TEACHING ON VIOLENCE AGAINST WOMEN

New Technology, New Approaches:

Collaborative and Interdisciplinary Teaching on Violence Against Women

Karen S. Sandell

University of North Carolina at Wilmington

LaVerne Reid

North Carolina Central University

Sandra L. Martin, Alison Hilton, and Katherine Andersen Clark

University of North Carolina at Chapel Hill

Abstract

The use of distance learning technology provides educators with creative and innovative opportunities to reach a variety of students in different fields of study. This article describes the collaborative development of an interdisciplinary distance learning course focusing on research, theory, and practice in the area of violence against women. Course development considerations, issues, outcomes, and recommendations for the use of specific technologies are discussed.

New Technology, New Approaches: Collaborative and Interdisciplinary Teaching on Violence Against Women

Current concerns about the incidence of violence and its manifestation in brutal, and often deadly acts of aggression suggest the need to increase our understanding of the nature, scope, causes, and effects of violence in this country. While worldwide media attention has focused most recently on acts of terrorism, the widespread prevalence of violence against women continues to affect individuals, families, and society in ways that are becoming more clearly understood through continuing research, practice, and theory development. It has been well documented that violence against women is a serious public health and social issue needing to be clearly understood, identified, and addressed in terms of practice, programs, and policy (Kane & Staiger, 2000; Koss et al., 1994; Koss, 2000; McFarlane & Willson, 2000; Tjaden & Thoennes, 2000a). More recently, findings from the National Violence Against Women Survey reconfirm that violence against women is primarily intimate partner violence (Tjaden & Thoennes, 2000b). For every victimized woman known to service providers, there potentially are many significant others who may come to the attention of emergency medical personnel, public health nurses, social workers, lawyers, police, educators, and others working to alleviate the consequences of violence against women.

For those who teach in human service-related fields such as maternal and child health, public health, and social work, preparing students to be effective practitioners means they must be equipped with a thorough understanding of the issues surrounding violence against women.

This includes educating students about the interdisciplinary and collaborative approaches needed to provide comprehensive services to victimized women and those around them who also are

affected by violence. Because the issue of violence against women cuts across so many disciplines, it is well suited to an educational approach that attempts to integrate interdisciplinary perspectives. One educational approach that can be used to reach an interdisciplinary audience is distance learning technology.

The use of distance learning as an educational delivery method in social work education is increasing as our awareness of its value and efficacy expands (Petracchi, 2000; Petracchi & Patchner, 2000; Seaberg, 2001; Thyer, Artelt, Markward, & Dozier, 1998; Thyer & Polk, 1997). In order to assess the current "state of the art" of distance learning in social work education, Siegel, Jennings, Conklin, and Flynn (1998) surveyed all CSWE accredited social work programs on their usage of distance learning technology. The survey findings suggest that the growing use of distance learning in social work education both challenges traditional approaches to learning, and presents opportunities for interdisciplinary and collaborative models of development and implementation. According to Siegel et al., the large public institutions with combined MSW/BSW programs are most likely to have distance learning programs because they have the planning and development resources available, even during times of fiscal cutbacks. Having access to this technology allows programs to consider expansion into other educational markets and to develop consortia ventures with other programs. Additionally, with regional, national, or international network connections, programs would have the potential to use the expertise of people outside the immediate classroom environment.

In this regard, recent developments in telecommunications technology, especially interactive video broadcasts, have enabled students at geographically remote sites to have live interactions with instructors and other students. This helps to shrink the distance between groups

that otherwise would have limited or no contacts. In addition, there is evidence that the use of interactive video has made it possible for social work educators to move away from the traditional teaching-learning model without sacrificing educational effectiveness (Petracchi & Patchner, 2000).

As the body of literature exploring the use of distance learning in social work education grows (Petracchi, 2000; Seaberg, 2001; Siegel et al., 1998; Thyer et al., 1998; Thyer & Polk, 1997), there is the reality that staying current with the rapid changes brought about by the Web and other new technologies may be a challenge for many educators (Sandell & Hayes, 2002). And, while decisions about the use of technology in social work education must be informed by research on the valued added by the use of available technology, the literature suggests that there is variability in how technology is being used in social work education (Sandell & Hayes, 2002; Thurston & Cauble, 1999).

