Student Assessment of an Online Clinical Social Work Research Course: Using a Collaborative Learning Model

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Abstract: *This article reports on a clinical research methods course taught online to a total of 90 off-campus MSW students in the fall of 1999, 2000, and 2001. The course was taught in a mid-size public university in a CSWE-accredited School of Social Work. The purpose of the course was to teach single subject design research skills for the evaluation of clinical social work practice. The student experience of the online course was assessed using qualitative interviews that add a deeper, textured understanding of the various facets of online instruction from the learner's perspective. Important dimensions for social work instruction in online courseware were delineated. A collaborative learning and teaching framework is presented for those social work educators interested in implementing web-based courses.*

Keywords: Single subject design, clinical, online, collaborative learning

The world of web-based instruction enables universities to implement distance education to reach a diverse population and to provide an open learning environment 24 hours a day, seven days a week. Currently, there are approximately 17,000 web-based courses and 5% of all post-secondary students are presently online in the United States (U.S. Department of Education, 2000). In 2000, estimates were that 2.2 million individuals would be enrolled in online courses by 2002 (International Data Corporation, 2000).

The Internet (IT) has also permeated the educational and organizational environments of social work faculty, students, and professionals (Gifford, 1998). Computers and other information technologies have become standard fixtures within the profession. One reason for this proliferation is that Social Work is a knowledge-intensive profession where information is essential in decision-making and clinical practice. Information must be relevant, appropriate, and pertinent for practitioners. Social work graduate students require knowledge about the effects of IT on their clients (i.e., confidentiality and privacy), the profession, and society. Moreover, understanding the range of current uses, identifying emerging trends, and developing competency to optimize the use of IT for professional purposes is essential.

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This article reports on a clinical research methods course taught online to off-campus MSW students in the fall of 1999, 2000, and 2001. The course was taught in a mid-sized public university in a CSWE-accredited School of Social Work. The purpose of the course was to teach single subject design research skills for the evaluation of clinical social work practice. The online course is evaluated using qualitative methods. An online collaborative learning and teaching framework is described for those social work educators interested in implementing web-based courseware. This exploratory research contributes to the field of social work education in several ways. First, knowledge gained from the study of student perceptions of self-mastery and technology may be particularly valuable to social work educators. Second, an understanding of individual online learning experiences can provide social work educational programs with insight into preparing future social workers to use technology in evaluating practice. Finally, recognition of the utility of a collaborative learning framework within online education is significant for course development and sustainability (Riel, 1998).

COLLABORATIVE LEARNER-CENTERED FRAMEWORK

A primary goal of our online academic program is to ensure that it is reflective of collaborative learning. Our conceptual framework for effective pedagogy is based on the National Research Council's Commission on Behavioral and Social Sciences and Education (NRC) publication on how individuals learn (Bransford, et al., 2000). The NRC report provides a model for effective learning environments in which a system of four interconnected elements exists and mutually supports each other. These components are focuses that identify environments as learner centered, knowledge centered, assessment centered, and community centered. This paper focuses on the collaborative learner-centered component as an effective learning environment that accounts for learner strengths, interests, and preconceptions and assists students to gain insight into themselves as learners.

The NRC guidelines provide an excellent framework from which to consider the design of online learning environments. There are three reasons why this framework presupposes that teaching social work practice and research skills online encompasses a method of instruction towards a collaborative learner-centered model and away from a traditional didactic model (Duffy, Dueber & Hawley, 1998; Bonk & Cunningham, 1998). First, this model views students as engaged in critical inquiry and problem solving within the context of a collaborative environment (Duffy et al., 1998; Garrison, Anderson & Archer, 2000). Second, the ability of students to project themselves socially into a community of discussion and inquiry is deemed critical in the absence of the physical presence of the course instructor. Finally, the model asserts that the design, facilitation, and direction of cognitive and social processes online may influence meaningful and educationally worthwhile learning outcomes for students. The benefits of online education for teaching and learning have included increased equity and collaboration among students (Johnson & Johnson, 1996), promotion of critical thinking (Gokhale, 1995), high satisfaction with student-faculty interaction (Shea, Swan, Frederickson & Pickett, 2002), and high class participation rates (Frederickson, Pickett, Shea & Pelz, 2000). Given that one of our objectives in social work educa-

tion is to help students explore their potential as thinkers and conveyors of ideas, online instruction offers considerable possibilities.

