The librarian as a partner in nursing education*

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Welch Medical Library has explored new roles for librarians in knowledge management instruction programs throughout the Johns Hopkins University School of Nursing curricula. These programs have created roles for library staff as both instructors and knowledge management experts. By fostering strong communication and attention to quality instruction, librarians achieved their vision of a program in knowledge management integrated into the curriculum, where they are partners working with nursing faculty to define the students' knowledge management needs and decide how these needs can be met.

INTRODUCTION

Although nurses have the same need for information as do other health professionals, they use libraries less often. This behavior is documented [1-2], and the suggestion has been made that a lack of training in the use of information resources may explain it [3]. Persuaded by this argument, librarians have felt an impetus to educate nursing students about information resources. Weaver discusses the need for "information instruction" to be integrated into the curriculum of nursing schools, suggesting that "librarians need to be more proactive in offering their services and faculty need to view librarians as their support partners and seek their expertise" [4].

There are few examples of model programs that integrate education in the use of information resources, or knowledge management, into nursing students' formal education, and generally they are not a part of the students' required coursework. These programs tend to be either brief orientation sessions included within the curriculum or optional sessions scheduled to supplement a particular course. Staff at the Indiana University School of Medicine Library developed an orientation to knowledge management for undergraduate nursing students, given in lecture form as a part of the "Introduction to Nursing Research" course [5]. Instruction in use of the Cumulative Index to Nursing and Allied Health Literature (CINAHL) CD-ROM database is available to the students, but not mandatory. At the Northern Illinois University School of Nursing, undergraduate students in a test program individually followed a step-by-step library research procedure [6]. The training did not cover online databases and was supplementary to regular class sessions.

In contrast to schools of nursing, many medical schools provide relatively well-developed knowledge management instruction that is integrated into their curricula. This type of program has been developed by Mercer University School of Medicine and McMaster University [7], the University of New Mexico Medical Center [8], the University of Illinois College of Medicine at Peoria [9], the University of Minnesota Medical School [10], the University of Tennessee Center for the Health Sciences [11], and the University of Miami School of Medicine [12]. Whether these programs have altered librarians' roles in the direction described by Weaver is unknown.

Weaver's suggestions have been adopted by librarians at the William H. Welch Medical Library, who have changed their relationship with the nursing faculty. Evolving beyond their traditional service role, librarians work as faculty peers in developing and offering knowledge management instruction to nursing students, and they function as acknowledged

experts in providing information support to the Johns Hopkins University School of Nursing. Students and faculty see librarians in their classroom and get the message that information-seeking skills are a necessary part of education and, by extension, the practice of nursing.

In the 1980s, the Welch Medical Library administration envisioned a changing role for librarians. The strategic plan called for providing students with knowledge management skills as part of their formal undergraduate educational experience; for the School of Nursing, this goal spanned three degree programs. As they pursued the goal, librarians have carried out new roles as educators and knowledge managers.

While these new roles developed naturally, they did not develop serendipitously. Ten years of hard work on the part of individuals at the library and at the School of Nursing enabled the development of the current relationship. Commitment to excellent communication and quality instruction have enabled the library staff to create opportunities to realize their vision. Good communication between the library staff and the nursing faculty initially won support for the library’s vision, and, as opportunities developed, the Welch staff’s delivery of quality instruction ensured continued development of the program.

**OPENING LINES OF COMMUNICATION**

Communication between the library staff and School of Nursing affiliates has been key to the achievement of library goals and the development of new roles for librarians. Efforts to foster communication date to the establishment of the School of Nursing in 1984, when the head of reference assisted in the design of the Nursing Information Resource Center (NIRC). The library manages this space in the School of Nursing and the NIRC staff also provides software support for the school’s computer lab (adjacent to the NIRC). The location of some library staff members in the School of Nursing increases their visibility and hence the potential for communication with the faculty. It also allows the library staff to assess information needs.