In the evolving body of literature on the potential uses of distance learning technology, there are no articles discussing the actual experience of developing a course using interactive distance learning technology in social work education. The experiences of those who have been through the course design and delivery process may give others ideas for the development of their own distance learning courses, including courses on the important topic of violence against women.

This article contains information on the collaborative development of an interdisciplinary distance learning course focusing on research, theory, and practice in the area of violence against women. Course development considerations, issues, outcomes, and recommendations for the use of technology are discussed.

Background

In the fall of 1997, a group of colleagues from a large southeastern public university's School of Public Health and Injury Prevention Research Center (to be referred to hereafter as the base site) applied for and subsequently received funding for the development of a distance-learning course on violence against women. Funds were provided by a Chancellor's Task Force on Instructional Technology, which encouraged university faculty to experiment with new teaching technologies in the classroom. Additional financial support was provided by a private family foundation that funds projects focused on building the capacities of domestic violence programs and services. The Principal Investigator (PI) for this project, a faculty member in the base site, had created and taught a three-credit-hour course entitled Violence Against Women: A Public Health Perspective. Based on that experience, a decision was made to create a distance-learning course designed to increase the awareness, knowledge, and response of students within the statewide public university system to the issues of violence against women.

The course had multiple objectives including: providing an historical and conceptual framework to ground violence against women as a public health problem; enumerating the incidence and prevalence of the problem; examining policies and programs aimed at prevention and intervention; and preparing students to address the problem in the real world of practice.

Course Development: Planning and Logistics

Once funding was secured, a key task facing the base site team was to find faculty who were interested in being involved in the collaborative teaching effort, who also had the technological capacity and structural supports at their universities to sustain a commitment to the project. The team explored various host departments across the statewide university system,

including departments of health education, social work, women's studies, and criminology. Each of these disciplines would have unique perspectives to bring to students from different fields of practice. They also could complement each other by providing students with a more informed view of the need for interdisciplinary collaboration in addressing the multiple service requirements of women who have been victims of violence.

After several months of exploration and discussion with potential faculty members, the base site team secured two additional university partners. These partners were selected on the basis of their being connected to the statewide university distance learning system and on having a faculty member who was interested in participating in the venture. The new sites incorporated different disciplines, including a department of health education in the central region of the state and a department of social work in the southeastern region.

Once the faculty team was in place, the expanded project team discussed course development via conference calls, site visits, and interactive video. The use of interactive video enabled the faculty and support staff to share ideas without having to travel the 150 miles between the base site/central locations and southeastern region of the state. Issues for consideration and decision making included: when the course would be delivered, since each site had slightly different academic calendars; how each faculty person would structure site-specific course activities after the shared interactive video presentations; how to tailor course content appropriate to each discipline; which texts and readings to assign; other pragmatic concerns, such as how to publicize the course and recruit students; and, how to handle possible disclosures by students who themselves had experienced violence. A final logistical consideration was how to

handle the registration of students. In the end, each site created its own course number and registered its own students.

Instructional Design

The course was initially conceptualized as a weekly one-hour interactive video broadcast originating from the base site, with additional activities, such as discussion forums, being offered on a website. As the other sites became involved in planning, this idea was modified to meet the needs of each cohort based on faculty members determining that students wanted to receive between two to three credit hours for the course. It was ultimately decided that the main structural components of the course would include interactive video broadcasts, on-line discussion groups, assigned readings, and individualized site-specific activities. The course, which was delivered in the spring semester of 1999, provided a weekly one-hour live broadcast, and at least one additional hour at each of the three campuses for cohort-specific activities. To initiate course planning, the base site team met with university-based instructional design staff. This work resulted in a plan to develop overall course goals and objectives, as well as sitespecific goals and objectives for each class session. In this way, continuity between class sessions and across sites could be established while also allowing individualization of the curriculum to best serve students at each site. This was followed by the creation of a master syllabus that included information on weekly goals, the schedule of guest speakers, assigned readings, and class activities that each faculty member could use during the site-specific portion of the course. The course was divided into three broad topic areas as shown in Table 1.

