Mentoring as a Teaching-Learning Strategy in Nursing

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As the nursing and faculty shortages persist, a need exists to develop unique teaching and learning strategies to facilitate students’ transition into their professional roles immediately following graduation. The development and use of student-centered practicum experiences while students are still under the guidance of faculty is an effective strategy to provide real situations they are likely to encounter as graduates.

The nursing faculty role includes application of numerous teaching-learning strategies to address students’ complex learning needs. This typically involves teaching large and small groups in both classroom and clinical settings. Nurse educator students are instructed on teaching-learning strategies, and during their teaching practicum course they are encouraged to utilize a variety of effective strategies in their classroom and clinical practice teaching. An area that often lacks emphasis is how to assist students having difficulty with the nursing content on a one-to-one basis. Strategies for individual, at-risk students or nontraditional students should be varied, including academic support to meet their specific learning needs and help them experience academic success in the nursing program (Jeffreys, 2001; Price & Balogh, 2001).

The purpose of this descriptive study using student-centered learning theory was to examine the effectiveness of using a nurse educator graduate student in an undergraduate nursing student mentoring program. Overall expectations were to provide a true life practicum experience for the nurse educator students, and enhance the teaching and learning that could be transferred to their professional roles after graduation for both groups.

Literature Review

A review of the nursing literature using the key words mentoring undergraduate/graduate nursing and practicum in the Cumulative Index to Nursing and Allied Health Literature (CINAHL) database (1997-2007) revealed a number of studies generally related to mentoring undergraduate students using faculty members, alumni, and various levels of student peers. These studies (Fredricks & Wegner, 2003; Neary, 2000; Sprengel & Job, 2004) primarily examined formal mentoring programs to promote clinical development and increase student retention. Research literature was limited in the area of using graduate
students as mentors for undergraduate students. Only one study explored the use of graduate (MSN) students as mentors for BSN students (Lloyd & Bristol, 2006). No studies were located involving graduate nurse educator students as mentors for undergraduate students. Barker (2006) discussed mentoring of advanced practice nurse (APRN) students. In addition, most of the studies explored mentoring as a learning process for undergraduate students (Kostovich & Thurn, 2006; Morrison-Beedy, Aronowitz, Dyne, & Mkandawire, 2001; Scott, 2005; Sword, Byrne, Drummond-Young, Hamer, & Rush, 2002). None of the studies examined mentoring as a student-centered teaching-learning strategy to benefit both the mentors and the mentees. This literature review reports on the studies found related to formal mentoring programs in nursing which includes faculty and alumni as mentors, student peer-to-peer mentoring, and graduate student mentors.

**Faculty and Alumni Mentors**

Kostovich and Thurn (2006) conducted a qualitative study at a liberal arts university school of nursing to investigate the faculty’s perceptions of doing group mentoring with students in nursing courses. Faculty mentors were asked to volunteer; eight participated. Students enrolled in a 1-hour mentoring course led by one of the eight faculty mentors for four consecutive semesters. The researchers explored group mentoring along with the process of faculty becoming mentors for nursing students. The results of their study showed some faculty “role ambiguity” but overall definite “personal and professional satisfaction” for both faculty and students (p. 12).

Morrison-Beedy and colleagues (2001) described the use of experienced faculty members to mentor students and junior faculty in the research process. The purpose of the study was to extend the concept and practice of mentoring beyond its traditional focus on clinical training to the realm of nursing research. Students and junior faculty participated in a research project that allowed the principal investigator to delegate many different tasks as team members learned aspects of the research process. No original research was involved; only reporting studies by others, authors concluded that good mentoring could extend to all partners involved in the research process.

Ryan and Brewer (1997) described a formal mentoring program for undergraduate BSN students utilizing faculty as mentors. The authors described how a mentorship program and a professional role development course were integrated into a BSN program. This seminar-type program (graded satisfactory/unsatisfactory) involved mentors who had full-time faculty positions and a minimum of 2 years teaching experience in the BSN program, and were willing to serve as mentors for up to 10 students for 2 years. Even though students gave positive comments regarding the weekly program, they expressed some concern about the commitment of time required for an ungraded course.

Another mentor program design found in the literature involved assigning alumni members as mentors for undergraduate BSN students (Sword et al., 2002). A Canadian nursing school conducted a mentoring program in which baccalaureate nursing students were mentored by alumni from the same nursing program. Unlike preceptorship, which generally involves clinical supervision and performance evaluation, this mentorship was focused more on sharing and nurturing to promote personal and professional growth. Student involvement was voluntary. The use of alumni as mentors was considered an innovative approach which allowed the students to benefit from their mentors’ experiences within nursing and the shared experience of graduating from the same undergraduate program. Because the alumni mentors had no formal evaluation role for the students’ course grade, greater reciprocal relationships were possible. Benefits for students included increased understanding of the roles and responsibilities of nursing. Mentors also provided students with career development information and employment references as well as other learning opportunities. The mentors reported a sense of satisfaction from working with students and “gained an increased awareness of trends and issues in nursing education” (Sword et al., 2002, p. 430).