Proponents of collaborative learning claim that the active exchange of ideas within small work groups promotes critical inquiry, with shared goals and values that inform decisions and actions (Gokhale, 1995; Walther, 1996). This approach is viewed as consistent with information processing theories that place more emphasis on the student's role for constructing and reconstructing his or her own knowledge by trying to make sense of new information (Brufee, 1999; Chong, 1998). Gellis (2000) has noted that knowledge is not something that is presented to students in this process, but something that emerges from active dialogue and interaction among those who seek to understand, apply, and integrate concepts and techniques.

Developing Internet courses entails using a different lens since collaborative online activities require social work instructors to make changes in their role from content provider to flexible facilitator with the purpose of teaching in a learner-centered style. In order to facilitate student learning, Cahoon (1998) and Bereiter and Scardamalia (1992) recommend using six methods of instruction for the online environment:

1. Coaching—focuses on issues and problems arising while students are in the process of attempting online tasks.
2. Modeling—focuses on cognitive modeling, which demonstrates to students the online thought process involved.
3. Reflection—particularly reflection that compares the student's processes with each other's and with those of the teachers.
4. Exploration—focuses on students, not only in solving online problems independently, but seeks them out independently.
5. Articulation—prompting students to demonstrate or verbalize their own knowledge and cognitive process in a specific online topic.
6. Scaffolding—This is external online support from the teacher that helps students achieve early success but can be withdrawn as students are able to function independently.

The author has found that developing and implementing collaborative online activities takes substantial preparation and planning at various levels including: Choosing content-based activities, weekly tasks and assignments, decisions on how student groups will be organized, and decisions about rules and expectations for online participation. The clinical research course discussed in this paper was developed in approximately four months for an online environment. Student work group and discussion group size appears to be an important factor for effective collaborative learning. Online work group size ranged from four to six participants for the entire semester. Empirical studies note that the optimum size for decision-making groups is five in order not to dilute the experience nor change the group dynamics (Brna, 1998; Bruffee, 1999; Felder, 1996).

Creating the appropriate conditions for an online student learning environment presents many other challenges for the social work instructor during the

planning stages of online curriculum development. Experience suggests that pedagogical decisions need to be considered in the following areas:

- Orientation of students in the use of Internet technology.
- Management of the interaction of the student community.
- Preparing students to participate in quality online discussions.
- Assessment of the online group interaction and individuals within the group.
- Sustaining student commitment to continuing in the discussion forum.
- Management of any online problems.
- How the online group will be monitored by the instructor.
- How to convey to students a sense of mastery in an online discussion.

An example of integrating a learning-centered model in an online social work course is delineated in the next section.

TEACHING SOCIAL WORK RESEARCH ONLINE INITIATIVE

Supported by the Alfred P. Sloan Foundation, the State University of New York's SUNY Learning Network (SLN) is an online distance learning delivery system using an Asynchronous Learning Network (ALN) approach to teaching and learning that is student- centered and eliminates the constraints of time and location that higher education normally places on students. Key characteristics of the SLN asynchronous software system includes the capability for secure student login via a standard Java-enabled browser, centralized database-centered syllabus with links to internal or external web pages, on-line, time-monitored quizzes with randomized dynamically-generated testing, discussion groups, and integrated e-mail. The SLN software system also provides instructor development tools to ease transitions from other media.

Typically, an SLN online course is delivered weekly over a semester and the instructor directs the course for about three hours during the week. Using Lotus Notes as the software platform, an online clinical research course was taught as part of the required MSW direct practice sequence. Identical syllabi and assignments were also utilized in other course sections where students are taught in a traditional classroom setting. No comparable data were collected for this investigation. This MSW-level course is fundamental for social work practitioners in empirically evaluating their clinical practice. Clinical social workers must be able to understand and use various research methods in order to conduct ethical, efficacious, and accountable practice interventions. Therefore, it is important that professional social workers have the advanced knowledge and skills needed to retrieve and critically analyze existing intervention research and the ingredients to carry out such clinical practice evaluations.