Beginning shortly after the school’s founding, librarians attended meetings of the curriculum committee. The initial proposal to instruct the bachelor of science in nursing (B.S.N.) students was presented in this forum. The library liaison used this exposure to identify additional instructional opportunities, such as possible development of a one-credit information resource course. Curriculum committee meetings also provided several opportunities for targeted instruction of faculty on topics such as reprint management, MEDLINE training, and the use of the Internet. These instruction sessions allowed Welch staff to develop close contact with nursing faculty and enabled nursing faculty to assess librarians’ teaching skills.

On several occasions the library’s introduction of new technologies has provided the impetus for development of special sessions for faculty. The installation of a new interface for the MEDLINE and Health databases provided one such opportunity. The session that was developed to introduce faculty to the system was eventually used to train nursing students as well. Faculty members not only were impressed by the new interface to the databases, but they also observed the teaching and evaluated the objectives of the nursing students’ sessions. A similar situation arose when the School of Nursing was connected to the campus network and thus to the Internet. The Welch staff used that opportunity to influence faculty members’ attitudes toward the new tools through educational programs.

Now, as new technologies become available, the nursing faculty is eager to integrate them into the curriculum. Internet instruction has become the latest arena requiring knowledge management training. To accommodate this rapidly developing medium, the library staff was allocated extra class time within the B.S.N. and masters of science in nursing (M.S.N.) programs. This willingness to release additional, valuable student-contact hours to librarian instructors indicates the level of faculty support for knowledge management training.

**QUALITY INSTRUCTION**

Another key to successful development of new instructional roles for librarians has been an ongoing commitment to quality instruction. Quality instruction at Welch is based on planned course development, hands-on instructional sessions, tailoring of instructional content to students’ needs, and continuity. Attention to instructional quality won faculty respect for the Welch staff’s expertise in knowledge management and ability to provide the quality teaching required for credit coursework.

Instructional sessions for nursing students, like all instructional sessions offered by the Welch staff, are the product of a carefully considered development process. This process begins with audience analysis; continues with identification of course objectives and development of a course outline and course materials; and ends with evaluation. Supporting materials, examples, and exercises are developed within this context. As new sessions are developed or the student audience changes, the process is repeated and re-evaluated.

As instructional opportunities developed, the library staff quickly realized the importance of hands-on training for students. This approach motivates students who are novice computer users to become actively involved in the learning process and to master skills for themselves. While each session starts with
Lecture and demonstration combinations, the instructional approach rapidly shifts to hands-on training, where students emulate the instructor’s searches and perform exercises on the computers. This in-class practice reinforces the concepts covered and helps the instructor identify gaps in the students’ knowledge.

Instructional sessions are enhanced by the use of examples and exercises, which librarians tailor to the group. Instruction currently takes place in three different curricula: B.S.N., M.S.N., and Ph.D. Exercises and examples are chosen carefully to show common situations or problems encountered by students in each program. For instance, examples for Ph.D. students focus on nursing research resources, while undergraduate students see examples involving general patient care resources. The nursing faculty often assigns supporting homework to verify that the students understand the material covered (Appendices A, B, and C provide details on the classes).

Continuity has been a crucial factor in maintaining instructional quality. For nine years, Welch has maintained the knowledge management training program without interruption, despite personnel changes and program growth. As the number of sessions required to reach the entire nursing student population has grown, it has become necessary for the library’s entire public service staff to contribute to the training program. The library administration has supported this level of staff commitment to the program.

THE TRANSITION INTO THE CURRICULUM

Successful integration of knowledge management training into three nursing curricula, while retaining librarian responsibility for the instruction, is the achievement that sets Welch’s program apart from others described in the literature. Initially, Welch librarians offered typical orientation sessions in a lecture and demonstration style. The sessions were not well integrated into the various nursing curricula. However, librarians articulated their vision of fully integrated knowledge management instruction and demonstrated to the faculty their expertise in knowledge management and ability to provide high-quality instruction. Librarians were able to win support for this vision, and ultimately they were given time within required course sessions to make it a reality. This shift from outside to inside the curriculum marked a significant change in the role of the librarian instructor from support staff to peer instructor.