Price and Balogh (2001) discussed nurse alumni mentoring of at-risk students in an effort to reduce attrition. Nursing graduates who met GPA and other standards volunteered, were selected as mentors, and matched to at-risk students who signed a contract agreeing to meet objectives for the one semester program. Even though abiding by the terms of the contract was problematic for both mentors and students, 21 of 24 students completed the term. A high majority of the mentors and students indicated this mentoring program met their needs. Conflicting work and school schedules interfered with the mentoring contract and led to meetings being missed or postponed.

**Student Peer-to-Peer Mentoring**

Jeffreys (2001) described and evaluated aspects of an enrichment program for students, with study groups led by peer mentor/tutor students. The author noted many students entering nursing programs are nontraditional students (older, employed, parents).
who often are at-risk; a program of enrichment was designed “encompassing the various stages of the educational process” (p. 143). Upper-level nursing course students or those in the RN-BS nursing program who performed at high academic standards in pre-requisite nursing courses and clinical skills, and who had excellent communication skills, were selected and trained to be peer/mentor tutors. Participants in the enrichment program achieved positive academic outcomes, and the author concluded such support strategies should be encouraged and developed. However, Jeffreys also found retention is influenced more often by environmental variables than academic variables.

A peer-to-peer mentoring program to teach collegiality was developed in response to the shortage of student advisors and the increased faculty workloads caused by budget limitations (Scott, 2005). Students were encouraged to use email, face-to-face exchange, or the telephone as mentoring vehicles. Senior students could experience nurturing, leading, and advising of young student nurses, while the junior students entering the program received benefits of a support system. Scott concluded this type of mentoring teaches the value of collegiality; that lesson may carry into the practice environment and reduce the possibility of new graduate burnout.

A similar program by Sprengel and Job (2004) involved second-year nursing students who served as mentors for first-year students within their initial clinical setting. Each first year student was assigned a second-year student mentor who was enrolled in the medical-surgical course. Specific role preparation was given to both levels of students. The mentors worked with their mentees pertaining to clinical preparations, client care, and expectation for future clinical courses. This mentoring took place for 4 hours once during the semester because that was the only clinical they received in their 2-hour “Fundamentals of Nursing” course. Even though only one 4-hour session was involved, those acting as mentors generally believed the experience was positive and a boost to self-confidence; the mentees were impressed by the knowledge and clinical skills of the mentors.

Fredricks and Wegner (2003) described a program in which senior nursing students mentored freshman students enrolled in a human anatomy and physiology course. Each freshman student shadowed a senior nursing student on a critical care nursing clinical rotation for exposure to critical thinking skills that are necessary to apply theory to practice. As a result of their experience, the freshmen tended to emphasize the importance of anatomy and physiology in nursing coursework, and the seniors validated nursing knowledge gained during their 4-year nursing program.

Graduate Student Mentors

Lloyd and Bristol (2006) offered the only study of graduate students (MSN) mentoring undergraduate (BSN) students. This pilot matched the MSN students as mentors with BSN student mentees in a community clinical practicum. Faculty and clinic staff developed the mentoring network as a team to implement health education programs for the clients. Ten students participated along with one faculty member from the MSN and BSN programs. Two BSN students were matched with each MSN student to plan effective client teaching for clients with asthma, hypertension, and diabetes mellitus. All students completed a Likert survey regarding the mentorship and collaboration processes. The survey included six items relating to the perceived effectiveness of the mentoring program in the community practicum, with responses ranging from 1 (strongly disagree) to 5 (strongly agree). The collaboration four-item survey used the same Likert scale. BSN students gave scores of 4.4-5.0 points on the Likert scale for the mentoring portion, and 4.0-4.8 for the collaboration survey. MSN student evaluations were 4.6-5.0 for the mentoring portion and 4.4-5.0 for the collaboration process. These positive results demonstrated the effectiveness of the process for this project for both levels of students in the community clinical practicum.

Mentoring of the APRN was discussed by Barker (2006) as a means to support growth and develop success in the advanced practice role. Her review of studies in advanced practice nursing and other disciplines, including vocational behavior, management, psychology, guidance counseling, and ethics, concluded a successful mentoring relationship includes understanding the nature of mentoring, monitoring the progress of the relationship, realistic expectations, and positive compatibility of the mentor and mentee. Pitfalls identified in the review included poor communication, improperly identified limits, and inappropriate objectives. The author concluded properly structured mentoring relationships tend to improve professional growth, productivity, and competence.