Sample and Procedures

Ninety MSW students were enrolled in three sections of a required social work graduate course titled "Evaluation of Clinical Social Work Practice," at a mid-size

research university in the Northeast. To obtain the data for this study, a qualitative instrument was administered on the Internet as part of the culminating activities during the 14th week of the course. Students were asked to write their answers to open-ended questions online in a short interview format, then assign a rating on a scale from 1 (much less than expected) to 5 (much greater than expected) on seven questions about the online course activities. This combined method of assessment resulted in a numerical indicator of learning with a richer understanding provided by the qualitative data.

A total sample of 81 (90%) social work students (31 males, 50 females) volunteered with informed consent to participate in the study. To reduce possible response bias, instructions to participants stated that the students' qualitative responses would only be viewed by the course instructor after the submission of grades. Participants were informed that the survey was anonymous and confidential and that the instructor would not be able to identify any particular student. To increase response rates in the project, no personal or student identifiers were requested. Participants were asked to send their answers to an administrative assistant at a secure website, at which point all identifiers were deleted. Instructions to respondents stated that the qualitative information would be used by the course instructor to evaluate and improve the online course experience for future students; the students did not have to answer any questions they did not wish to, they could withdraw from completing the qualitative instrument at anytime without penalty, and participating or not in the project would have no effect on their course grade.

Online Course

Each of the three online course sections had identical formats and materials including syllabi, online lectures, shared references and websites, quizzes, lecture notes, discussion questions, discussion groups, a class bulletin board, and virtual office hours. All of these course features were integrated online to provide students with the opportunity to relate lecture material with hands-on computer experience. The specific objective of the online lecture section was to develop student comprehension of topics, such as single system designs, target problem assessment, measurement packages, behavioral observation, logs and journals, data analysis and interpretation, and computer software applications for clinical social work practice. In addition, other portions of the course involved working with microcomputer applications including word processing, database, graphics, and electronic mail.

Qualitative Results

The online short interview method was used to explore the perceptions of students on technology-related activities, online learning, knowledge, and overall course experience. The short interviews were conducted primarily to lend rich, qualitative texture to this exploratory study. These interviews were designed to invite the student participants to give voice to their cognitive experiences and their plans with respect to technology in social work practice. It was hoped that the short interview method would capture student experiences as they occurred in a variety of online activities. In the section that follows, participant comments

were selected from these short interviews, representing the range of responses and experiences that generally reflect variation along the two dimensions of affect and cognition. The interview questions are delineated in the order they were asked online.

Table 1 presents the characteristics and prior experience of the sample with previous computer courses. All students were registered as full-time in their second year of an MSW program. The mean age for the sample was 29.4 years (sd = 6.29), with an age range of 22-51 years. About half of the respondents indicated that they had a computer course in their undergraduate program. The most common course reported is word processing, followed by Internet navigation and searching. The most common type of computer used in undergraduate courses was an IBM compatible computer (92.5%). Macintosh computers accounted for approximately (7.5%). More than two-thirds of the students (69.2%) reported having a cable modem connection, with a 56K modem being the next most common connection (28.4%). The students had access to computers in three different ways: (1) they had their own computer at home (97.5%), by far the most common situation; (2) they had access to computers provided by the university in public user rooms (1.2%); and (3) they had access to a computer in their remote area at a small community college or local library (1.2%).

LEARNING TO USE TECHNOLOGY IN SOCIAL WORK PRACTICE

Table 2 presents the results of the student participants on the rating scale. Overall, none of the participants rated any of the items as either "worse" (2) or "much worse" (1) than expected, suggesting that they were satisfied with various facets of the online course. The first question asked of students was to rate how much the online course prompted them to become more aware of learning to use technology in their social work practice. They reported learning much about applications and issues surrounding technology in social work practice, with a mean score of 4.62 out of a maximum of 5.00 on the self-rating scale. More than three-quarters of the students reported the online course to be much better than expected, and it expanded their thinking about integrating information technology into their work with clients. Less than 5% perceived it to be about what they expected. The general theme of technology integration by the students in this course can be summed up in this student's comments:

> "*The use of technology in social work practice includes many things: assessment tools, clinical data collection, evaluation tools, and other software programs. I hadn't thought about all the potential uses.*" (Student #79)

Experience and Attitudes of Learning to Use Technology in Social Work

The second question asked students about their level of awareness of their own experiences and attitudes as they relate to learning to use technology in social work. The mean score was 4.66 out of a maximum of 5.00 on the rating scale. More than 90% of the students perceived their awareness level to be better or much better than expected at the end of the course. In the short interviews, students reported contrasting opinions about their level of awareness. Students generally reported increased awareness and improved attitudes towards tech-

Table 1: *Sample Characteristics (*N=*81)*

	N	Percent
Gender		
Male	23	28.4
Female	58	71.6
Total	81	100.0
Taken Computer Class as Undergraduate		
Yes	41	50.6
No	40	49.4
Total	81	100.0
Type of Computer Worked On		
IBM or Compatible	75	92.5
Macintosh	26	7.5
Other	0	0.0
Total	81	100.0
Type of Internet Service Connection		
56K Modem	23	28.4
Cable	56	69.2
DSL	2	2.4
Total	81	100.0
Student Access to Computers		
Have own computer	79	97.5
University Public User Rooms	1	1.2
Local library or college	1	1.2
Total	81	100.0

nology in social work. However, there was a minority of students who felt anxious during the course due to a lack of confidence in using technology.

> "*As a social work student,…I learned that I am not the only one who is anxious about working with computers. I have a computer at home and I need more practice to increase my comfort zone.*" (Student #62)

> "*Completing this online course has taught me a lot about myself. I realized that I have mastered many new information technology skills and that excited me.*" (Student #2)

The majority of students indicated positive attitudes towards technology at course completion.

> "*I learned that I am on the high end of attitudes and aptitudes [regarding technology], which surprised me somewhat. I like working with computers, but sometimes I feel overwhelmed.*" (Student #51)

Table 2: *Student Ratings of the Online Social Work Course by Frequency and Percent (N=81)*

Rating Scale Items	Much Better Than Expected 5	Better Than Expected 4	About What I Expected 3	Worse Than Expected 2	Much Worse Than Expected 1	Mean Score
1. Rate whether the online course prompted you to become more aware of learning to use technology in social work practice	64 (79.01%)	13 (16.04%)	4 (4.93%)	0 (0%)	0 (0%)	4.62
2. Rate the level of awareness of your ownexperiences and attitudes toward technology	59 (72.83%)	17 20.98%)	5 (6.17%)	0 (0%)	0 (0%)	4.66
3. Rate whether the online course promoted collaborative discussions	74 (91.35%)	5 (6.17%)	2 (2.46%)	0 (0%)	0 (0%)	4.90
4. Rate how the online course compared with your expectations at the beginning of the semester	67 (82.71%)	7 (8.64%)	7 (8.64%)	0 (0%)	0 (0%)	4.74
5. Rate the features of the online course template	27 (33.33%)	33 (40.74%)	21 (25.92%)	0 (0%)	0 (0%)	4.07
6. Rate the technical support/assistance you received for the course	43 (53.08%)	30 (37.03%)	8 (9.87%)	0 (0%)	0 (0%)	4.43
7. Rate your ability to access the online instructor as compared to a traditional course	77 (95.06%)	3 (3.70%)	1 (1.23%)	0 (0%)	0 (0%)	4.93

Online Collaborative Discussions

The third question asked students if they perceived the online course to promote greater collaborative discussions among members of their online course group as compared to their traditional classroom experiences on a scale ranging from "much better" (5) to "much worse" (1) than expected. The mean score on this question was 4.90 out of a maximum score of 5.00. The majority of students (more than 90%) reported positive experiences on promoting collaborative group discussions.