Table 1
Course Content by Unit of Study

UNIT 1 – BACKGROUND AND SIGNIFICANCE

Ethical Issues in Research on Violence Against Women

Theoretical Perspectives Used to Study Violence Against Women

Prevalence, Risk Factors and Economic Outcomes

Social and Cultural Perspectives on Violence Against Women

Measuring Violence Against Women: Assessment Tools and a Research Example

Sexual Violence Against Women

What It's Really Like – Women's Experience of Violence

UNIT 2 - RESPONSES TO THE ISSUE

Battered Women's and Rape Crisis Movements

Health Services Response to Domestic Violence and Sexual Assault

Law and Policy Issues

Coordinated Responses

UNIT 3 - SPECIAL TOPICS

Violence Through the Life Cycle

Issues of Fear and Self-protection

Female-Perpetrated Violence Against Women

Faculty members were able to individualize the master syllabus by modifying assigned readings, graded assignments, and site-specific activities. Each instructor determined how students would be evaluated, which was especially important because students varied in discipline and academic levels. The fifteen base site students were graduate students in public health, the six students in the central region were undergraduate health education students, and the ten southeastern region students were in an undergraduate social work program.

Travel money to cover expenses to bring in nationally known guest lecturers was provided through the foundation funding. Project team members were assigned to contact them and arrange for their appearances. In addition to faculty members, local service providers in the base site region were also scheduled as guest lecturers for the interactive video broadcasts.

Early in the scheduling process the speakers were given an outline of the material being covered in each session and an information sheet that included ideas for making presentations using distance learning technology. As a final instructional design consideration, each guest lecturer was asked to provide either Microsoft PowerPoint slides or other materials to be made into slides prior to her/his scheduled appearance. These slides were shown to students during the interactive video broadcast and were also put into a standardized format and posted on the course website.

Use of Technology

The base site planning team explored available technical options during initial course development and ultimately decided that the technological aspects of the course would include shared weekly lectures via interactive video, a shared course website, and two electronic discussion forums. The website included the syllabus, which covered overall course information

and cohort-specific activities for each session, as well as PowerPoint slides for each lecture. Additionally, the website provided information about local resources, including domestic violence shelters, rape crisis centers, university specific services relating to violence against women, links to a variety of related websites, and access to the on-line discussion forums.

Two on-line discussion forums allowed students to communicate respectively with one of the co-authors of the course text, and the Director of domestic violence programs for the private foundation that was funding the project. Students could also chat with each other by posting and responding to messages on the website. These forums were held at the end of each of the first two units of the course. While additional discussion forums were considered, only two were scheduled during the course as an experiment on the use of the technology and its potential for adding to students' overall learning experience. Considerations in planning the discussion forums included dividing students into different forums by area of interest, and creating forums that had an equal mix of students from each site to facilitate increased interaction between students over the course of the semester. Ultimately, the two forums were open to all students and moderated for a period of time by the guest experts. The forums allowed students to engage with people currently involved in both research and direct practice with battered women, and also provided an opportunity for students to discuss the wealth of information they were receiving from class activities and assigned readings.

Faculty Perspectives on Collaborative Distance Learning

Between class sessions, the instructors communicated frequently via e-mail, phone calls and occasional videoconferencing. Instructors were encouraged to share both their own ideas and feedback from students on ways to better facilitate the learning process. The instructors

attempted to be as responsive as possible to student feedback. As a case in point, early in the semester the social work students said they wanted increased practice-focused content and presentations. While the guest speakers scheduled in the second and third units met many of their needs in this regard, the instructor also responded to their concerns by inviting local speakers into the classroom and by integrating more practice-oriented activities during the cohort-specific class time. Students responded very positively to the almost immediate tailoring of aspects of the course to better meet their expressed learning needs.

The instructors and project staff agreed that the collaborative and interdisciplinary nature of the course, although time-consuming, was an exciting learning opportunity. The project was a group effort that also allowed individual expression in course design and delivery. Team members felt that important outcomes included their learning to better appreciate the perspectives of other disciplines in addressing violence against women, and gaining an understanding of how to contribute to effective interdisciplinary practice. While it was a large undertaking, the groups' ability to work together in a supportive manner made the project tasks more manageable for everyone. Finally, a subtle but not to be overlooked benefit of this effort was that students were able to see faculty members modeling collaborative and interdisciplinary approaches to curriculum design and teaching.