This process of integration took nearly a decade. Welch staff members had their first opportunity to provide curriculum-integrated instruction with the B.S.N. program in the fall of 1989. The very positive response of the students and course directors resulted in an invitation to expand librarians’ involvement to the M.S.N. program and, in 1993, to the Ph.D. program. The scope of the subject matter covered by Welch instructors has also been expanded over time. What began mainly as MEDLINE training now includes training in the use of database technology (including database selection and search strategies) and also Internet-based services and resources.

CONCLUSION

Frequent contact between the library staff and the School of Nursing faculty provides the foundation that allows librarians to explore new roles as instructors and knowledge managers. An emphasis on quality instruction allowed librarians to build a comprehensive program on that foundation. The library staff has been able to use the opportunities provided by interaction with faculty, curriculum meetings, and instructional sessions to share their vision for educating nursing students and to demonstrate their expertise in knowledge management. The current program is successful in part because it is broadly based in the school’s curricula and widely supported by the faculty.

While the library’s initial vision of course-integrated instruction across the nursing curricula has been realized, the current program provides room for further development. Knowledge management includes skills ranging from database searching to use of electronic mail to preparing material for publication or presentation at a conference. Welch’s instructional program currently focuses on searching library databases and using Internet-based resources. Instructional programs taught by the Welch staff for non-nursing audiences focus on scientific writing, reprint management, presentation skills, and various computer applications. These topics could be incorporated into the nursing curricula.

The teaching methodology may evolve as well. The School of Nursing currently is using several interactive videodisc tutorials in other areas of the curriculum. Medical students at Hopkins use an Internet-based tutorial developed by Welch staff that provides basic instruction in knowledge management. As additional tutorials are developed, nursing students will likely be candidates for this type of computer-assisted instruction. In time, they may no longer have to attend group sessions but instead may work through materials at their own pace and then demonstrate mastery.

Librarians are now partners with the nursing faculty and possess proven expertise in knowledge management. While the School of Nursing retains control of allocation of class time, the library staff determines the content and structure of the generous class time they are allocated. Whatever future developments
emerge, there is clearly no going back to traditional library roles.

REFERENCES

3. Ibid.

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APPENDIX A

Classes in the bachelor of nursing program

The library staff teaches three sessions for the Systems and Technology class, which is a required course. Each session is two hours long. During the Fall 1994 semester, ninety-nine B.S.N. students received this training.

- Session 1 provided a general introduction to the Internet, including use of e-mail software and the library’s Gopher server. Students completed exercises that involved sending and reading mail and searching for information in the Gopher server.

- Session 2 focused on library and campus information resources. Students used Lynx to access World Wide Web-based information about library resources and services. The Hopkins InfoNet campus information service was accessed. Students learned to use the online catalog through hands-on exercises.

- Session 3 instructed students in the MED2000+ database system which includes MEDLINE, CINAHL, and PsycINFO. Students learned about search strategies, database selection, and controlled vocabulary.

APPENDIX B

Classes in the master of nursing program

The sessions are offered during Computer Technologies in Nursing, a required course for major areas of study. Each session is two hours long. For the Fall 1994 semester, eighteen M.S.N. students received two training sessions.

- Session 1 provided a general introduction to the Internet, including use of e-mail software, the library’s Gopher server, and Lynx. Students completed exercises that involved sending and reading mail, searching for information in the Gopher server, and using Lynx to view information in the Hopkins InfoNet campus information service.

- Session 2 instructed students in the MED2000+ database system which includes MEDLINE, CINAHL, and PsycINFO. Students learned about search strategies, database selection, and controlled vocabulary. A lecture on library databases and services was given.

APPENDIX C

Classes in the Ph.D. nursing program

The Ph.D. program began in 1993. Four students have attended the following sessions as a part of the first year, first semester class, Technology Applications in Nursing Research.

- Session 1 provided a general introduction to the Internet, including use of e-mail software, telnet, the library’s Gopher server, and mailing lists. Students completed exercises that involved sending and reading mail, searching for information in the Gopher server, and subscribing to a list.

- Session 2 instructed students in the MED2000+ database system which includes MEDLINE, CINAHL, and PsycINFO. Students learned about search strategies, database selection, and controlled vocabulary. Library databases and services were discussed. A reprint management software package was demonstrated.