> "*I loved the intensive interactions among [online] group members, stimulated by the weekly discussion questions. I don't remember ever having such intensity in a regular classroom. These [clinical evaluation] questions and online discussions really helped me to understand the topics of the course.*" (Student #44)

> "*I have only positive things to say about our group. I personally found the interactions almost "addictive," in that I was anxious to get on and find out what my group members had said… [about the discussion question or field internship question]... I was also fortunate to be in such a stimulating, thoughtful, and thought-provoking group. These were not the experiences I have had in a traditional classroom.*" (Student #70)

Only four participants in the sample expressed their preference for live communication in a traditional classroom, instead of the asynchronous online group discussion format. Upon examination of this subgroup's qualitative comments, the online course experience was perceived to be more time-consuming than other traditional courses they had completed. Perhaps, this perception was due to a course requirement of logging onto the SLN website for a minimum of three times during the week for the purpose of collaboration and communication on weekly discussion assignments, in contrast to a traditional three-hour weekly course session.

Online Social Work Course Expectations

The fourth question asked was, "How did this online course compare with your expectations at the beginning of the semester?" Students had a mean score of 4.74 out of a maximum of 5.00. More than three-quarters of the students rated this item as "much better than expected." Course participants were prompted to describe times during the online course when they were interacting online with regards to their expectations of the course. A majority of students stated that the online course was flexible, and enjoyed working at one's own pace at home. The course also provided access to clinical measures in social work practice, useful for clinical evaluation.

> "*The course offered so much flexibility…I was able to use the CD that came with our text to choose several reliable and validated screening instruments to use with clients in my field placement…Our [online] discussion group decided what was the most convenient time to meet online. Also, it offered direct online participation regularly, which I did not have in other courses.*" (Student #31)

> "*It forced me to become familiar with the technological aspects within the [social work] field, something that I may have avoided had I not taken this course…In addition, I learned so much about how to use computer-guided assessment and clinical information systems for my field internship…*" (Student #29)

Some students described how completing the short interview seemed to trigger an awareness of their feelings of anxiety, which otherwise remained in the background of their online experiences.

> "*I always feel like I am going to break the computer if I type in the wrong command, though I feel less and less like that now. I've learned to be more patient and to discuss these issues with other online group members. I realize that other people are struggling with the same things through this course. That is comforting. I don't panic as much, because I realize that happens to even the experts.*" (Student #78)

Online Course Template

The fifth question asked to students was to rate the features of the online course template (for example, chat, discussion group, course documents, announcements, course evaluation, virtual lectures, shared references, private course folders) on a scale from "much worse to much better than expected." Students rated the features of the online course with a mean score of 4.07 out of a maximum score of 5.00 on this question, somewhat lower than the other rating scale items. One-third of the participants rated the course template as "much better than expected." Forty percent of responses were in the "better than expected" category, while a quarter were in the "about what I expected" category. This question was significant, since it focuses on sustaining the student's interest and developing a webpage environment for continued curiosity and interest in the course material. The examination of qualitative responses found that students were generally pleased with the discussion groups and, in particular, the amount of sustained interaction. Other course template features frequently mentioned as helpful included the shared class references section and the private course folders for student-instructor interaction.

> "*The discussion [bulletin] board was helpful with information, but I really enjoyed chatting with members in my group and sharing ideas on various topics that we were learning for clinical practice.*" (Student #48)

> "*The chat room, announcements, course documents, and the discussion groups were all helpful. The shared resources were very helpful external links. I was finding myself checking these resources more than I realized.*" (Student #12)

Technical Support/Assistance

The sixth question asked students to rate the technical support/assistance they received during the course. Technical support was provided by university personnel who were available five days per week, 12 hours each day, to assist with computer or Internet problems experienced by registered SLN students. The mean score on this item was 4.43, with the majority of responses in the "better" and "much better than expected" range. Interview responses were positive for perceived technical support and assistance during the online course.

> "*I had problems logging on and the tech support came through for me. My anxiety level decreased immediately.*" (Student #48)

> "*The course docs, announcements, and online helpdesk were very useful, especially when I ran into a problem.*" (Student #16)

Online Access to the Course Instructor

The seventh and final question asked students to rate their ability in accessing the online instructor as compared to a traditional course from much better than expected to much worse than expected. The majority of students rated this item very high, with a mean score of 4.93 out of a maximum 5.00.

