focused directly on the faculty comments. She coded all the transcribed data into categories, looking specifically for

themes [13](#) in the strategies used to facilitate student online discussion. The data were then reviewed, and the coded categories were discussed with the course faculty member to refine the categories and clarify questions. The course faculty member validated that the coding and categories represented what she had intended to accomplish while facilitating online discussions. However, the course faculty member stated that she had made her contributions according to her intuitive sense of what was needed for student learning. She stated that during the semester she was unaware of any particular categories that characterized her specific intentions while she was teaching online. Lastly, two other nursing faculty members not involved in the NMP reviewed the codes and categories for clarity and representativeness of the data. They, likewise, verified the accuracy and clarity of the categories, applying independent insights and experience with education and qualitative research. Suggestions from these evaluators were discussed and the categories were further refined as appropriate.

## Results

The faculty member who taught the two courses had online remarks in six general categories. These categories were identified and validated by the two independent reviewers. The categories were named according to the type of response intended by the course faculty member: (a) assist with navigation, (b) explain expectations for students, (c) clarify the faculty role, (d) stimulate critical thinking, (e) share professional expertise, and (f) provide encouragement. Each category is explained according to its key elements. In [Table 1](#), the summary of the six categories of faculty comments are presented along with their characteristic types of communications that the faculty used to improve the quality of the online course discussions. Select quotations from the course faculty member's online contributions are used to illustrate each category.

<b>Category of Faculty Involvement in Course</b>	<b>Characteristic Types of Faculty Comments</b>
Assist with navigation	State details about use of course software Troubleshoot courseware problems Suggest relevant websites to explore
Explain expectations for students	Establish assignments and deadlines State need for substantive, data-based contributions Instruct about need to avoid praising others' comments exclusively
Clarify faculty role	Describe how students' comments would be evaluated Create case studies Provide details about required timing of responses Make concrete suggestions to promote learning Indicate availability for private discussion online
Stimulate critical thinking	Guide discussion Redirect discussion by altering the situation with new data Correct misconception Ask questions to increase depth of topic exploration

Share professional expertise

Supplement students' views with own practice experiences  
Provide answers when broader practice background required  
Add enrichment information from own pertinent life experiences

Provide encouragement

Make general enthusiastic remark about learning demonstrated  
Add a specific note regarding quality of comments  
Support professional role development

### Assist with navigation

This was the first semester that these courses were offered online. Therefore, all students and faculty needed orientation and assistance learning to navigate within the course software. Initially, this information was conveyed by the consultant during a face-to-face introductory meeting at the beginning of the semester. He provided online information on how to download various programs needed to enhance running the course materials. He was also available by e-mail for troubleshooting problems. The ways to maneuver through the course using particular computer keys or screen icons were also an early focus in the course discussions. As problems or questions arose about the use of the courseware, the faculty would troubleshoot with the design consultant. The answers would be conveyed to the students through e-mail and within the course messaging system. This category also included the faculty member's suggestions for various websites relevant to the course material.

You can find out if you participated in each of the case discussions by using the navigation advice that [the consultant] just informed us about. Hit assignment button, then make the number of entries viewed some large number, then hit the green down arrow in the middle of the bottom screen. You can easily see where you can participate if you have not done so.

A navigation hint that I found helpful ... maybe you already tried it. When I wanted to track the case, I started at the case and then used the blue arrows on the bottom of the case discussion page to navigate between your comments. It made me feel like I could track the discussion and the comments that you have made in a really simple way. You can then easily comment on the comments as you go.

This website [address specified] is a virtual hospital where you can get pictures of derm[atological] conditions. Unfortunately I could not find a picture of [specific condition] included, but you will be able to see pictures of some of your differential [diagnoses].

### Explain expectations for students

In this category of comments, the faculty member explained expectations for students when announcing assignments. In addition, the faculty instructed students in their need to review particular content areas, clarified her expectations for the students' contributions, and explained grading criteria. The faculty member set expectations, not merely commending another's efforts but assisting everyone's learning by making substantive comments. Samples of faculty expectations of students were:

Please attempt to discuss each [topic] in the discussion room as you work on them. You can discuss the readings, discuss a case, ask a question, pose a challenge, or discuss a clinical situation that applies, etc. Feel free to chat as you would in class.



