Infusing Technology into the Social Work Curriculum

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Introduction

Rapidly evolving information technology is changing the face of social work and social work education. These changes have created the need for a partnership between social work practitioners and educators. Together, we must respond creatively and authoritatively to the opportunities and the dangers spawned by new technologies. In many ways, social work practice has led social work education in grasping and using new technology (Nuris, Hooyman, & Nicoll, 1988). The purpose of this article is to encourage social work educators to join in a partnership with practice colleagues in the infusion of technology throughout the social work curriculum.

Literature Review

Technology is unique in that it is central to both social work education and the conduct of social work practice (LaMendola, 1987). According to Kaye (1991), "Social work educators will need to assume heightened responsibility for preparing social workers who are computer literate" (p. 50). Kaye further states that failure of educators to prepare social workers with skills in the application of information technology to daily practice will have adverse consequences for the profession of social work.

Unfortunately, social work education literature has little to say about this vital topic. In 1989, Cnaan reported that the technological revolution had caught social work unprepared. Ten years later, social work seemingly still lags behind. Social work educators must find ways to prepare students to use computers in practice, to understand and eventually to participate in the development of software, and to ensure that the rights and dignity of clients are protected. In response to the increasing need for the use of information technology in social work practice, a number of graduate and undergraduate social work programs have begun to incorporate computer skills as part of the curriculum (Finn, 1990). According to Born (1987), this curriculum addition is in response to educators' need to prepare students to work effectively with technology. LaMendola (1987) stated that both skills and theories of computer technology should become an integral part of the curriculum, built into practice and other core courses.

While many educational practices found in schools today began at the close of the nineteenth century; as the twenty-first century approaches there are strong indications that education is ready for significant change. The impact of technology and the advent of the information age are permanently altering how and what is being taught (Weisburg & Toor, 1994).

Technology has become a ubiquitous part of everyday life, affecting how we transact business, communicate, and perform our jobs. While the introduction of technology into schools has sometimes been justified based upon these "real world" developments, stakeholders in the educational system want to know what effects the incorporation of technology into schools has on student outcomes. Much of the present literature on this topic demonstrates an equivalency or advantage of technology-delivered instruction compared to teacher-directed, lecture methods (Bialo & Sivin, 1990), while many of the effect size advantages seen within educational research into technology have been shown to be significantly reduced when the same teacher delivered instruction for both the experimental and control groups (Clark, 1985). It appears that it is not technology per sé that has resulted in improved student outcomes, but rather how the technology was used and integrated into the instructional processes (Lehrer, Ericksoj, & Connell, 1992; Spoehr, 1992).

New technology provides social work education with many opportunities and challenges, but far too few social educators have been trained in the use of that technology. While educators frequently know how to navigate the World Wide Web, fewer know how to teach students to critique the information

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found, and fewer still are comfortable in using the technology effectively as a learning tool. Infusing technology into the social work curriculum will need to allow the synthesis of new, essential learning, both in and out of the classroom.Unfortunately, this change in learning style seems to be occurring very slowly.

Beginning with Technology

This infusion of technology into the curriculum is a challenging and exciting undertaking. The authors, at the time new assistant professors at a comprehensive regional university, began teaching assignments with the aim of infusing technology into their courses. In preparing curriculum, the authors adhered to the Council on Social Work Education's Curriculum Policy Statement as a guide while reviewing every aspect of course content with careful attention being placed on opportunities for infusing new technology.

One of the authors also designed a simple educational study to evaluate the backgrounds, opinions, and recommendations of undergraduate students and ways to improve the technology content of their classes in the social work department (Gustafson, 1999). The goal of the study was to describe and explore student computer technology backgrounds and subsequent opinions and attitudes of the students about the necessary interventions and changes to improve technology content within social work classes. Student-completed surveys at the beginning and ending of each semester represented the principal data collection strategy, followed by in-depth, follow-up student interviews.

One striking impression the authors drew from a review of initial survey responses was the lack of "hands-on" social work applications students received in previous computer and informational technology coursework. While almost all of the social work students (approximately 90 percent) had at least one computer science course at the college level (a core general educational requirement of the institution) and most had previous computer exposure during their K-12 education, few of the students had technology modeled in courses within the social work curriculum. Few of these students had a "vision" of how technology can be used within social work practice. Only 17 percent of the students reported any exposure to computer technology in past social work classes. Almost all of this exposure had occurred through use of computers for word processing class papers (Table 1).