In summary, this literature review demonstrated the use of mentoring as a means to develop student practice at various levels in the clinical setting. This finding is consistent with the nursing tradition of mentoring used in clinical to promote professional practice (Lloyd & Bristol, 2006; Morrison-Beedy et al., 2001; Ryan & Brewer, 1997). In most of these studies, mentoring was a teaching strategy with the main goal to support students in their clinical courses (Fredricks & Wegner, 2003; Neary, 2000; Scott, 2005; Sprengel & Job,
2004). Therefore, the purpose of the current study was to explore the effectiveness of a formal mentoring program in which nurse educator graduate students mentored undergraduate students. Effectiveness was determined by students’ academic outcomes and completion of an evaluation survey at the end of the semester. For this study, formal mentoring was a planned teaching-learning situation that included expectations of mentor and mentee as well as time to participate in the assigned relationship. In addition, the process was monitored and evaluated.

**Study Methods**

*Design.* This descriptive study examined the effectiveness of using a nurse educator graduate student to mentor an undergraduate nursing student. The mentoring program was developed and implemented in the nurse educator teaching practicum course. With the cooperation and assistance of the practicum preceptor, each nurse educator graduate student was assigned to mentor an undergraduate nursing student who was having academic difficulty. Mentoring was done in face-to-face sessions which could be supplemented by online communication via email.

*Sample and setting.* A convenience sample of 18 nurse educator graduate students was obtained from a university school of nursing. All of the nurse educator students from the Southern Illinois area were enrolled in the teaching practicum course, which is the final course for the nurse educator master’s specialization.

The 18 nurse educator graduate students chose an undergraduate nursing student with academic problems to mentor for one semester. The graduate student’s practicum site preceptor helped identify at-risk undergraduate students who might benefit from this mentoring. Fourteen of the practicum sites were at ADN programs, two were BSN programs, and two were LPN programs. The level of undergraduate students varied based on the preceptor’s teaching assignment.

**Ethical Considerations**

Institutional review board approval for the study was obtained from the university’s committee. An explanatory cover letter was developed to describe the program and sent to each of the graduate and the undergraduate students. Written consent to participate was obtained from all graduate and undergraduate students who chose to participate. All responses, reports, and evaluations gathered during the program were handled in a confidential manner by the researchers. Permission to use the VARK questionnaire in this study was obtained from Neil D. Fleming, designer of the inventory.

**Implementation and Assessments**

In the first meeting between the graduate student and assigned undergraduate student, the nurse educator student assessed the undergraduate student’s strengths and opportunities based on a discussion of study skills habits and academic history.

The graduate student administered the Learning Style Assessment using the VARK Survey (Visual, Aural, Read/write and Kinesthetic) (Fleming, 2001). The VARK survey, designed for adults age 18 and older, consists of 13 items that identify a person’s preferences for gathering, organizing, and thinking about information. VARK is the learning style modality of instructional preference. Other modalities are personality characteristics, information processing, and social interaction. In the *visual* mode, the learner prefers information in charts, graphs, hierarchies, circles, pictures, media, videos, and Web sites. In the *aural* mode, learning occurs best when information is heard or spoken, such as with lectures, group discussions, seminars, tutorials, and talking with other students. In the *read/write* mode, the learner prefers information displayed in text and printed words. Learners using the *kinesthetic* mode prefer experience and practice that is connected to reality (Fleming, 2001).

In considering reliability, consistency of scores over time is not an expectation of the VARK. An individual’s preferences for learning are predicted to change over time based on experience and trends toward multimodalities with aging. Content validity of the VARK is reflected using multiple studies indicating a matching of preferences with a person’s perceptions and learning strategies. The VARK does not have predictive validity as its design is not diagnostic or predictive. However, some studies have shown that the preferences identified do predict successful study methods. Learning is facilitated when students and teachers have similar preferences (Fleming, 2001).

As determined at the initial mentoring meeting, identified academic and study skills strengths and weaknesses and the student VARK survey results related to learning preference provided the basis for the graduate student to develop an academic plan with individualized outcomes for the assigned undergraduate student. With the approval of the practicum course faculty and the graduate student’s preceptor, the plan was presented to the undergraduate student and implemented with his or her acceptance. Meetings usually were face-to-face, but email also occurred often. The graduate student submitted progress reports and a summary evaluation of student performance to the course faculty at designated intervals during the semester.

At the end of the semester, the undergraduate students completed a 12-item Likert scale evalua-
tion from 1 (strongly agree), to 5 (strongly disagree) about the effectiveness of the mentoring. The tool assessed communication, level of assistance, accessibility, feedback and response time, support, and attitude. Three open-ended questions addressed the most helpful strategies, areas for improvement, and any additional comments. This formal mentoring program was a graded assignment for the graduate students, providing an actual one-on-one teaching-learning experience.