Sample Course Assignments

While there was some commonality in coursework across sites, instructors were free to individualize assignments and activities. For example, the base site, located in a School of Public Health, had many graduate students with work experience in the area of violence. Student grades were based on participation during the course (15% of grade), and a final paper consisting

of a critical review of an area of the literature pertinent to violence against women (85% of grade). At the southeastern site, grades were calculated using a 150-point scale and were based on: participation (10 points), a critical review of the literature on an issue related to violence against women (30 points), a final research paper that expanded on the critical literature review (60 points), and an oral presentation that covered their research and understanding of social work practice, programs, and policies as detailed in their final paper (50 points).

At the central region location, the course was modified to address aspects of professional training aimed at preventing and treating health problems. The course grade was based on participation (15%), a critical literature review on an aspect of violence against women (25%), and a final project (60%). For their final project, the undergraduate health education majors designed and implemented an awareness campaign to combat violence against women in the campus community. They started by making an assessment of the climate for this effort by interviewing key university administrators and community stakeholders to determine existing policies and to evaluate the level of interest in and support for the project. Students then recruited members of student groups, university administrators, and community-based service providers to participate in a planning session for the campus educational program. Based on their assessment that the project was viable, students held a "Love Shouldn't Hurt" forum that focused on intimate partner violence.

Student Perspectives on Interdisciplinary Distance Learning

Students completed a survey on the last day of class that asked them to rate the various course components in terms of the extent to which they supported the overall course objectives.

The course objectives were:

- To provide an historical and conceptual framework from which to consider violence against women as a public health problem;
- 2. To provide an understanding of the epidemiology of violence against women (including prevalence, risk factors, and outcomes);
- 3. To enhance understanding of policies aimed at the prevention of violence against women;
- 4. To enhance understanding of interventions aimed at addressing violence against women; and,
- 5. To stimulate interest in research, program, and policy issues concerning violence against women.

Using a five-point Likert scale, students were asked to answer the question "How well did each component of the course support each course objective"? Students could respond from 1 – 'Not at All', to 5 – 'Extremely Well'. The survey also asked questions about the use of technology and the impact of the course on students. The reported findings for all sites, which are limited to descriptive statistics, are presented in Table 2.

Table 2

Results from Student Evaluation Survey

Results from St	udent Evaluation Objective 1.	Objective 2.	Objective 3.	Objective 4.	Objective 5.
	_				
	Historical and	Understanding	Understanding	Understanding	Stimulate
	Conceptual	Epidemiology	Policies	Interventions	Interest in
	Framework				Research,
					Program, and
					Policy Issues
Readings	3.8	4.0	3.4	3.6	3.8
Interactive					
Video	4.2	4.3	4.0	4.1	4.5
Site-Specific					
Discussion &	4.5	4.1	4.0	4.4	4.6
Activities					
On-line					
Discussion	3.5	2.9	3.1	3.3	3.4
Forums					
L					¥7 1122\

Note: Using a 5-point rating scale (with 1 being "Not at All" and 5 being "Extremely Well"), students rated the extent to which each major course component helped to fulfill the primary course objectives.

Overall, the site-specific discussion and activities and the interactive video broadcasts received the highest ratings, followed by the readings, and then the on-line discussion forums. This ranking was consistent for all three sites and for all objectives. In general, the students in the base site university gave slightly higher ratings than the students at the other two sites. One possible explanation for this might be that the interactive video broadcasts originated from that site and the guest lecturers were often able to spend additional class time with that group of students, a benefit that was not available to the other two cohorts.

The survey contained several questions about the course website and interactive video broadcasts. Overall, about half of the students (48%) reported using the on-line syllabus, 52% printed out PowerPoint slides from specific classes, and 48% participated in at least one of the two on-line discussion forums. Students did not participate in the on-line discussion forums to the level anticipated by the faculty. While there was no data on why students were not more involved with the forums, disincentives could have included that there was no graded assignment connected to their participation in the forums, they could have experienced technical difficulties in logging on to the forums, and/or they were uncomfortable with the format.

Many students cited the PowerPoint slides as being the most useful aspect of the website, however, several mentioned that this usefulness was limited by the fact that the slides were often posted later than the specific class for which they were intended. Fewer students (38%) reported visiting the link for local resources or the links to related websites.

The students enjoyed the format of an hour-long interactive video broadcast followed by site-specific discussion and activities, and identified two sessions as particularly interesting. The

first included a panel of survivors of violence, and the second featured two speakers on cultural issues in service delivery to battered women.

The survey also asked students to comment on what impact the course had on them.