Another alarming response from the survey pertained to the way students evaluated their own proficiencies in the use of computers. During the preliminary study of student backgrounds and attitudes, students throughout the social work department were asked to rate their proficiencies in various computer skills, including word-processing, use of spreadsheet and statistical software, computer graphics, and other computer software applications such as world wide web design. Students could rank themselves from "none" to "very proficient" in these skills. While most of the students owned personal computers (63 percent), an overwhelming number of these felt they had no or very limited proficiency in the use of software applications on those machines. When asked to rank their individual proficiencies from a menu of selections, approximately 50 percent of the students reported "none," 28 percent responded "somewhat," 14 percent responded "proficient," and only eight percent responded "very proficient."

Table 1 summarizes student demographic backgrounds obtained in the survey, previous exposure to computer class work, student ownership of computers, and computer usage rates. Information gathered in this study was critical in shaping and directing subsequent classroom strategies.

Table 1. Survey Information about Student Technology Backgrounds

Student backgrounds	
Average Age	26.6 years
Average Grade Point Average	3.03/4.00
Average Number of College Hours Completed	78.2
N=81	
Previous Computer Class Work	
Elementary	50%
Middle School	38%
High School	50%
College	90%*
Employment	61%
SW Class	17%
*Computer Science 201 was a General Education requirement of all students	
Student Computer Ownership	
"Yes"	63%
"No"	37%
Reported Weekly Time Spent Using a Computer	
0 Hours	10%
1-2 Hours	28%
3-5 Hours	43%
6-12 Hours	14%
12+ Hours	04%

Into the Classroom

Both authors immersed students in technology from their first class sessions. A fundamental assumption used throughout the academic year was that if social work instructors and practitioners did not teach the use of technology, students would not learn that technology. For example, the authors were able to "team-teach" two courses offered on the same day and during the same time period with each having a lecture room adjoining a university electronic classroom. During lecture portions of these separate classes, individual, course-specific content was frequently addressed in these classrooms. Subsequently, the classes were combined in an electronic classroom setting and students were exposed to and used technology for a variety of activities, projects and products. Class projects for the classes were developed in conjunction with local field agencies. Students were able to access support for their activities through on-line support provided via World Wide Web resources developed for the classes. Table 2 provides information about selected network and teaching elements within the electronic classroom, a description of the computers available to students in the classroom, and provides a description of the software loaded on each electronic classroom PC.

Throughout the semester, both social work classes afforded students the opportunity to practice their newly acquired skills and/or hone old ones. Each class meeting built on the previous one, both in course and technology content. Students were given an opportunity to practice with the technology under the supervision of both instructors and peers during each class period. Mutchler and Hasenfels (1986) have noted that the rapid advances in computer

Table 2. Technology Elements Available in Classroom

Electronic Classroom Equipment
Ethernet connections to FDDI
Equipped with 32 student PCs
One instructor station
Color scanner
Wall mounted screens
Elmo presenter
Video cassette recorder/player
Compact disk player
Two ceiling-mounted color projectors
Laser printer
Electronic Classroom Computers
Pentium 166's
all have sound cards
32 MB of RAM
2GB hard drives
Video capture cards
Instructors' station has external Iomega Zip drive
Electronic Classroom PC Software
All machines equipped with:
MS Office Suite (Office 97)
Netscape Communicator
Telnet and FTP software
Additional software for curriculum specific courses

technology, decreases in the costs of computers, and growing demands for accountability will find a substantial proportion of human service agencies utilizing electronic technology to respond to the information management needs of contemporary social work practice. The class settings were an attempt to replicate this recent utilization of the emergent technology in the real world.

Class Assignments

Assignments were developed with field practicum agency cooperation, input, and support. The school's Social Work Advisory Committee had requested that the department develop ways to improve student communication, presentation, and technology skills. When these courses were designed, assignments that provided the students with an opportunity to improve their communication, presentation, and technology skills specifically were built into the curriculum. The addition of "real world" technology products with actual application in local social welfare agencies enhanced these student efforts.