To clarify my expectations regarding [topical] discussions ... I expect each of you to make a substantive contribution to each of the [topics] ... You may answer one question or do one case, and your classmates can do another ... If all of the cases and assignments have been covered adequately in your view, you can "add" to the class discussion in a number of ways. Some examples are: asking questions, summarizing readings, critiquing the literature, critiquing a website, critiquing a clinical practice, discussing another case example, or asking for clarification. In other words, just like the way you interact in a classroom, if a student has made a comment that covers the bases, please feel free not to repeat it. Instead, expand on it, clarify it, or if you don't agree take a different direction with it ... Continue to strive for the group dynamic that you achieve face-to-face.

Review the concepts of newborn thermoregulation and the mechanisms of heat loss. Also review the strategies that you as a nurse-midwife can use to prevent heat loss in newborns.

### Clarify faculty role

The faculty member clarified her role during the course by orienting the students about how and when she would contribute to the discussion and by indicating her availability for private online discussions. Likewise, she provided her e-mail address to facilitate communication. In addition, the faculty member clarified her role when she created case studies and identified required timelines for student responses. Lastly, she informed students about when to expect her feedback. This category encompasses some of the remarks that could also be considered the "house-keeping" tasks of teaching.

I am very concerned that your learning needs and the content are covered. I will continue to strive for that goal. Please dialogue with me privately with comments or suggestions to continue to improve things for the course and for your learning.

I will jump in to the discussion after most have you have entered in.

If I see another fruitful direction for the discussion, I will help redirect it as well. I wanted you to know, I read all of your responses. I don't always respond to them if the discussion is going in a fine direction. I check for accuracy, because I don't want misinformation to be passed on (this has not been a problem too often with your group). I also keep a written log of your participation, so that you will be sure to get "credit" for your participation. The "by student" button does not accurately reflect student participation in the course. Therefore, I do not use it for keeping track of your participation.

### Stimulate critical thinking

This particularly important type of faculty comment was used to help students increase their critical thinking. The faculty member guided them to delve deeper into their analyses or redirected them in ongoing case discussions by altering situations with additional data requiring different nurse-midwifery management plans. This category was also used to correct misconceptions.

How can we do anticipatory guidance and planning for the case of a woman with a history of postpartum depressive disorder and/or depression? Are there referrals that could take place prenatally? How would you plan differently for the postpartum hospital course? What about planning for after the six-week visit? ... Our acknowledgment of these [warning] signs legitimizes that these are an indication for the woman to seek help. Incorporation of the warning signs of postpartum depression into the postpartum danger signs is a critical part of our midwifery management plan.

What did you all think about the subjective data [piece that no one has addressed yet]: "I get this every year at the same time?" ... I still am interested to understand the client's perception that she gets these symptoms yearly. What do you think of that aspect of her history?

Subinvolution and thyroiditis are important differential [diagnoses]! Yes, never assume someone isn't pregnant ... when in doubt do a pregnancy test ... What are some other causes of a uterus larger than expected postpartum?

### Share professional expertise

The faculty member used this type of comment to help extend case discussions, often adding enrichment material based on her clinical expertise or reflections on her personal life experiences. These experiential comments supplemented the students' more limited experiences, sometimes providing answers to students' questions that required a broader practice background.

A number of years ago I was in Kenya and toured Nairobi Hospital, which is the largest most modern hospital in the country. There were up to three babies in an isolette in the special care nursery. The mothers waited and breast-fed their infants. They sat on the floor around the nursery waiting for the chance to breast-feed. There was no question how their babies would be fed and no question that they were where they belonged.

I often advise women to wait to have sex until she feels like "ripping [your partner's] clothes off." This makes them laugh and can sometimes break the ice to open up a discussion. I was a research assistant in a graduate study of women breast-feeding and working. One of the interesting findings in this qualitative study was that one woman who spoke of her sexual desire stated that with breast-feeding she felt as though she had been "touched all day."

I recommend that each of you consider investing in a good derm[atology] book with pictures if you don't join a practice that has one (or immediate access to the internet for pictures). They are a wonderful help with differential diagnoses. Rashes are the most common reason that people seek health care (at least so says my dermatologist) so you will see lots!

### Provide encouragement

In this category of providing encouragement, the faculty member made enthusiastic remarks about the learning being demonstrated. She also commented specifically about the quality of students' critical thinking on particular issues. In addition, she enthusiastically supported their professional role development.

You amaze me! I love midwives! I am thrilled by your efforts to make this work and to really participate in the discussion of our first case ... OK I said no pats on the back ... but I feel I need to tell you how really pleased and proud I am ... and only our first week!

You are doing a great job in the course! I can really see your effort. I can picture us all having a wonderful library of websites that will be useful for clients and professionals as well.