When asked how the course stimulated their thinking about violence against women, students reported it had increased their awareness of the context, prevalence, and outcomes of the problem. Additionally, they indicated that the course made them think about the roles they would play when working in their chosen fields of social work, public health and public health education. Finally, students felt they had gained an increased understanding of how the different disciplines responded to the problem of violence against women; had increased their knowledge about the variety of programs dealing with the issue; and had gained a better understanding of the application of theory to practice.

The most commonly expressed concern with the distance learning format had to do with its limitations on student interaction across sites. The course was limited in design to include time for the speakers to present and for students and presenters to interact, but no additional time was built in to facilitate exchanges among students across sites. Students said they wanted to have more interactions with the other cohorts, and they also wanted their on-site faculty to be involved in presenting lectures to the whole group. This is very valuable feedback for future course planning, and something that would not require extensive reworking of the course to accomplish. In order to get the full benefit of having multidisciplinary perspectives, there should be opportunities for students across sites to talk to each other and to do projects together, as well as using the on-site faculty to present material and facilitate cross-group discussions.

Implications for Practice

A group of educators from the base site's School of Public Health applied for and received funding for the development and implementation of this distance learning course, which enabled faculty and students from three different sites to share the unique resources available for this special project. While the authors cannot stress enough how positive this experience was for faculty, team members and students, it must be noted that this undertaking was very expensive in terms of time and money. Fortunately, external funding provided the resources to pay for guest speakers' travel and accommodations. There also was funding for both a course director and a teaching assistant. They were critical to successful course development and implementation because they managed many of the technological aspects and details that enabled course delivery. Additionally, costs for duplicating materials, slide preparation, and website management were covered by project funds. There was no specific funding for evaluation of the project, which is reflected in the limited survey results.

Obviously, many social work programs could not mount such a course independently due to resource limitations. In this case, through the use of technology, a resource rich program was able to offer two smaller programs a unique chance to have access to experts in the field of violence against women, as well as facilitating interdisciplinary learning opportunities.

From a course design standpoint, the project team would emphasize the need to involve all sites at the beginning of such an endeavor. Since this was not possible at the start of this project, some early planning and groundwork had to be modified or put aside to accommodate the new team members as additional sites came on board. Fortunately, everyone involved was quite committed to making this project work and flexible in responding to emerging needs as the course progressed. In the utilization of interactive video broadcasts, for example, students

suggested using a split screen so that the presenters could be viewed simultaneously with the PowerPoint slides. This was an easily correctable and important detail that prevented students from feeling cut off from the speaker. Team members also learned that additional interactive video time needed to be built in so that students from different sites could interact with each other. This would facilitate the whole group feeling more connected.

There are many exciting possibilities for the use of distance learning technology, which currently are limited only by our imaginations. For example, there could be cross-site debates on an issue, or there could be a guided discussion with the whole group. Also, small groups could work together via interactive video by developing a schedule of times to "meet", and the small group work then could be presented to the larger group. Students from different sites could even do oral presentations together via a split screen interactive video broadcast.

Time and cost savings could be realized by having off-site guest lecturers broadcast from their own local communities. Interactive video technology can be found in many different settings besides universities, including nationwide copy centers, hospitals, and large corporations (C. W. Sutton, personal communication, January 30, 2002). At an average cost of four to five hundred dollars an hour for the use of this technology, a lecturer could do a live interactive video broadcast without having to take his/her valuable time to travel to distant points. This could also create a savings in travel expenses (C. W. Sutton, personal communication, January 30, 2002).

Based on the experience in developing and implementing this course, the authors highly recommend that educators boldly experiment with novel forms of teaching on the issues of violence against women. The interdisciplinary and collaborative nature of this work needs to be continued by those of us who are committed to educating future professionals to provide

competent services to women who have experienced violence. This can be facilitated through the sharing of course syllabi, reading lists, class assignments and activities via websites, discussion forums, and other innovative approaches. Additionally, videotaped lectures may be useful tools in expanding our knowledge through sharing our expertise if the interactive technology is not available. In this course, the availability of interactive video was key in giving students across three sites access to well known experts in the area of violence against women. This is a feature that cannot be duplicated in most traditional classroom settings.