> "*I have never had so much interaction with a course instructor as I have had in this online course. It is much appreciated. All courses should be this way.*" (Student #22)

> "*The instructor responded very quickly to questions and concerns. Papers and assignments were graded on the same or next day and were on the web for viewing. I couldn't believe how quick the turnaround time was. This has never happened in any other courses I have taken.*" (Student #73)

Student responses to the short interview questions provide some evidence of a diversity of positive cognitive experiences triggered by technology-related experiences. The richness of these responses was heightened by the articulate manner in which students were able to describe their thoughts and affect. The timing of these interviews at the end of the course was successful in eliciting an inclusive set of cognitive experiences as well as triggering student experiences in other traditional courses. Taken at face value, the diverse range of student experiences reported here may have been influenced by levels of technological competency, attitudes toward technology, and the amount of time spent with computers during the semester.

DISCUSSION

The purpose of this study was to explore student perceptions of their experiences in an online required graduate-level social work course. The findings will be used to identify key dimensions for designing and improving collaborative learning activities in online social work courseware.

Based on the qualitative interview findings, several components of teaching online should be emphasized. Students can interact with each other, with the instructor, and access online resources at any time without the constraint of a classroom or office hours. The instructor acts as facilitator rather than a lecturer. In addition, the instructor can provide immediate support, guidance, and feedback on assignments and discussion questions. The online course can facilitate a democratic and collaborative learning environment and may place students in control of their learning, offering them a choice of content, online time, feedback, and a wide range of media for expressing ideas. Instructors can also update course materials, review assignments rapidly, interact with individual students and through group discussions with ease at anytime. In the course presented, students were able to log on anytime, access all resources, review virtual lectures, complete assignments, take quizzes, and receive results instantly. Online courses permit students to meet their own needs in a self-paced, self-monitoring environment.

Within this online experience, video and audio media and text interactions are used frequently; this is provided through asynchronous communication, thus

maintaining visual anonymity. Students are reliant on each other for completion of tasks, therefore, increasing group influence. Online interaction is required of all group members for a sustained period (14 weeks), and task activities are balanced with online non-course related social interaction in a bulletin board lounge. One of the main course objectives is to develop an online collaborative learning community with increased student participation. Collaborative learning among students and instructor emphasizes active participation and sustained interaction. It creates a medium for conversation, discussions, and an exchange of ideas.

The processes of this online course group experience is concisely described by Felder (1996), who suggests that students in online groups can be organized to collaborate on projects and discussion forums under circumstances that include the following elements:

- **Online group processing.** Online group members set group goals, periodically assess what they are doing well as a group, and identify changes they will make to function more effectively online over the semester.
- **Individual accountability.** All members of the group are held accountable for doing their share of the work and form a mastery of all of the material to be learned.
- **Positive interdependence.** Online group members are obliged to rely on one another to achieve the goal. If any group members fail to do his or her part, everyone suffers the consequences.
- **Appropriate use of collaborative skills.** Students are encouraged and helped to develop and practice trust building, leadership, decision-making, communication, and conflict management skills.
- **Communication and interaction.** Although some of the group work may be parceled out and done individually, some must be done interactively in person and online, with group members providing one another with feedback, challenging one another's conclusions and reasoning, and perhaps most importantly, informing and encouraging one another online.

Favorable online collaboration and communication combines elements of the learner's and instructor's capabilities, needs, and goals with academic content, pedagogy, and the application of technology. Online communication offers the potential for collaboration, increased participation in the learning process, reflection, peer tutoring, and monitoring of student learning as it takes place in real time. However, for the collaborative approach to succeed, online instructors need to be concerned about developing teamwork skills and structured exercises that promote critical thinking. These online experiences have one factor in common. They are based on the premise that comprehension and problem solving require activities that engage students in constructing knowledge (Norman, 1999). Student engagement in the online process is likely to include more time spent on task, more self-directed learning, increased participation in group discussions

and special projects, and less absenteeism (Shea, Frederickson, Pickett & Pelz, 2001).

Teaching an online course can be a rewarding experience for instructors, because it is designed to provide the student with an authentic learning environment by addressing real world problems and issues relevant to social work practice. The SUNY Structured Learning Network (SLN) online experience described here features a virtual community, virtual classroom, virtual office hours, and a virtual real world studio for life-long learning. It is imperative that social work educational programs begin to develop a collaborative learner-centered online environment that will help students feel a sense of mastery while learning to integrate technology into social work practice.

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