Throughout the semester the use of technology was underscored throughout the curriculum. Students received instruction not only in how to use the computer hardware, software, and network, but also in areas of analysis, critical thinking, development, and presentation. For example, specific information was provided on how to evaluate the content of World Wide Web sites. The transfer of information and data with emphasis on ethical considerations about client confidentiality, self-determination, and the potential for abuses were also reviewed. As Cnaan wrote in 1989:

> *Social work education must: A) train students in formation technology applications, and not in programming; B) provide broad-based knowledge that graduates can build on to meet the requirements of their employers; C) update curricula periodically so that student training can be kept current; D) match information technology curricula with the agencies' needs based on empirically data; and E) incorporate information technology into core courses rather than into a separate technical course (p. 237-8).*

In another example, groups of students were assigned a "participating" social agency, met with agency staff, and reviewed policies and procedures before planning and developing a color brochure containing program information for that agency. Students then developed color brochures, using a variety of software packages. The final products

were printed and the student groups presented their results to peers in class, describing the procedures used and lessons learned. Finally, the finished brochures were provided to the agency program staff. One program director, so impressed with the student brochure, invited the students to present their work to the local board of education. The board of education subsequently adopted the brochure for use in their information campaign.

Students in classes also prepared electronic agency policy briefings designed to educate and train new board members about an agency program and its policies. Once again, students collaboratively met with agency staff and reviewed policies and procedures before planning and developing the policy briefings. Each briefing was prepared, reviewed by faculty, and presented to peers. A final policy briefing was formally presented to agency administrators, faculty, and staff during the final class days. Several agency administrators, pleased with these student-designed electronic briefings, are now using the product as part of their board member training programs. Additionally, many students throughout the entire social work department are now requesting that all faculty permit them to use the electronic presentation software for class reports and demonstrations.

Results

Typically, many schools of social work have some schism between what may be doctoral-level academic faculty and field training activities. Often, larger social work programs coordinate field training through MSW-level faculty, with doctoral-level faculty responsible for classroom activities. Within smaller schools and programs, such as the regional university where the authors offered classes, there frequently may be less distance and more collaboration between all faculty and field agencies. In the case of this educational project, close associations developed through the interaction of faculty, students and field agency personnel resulted in a true partnership to foster technological training for the students.

This project reinforced the bond between social work education and social work practice. The participating agencies provided invaluable time and support to the faculty and students. In return they received informational brochures and electronic briefing materials at no cost. In some cases, agency personnel also received introduction and exposure to this new technology through their interactions with the students. In addition to their grades, knowledge, and technology skills, students received invaluable experience with and exposure to local social service agencies. Students also acquired technological expertise in the use of informational and computer products to add to their professional portfolios. This alliance between social work students, educators, and agency personnel modeled the critical relationship needed to foster more technological capability in social work the future.

Dialogues with students at the beginning of the academic year indicated many held "micro" versus "macro" concerns over the use of technology in social work. This meant students frequently focused on their personal concerns about their individual inability adequately to use existing technology in appropriate ways (micro concerns) versus the expression of concerns and questions over the larger role of technology in social work practice and the impact on society (macro concerns). At the same time, non-traditional students largely were negative as a group in their responses about technology. In contrast, at the close of the academic year the same students, especially non-traditional students, were very positive, stating, "I can do this!" and "This is really easy." Overall student expectations regarding the future of technology in social work practice were very positive in nature. Students were able to express positive expectations about future technological advances within social work practice as well as their abilities to utilize that technology.

These results suggest the infusion of technology into the curriculum is critical for students effectively to incorporate that technology into a practice model. The combination of collaboration with local field agency social worker staff and the infusion of "real world" technology assignments into the curriculum appear to have benefited both student classes and the field agencies as well.

In addition to the improvement in technological proficiency, infusing technology into the social work classroom reinforces the bonds between direct social work practice, practitioners, educators, and social work students. The authors found participating agencies and staff added mentoring and realism to student technology projects. Technology assignments provided students the opportunity to collaborate with other social work professionals. Learning seemingly occurred among both students and agency practitioners.

This same group of students, many previously unsure of their proficiency in the use of technology, now may include in their professional portfolio comments from field agency social workers, samples of technology products, and actual experience in collaboration in the development of technology-related materials. Another result of these classroom efforts, while not part of the original design, was the enhanced relationship between the direct practice and social work education communities. The level of encouragement and support for student use of technology continued to grow throughout the semester from the participating agencies.

Technology has begun to be infused in all aspects and levels of the direct and indirect social work practice community. These efforts demonstrate the benefits derived infusing technology into the social work curriculum. Social work educators should consider use of technology across all aspects of the curriculum as a means to enhance student learning at all levels.

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