Another use of distance learning technology that is just beginning to be realized in many places is the ability for institutions of higher learning to develop cooperative ventures. For example, several universities could combine resources to offer a course to their joint students if individual program enrollment is small or dwindling. In this way no one program has to bear the brunt of the costs alone (C. W. Sutton, personal communication, January 30, 2002). As long as there is the ability to make a connection, resource rich programs anywhere in the world can share their educational assets with smaller programs.

Lessons for the Future

This innovative distance learning course was developed to give students in different programs in several sites across a southeastern university system the opportunity to increase their knowledge and understanding of violence against women. Traditionally, this topic has not been covered in depth in university curricula, even though the issue is germane to many different disciplines, such as nursing, maternal and child health, public health, social work, mental health, and criminal justice. Based on this experience, the authors believe that the subject material is particularly well suited to an interdisciplinary educational approach.

Because practitioners from many different disciplines will come into contact with victimized women, educators must arm future professionals with a comprehensive understanding of the best practices in meeting the unique service needs of these women. Women who have been traumatized by acts of violence should not be retraumatized by service providers' lack of awareness of or insensitivity to their needs.

Through the use of distance education technology, what is known about violence against women can be shared with colleagues in other university settings, with practitioners in the field of violence against women, and with members of the community at large. The more we know about effective programs, policies, and practices, the more we can do to reduce the prevalence of violence in women's lives.

REFERENCES

- Kane, T. A., & Staiger, P. K. (January, 2000). Male domestic violence. <u>Journal of Interpersonal</u>

 Violence, 15(1). 16-30.
- Koss, M. P. (2000). Evolutionary models of why men rape: Acknowledging the complexities.

 <u>Trauma, Violence & Abuse, 1(2)</u>. 182-195.
- Koss, M. P., Goodman, L. A., Browne, A., Fitzgerald, L. F., Keita, G. P., & Russo, N. F. (1994).

 No safe haven: Male violence against women at home, at work, and in the community.

 Washington, DC: American Psychological Association.
- McFarlane, J., & Willson, P. (February, 2000). Intimate partner violence: A gender comparison.

 Journal of Interpersonal Violence, 15(2). 158-169.
- Petracchi, H. E. (2000). Distance education: What do our students tell us? Research on Social Work Practice, 10(3). 362-376.
- Petracchi, H., & Patchner, M. A. (2000). Social work students and the learning environment: A comparison of interactive television, face-to-face instruction, and the traditional classroom. Journal of Social Work Education 36(2). 335-347.

- Sandell, K., & Hayes, S. (2002). The Web's impact on social work education: Opportunities, challenges, and future directions. Journal of Social Work Education, 38(1). 85-99.
- Seaberg, J. R. (2001). Use of the Internet and other teaching tools in graduate social work education: A national survey. Retrieved January 25, 2002, from, http://www.people.vcu.edu/~jseaberg/teaching_survey.htm.
- Seiden, P., Szymborski, K., & Norelli, B. (1997). Undergraduate students in the digital library:

 Information seeking behavior in an heterogeneous environment. Retrieved December 1,

 2002, from, http://www.ala.org/acrl/paperhtm/c26.html.
- Siegel, E., Jennings, J. G., Conklin, J., & Flynn, S. A. N. (1998). Distance learning in social work education: Results and implications of a national survey. <u>Journal of Social Work</u>

 <u>Education</u>, 34(1). 71-80.
- Thyer, B., Artelt, T., Markward, M., & Dozier, C. (1998, Spring/Summer). Evaluating distance learning in social work education: A replication study. <u>Journal of Social Work Education</u> 34(2). 291-295.
- Thyer, B. & Polk, G. (1997, Spring/Summer). Distance learning in social work education: A preliminary evaluation. Journal of Social Work Education, 33(2). 363-367.

- Tjaden, P., & Thoennes, N. (2000a). Extent, nature, and consequences of intimate partner violence: Findings from the National Violence Against Women Survey. (National Institute of Justice No. NCJ 181867). Washington, D.C.: U.S. Department of Justice.
- Tjaden, P., & Thoennes, N. (2000b). <u>Full report of the prevalence, incidence, and consequences</u>
 <u>of violence against women</u>. (National Institute of Justice No. NCJ 183781). Washington,
 D.C.: U.S. Department of Justice.
- Thurston, L. P., & Cauble, L. P. (1999). Using interactive multimedia to build child welfare competencies in social workers. <u>Journal of Research on Computing in Education</u>, 32. 298-306.