Hi everyone! I'm glad to see such activity in the course! I am pleased with your efforts! ... I think this is a much more exciting course. I think we are taking the discussions to higher and better directions. I really mean this! I think you are certainly covering the basic information in a complete manner and I feel that you will be well prepared in this content area.

In summary, six categories of faculty comments were identified that were validated by faculty coders. The categories represented the various types of faculty input during online discussions that were used to promote active student involvement in the course. In this initial descriptive investigation, the data were not analyzed for frequency or timing in the course. Therefore, it was not possible to state the prevalence of any category or variations about when certain categories were used more than others.

## Discussion

The faculty member's comments in response to student discussions showed consistently high levels of encouragement to think broadly and critically, while remaining open to various viewpoints. Other phenomena, such as clarifying expectations, also occurred in a mutual learning process during online case-based discussions.

The findings of this study were compared to Klemm's <sup>14</sup> suggestions for increasing student participation in an online course. Klemm, a non-nurse, identified eight suggestions. His first six were (1) require participation, (2) limit opinions, (3) structure activity, (4) require deliverables, (5) be interesting, and (6) be involved yourself. These six strategies were similar to categories found in this study, such as clarify faculty role and explain expectations for students. Klemm also suggested two additional potentially helpful strategies: (1) form teams and (2) use peer grading. The NMP faculty member did not use these during the first semester of online discussion. Two categories in this study were absent in Klemm's work: navigation assistance and faculty encouragement of the students. Perhaps these may be more needed when actively making the transition to online discussions. Perhaps they may be more needed for students in a healthcare profession. Both are areas for further study.

Souviney and colleagues <sup>11</sup> analyzed archived e-mail traffic among faculty and student teachers who were placed in outlying schools. The authors found that e-mail communications freed up the time constraints of group meetings while addressing the immediate concerns of student teachers in the field. In their analysis, they deleted purely personal e-mail messages that were non-course-related communications. These researchers categorized the remaining comments into three types: procedural (about scheduling and assignments), academic (discussing course content), and clinical (suggestions to implement in the student teachers' classrooms). The three categories they identified included elements similar to those categorized in this study. However, the three categories were too broad to be useful, because they did not include specific details or examples that could guide educators. Yet, the work by Klemm and Souviney and colleagues provided support for the results of this study.

This study contributed to nursing knowledge of online education by identifying strategies that one faculty member used. It was a small study, yet important because it demonstrated that quality communication can occur in online discussions. As Musinski <sup>15</sup> indicated about classroom teaching, nurse educators lead through facilitation of the students' learning processes. This study confirmed that the same creative stimulation and supportive guidance can be expressed online and used to release students' energy for learning. In addition, online teaching presents greater flexibility for student learning and unique opportunities for educators to do further research. Much nursing research remains to be done, including more detailed analyses of specifics such as when and how often the faculty use the various response categories during an online course. However, this was beyond the scope of this study. Validating the currently accepted benefits of distance education would also be timely and useful.

A pilot study has acknowledged limitations. The authors recommend that this type of qualitative study be done with more students, courses, faculty, and sites. Analysis of additional experiences will deepen the knowledge of various approaches, which would allow for better understanding of online teaching.

The authors learned much from their experiences. For example, online education did not decrease faculty workload, rather it increased it, at least initially during the course development phase. The intensive course preparation and the need for frequent faculty availability for online student learning

are important workload issues to consider. Milstead and Nelson <sup>2</sup> identified a range of administrative issues that need to be addressed prior to their online course development. These were at the university level (e.g., the technical infrastructure, registration, student services, traditional and online library access, and bookstore use) and the department or college level (e.g., administrative commitment and faculty members' commitment and willingness to participate), along with marketing of the course and other implementation details such as orientation, faculty availability, and support. There were also issues with faculty knowledge and experience with computers. Lewis and Watson <sup>16</sup> demonstrated that technical workshops for faculty significantly increased their comfort levels with computer applications to teaching. Online class discussions required careful planning and active, frequent faculty input. For students to feel supported and mentored, faculty comments needed to be clear, concise, timely, and meaningful. By sharing observations, insights, and findings, nurse educators may increasingly use distance technologies more effectively, while improving the quality of teaching and curricula. Education is increasingly occurring in classrooms without walls; therefore, online courses will become more common. Questions that continue to need to be addressed in future research are whether there are differential effects due to the number of students in the discussion or the number of face-to-face meetings during the semester. With education and technical support in computer-based learning and a risk-taking attitude, nursing faculty can successfully facilitate learning and employ effective teaching strategies to online formats. These strategies and outcomes for electronic learning communities can be mutually stimulating, challenging, and rewarding.

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