Communication. The graduate student and undergraduate student met face-to-face for the initial assessment and administration of the VARK. E-mail was used for clarification, communication, and questions. Subsequent meetings were arranged jointly; many of the graduate students met weekly with their undergraduate student. Graduate students used emails to send academic plans and progress reports to course faculty members. Faculty members were available to answer questions via email, or on the Web-based practicum course site. They also provided feedback on the academic plans and progress reports via email. Preceptors were available at the practicum site to discuss concerns.

Results

Vark survey results. The following single modal learning preferences were found for the undergraduate students: one aural, one visual/read write, one visual/aural, and four kinesthetic. Eleven students were multimodal, with no one channel predominant; two or more, up to all four, sensory modes are preferred by the learner, who is able to adjust to a variety of teaching strategies used by an instructor. Also, they may be able to adapt to other students’ modes when working in peer groups. This process is known as matching. Even though all modes can be used by a learner, one mode may be preferred more strongly.

Areas identified for mentoring. Eight major areas for mentoring were identified by the graduate students in their assessment plans. Many students cited writing skills as a weakness. Undergraduate students also reported correct use of American Psychological Association referencing format and care plan or care map development as problematic. For senior students, résumé development was identified as an area for improvement. In the area of study skills, the graduate students identified undergraduate student needs in management of large reading assignments; test-taking skills, especially for standardized multiple-choice questions; and time-management skills. Another area in which students frequently requested assistance was preparation for clinical assignments. A number of graduate students worked on specific skill acquisition, such as venipuncture or intramuscular injection, with their undergraduate student. Also, graduate students assisted the undergraduates to understand specific content from their courses. Each graduate student developed objectives and teaching strategies, as suggested in their nurse educator courses, in the academic plan to address the areas identified.

Teaching strategies used by graduate students. The graduate students developed teaching strategies based on the VARK results, as well as discussions of learning needs and preferences with the undergraduate student. A variety of strategies was utilized for the multimodal students with an emphasis on what the individual undergraduate needed. For single-preference students, the strategies best suited for the identified mode were included; however, many graduate students also included strategies to help strengthen the student’s other modes of learning to assist with adaptation to a variety of learning situations.

End-of-semester evaluation results. Sixteen of the 18 undergraduate students completed the evaluation tool; 89% of the scored items were in the strongly agree or agree categories. One item on each of two evaluations was scored as disagree or not enough information to answer. The rest of the items on these evaluations were scored in the strongly agree or agree categories. Several undergraduate students who had been in danger of failing the course stated they passed in part because of the extra help from their mentors. Specific areas of assistance mentioned by the undergraduate students were critical thinking case studies and multiple-choice questions developed by the mentor, learning their study strengths and weaknesses, time management and organization skills, individualized support, and encouragement. No negative comments were received.

Graduate students’ evaluation of the mentoring experience. Many graduate students commented that online communication via email facilitated implementation of the academic plan they developed. Many used teaching strategies based on the VARK results and reported these helped meet the undergraduate student’s learning needs. The graduate students reported progress on the goals of the academic plan and also indicated a belief that study skills, critical thinking, understanding of content, clinical time management skills, confidence levels, and overall clinical performance improved as a result of the mentoring project. A number of graduate students stated the experience with one-on-one mentoring increased their self-confidence in the ability to apply the nurse educator content in the practicum setting. Many reported in narrative comments that prerequisite nurse edu-
cator courses prepared them for this project.

Several of the graduate students expressed concern about undergraduate students who missed appointments for mentoring, were late, or were unprepared for the mentoring session by not completing assignments. Some believed their students’ busy schedule was the reason. These graduate students expressed some frustration and disappointment because they had invested their time and energy into the project. Even with these problems, common to nursing faculty at all levels, the graduate students reported they had made a positive difference in the undergraduate students’ academic situation and level of achievement for the semester.

**Implications for Nursing**

This study demonstrated that an effective mentoring relationship can be developed to assist with academic achievement and clinical performance of nursing students. Online tools such as email can facilitate communication in the mentoring relationship and lead to positive outcomes for all levels of students. Use of an assessment tool such as the VARK can help mentors develop effective teaching and learning strategies for the student.

Future research should assess the effectiveness of a totally online mentoring program. Also, a longer study could assess further the impact of the mentoring relationship on both parties. Matching the mentor and student according to VARK preferences could be done to determine if student learning and communication with the mentor are enhanced. Mentoring of a new graduate in the health care setting including a VARK assessment and an individual academic plan can assist with NCLEX-RN® preparation. This type of mentoring program also could be used in orientation and inservice or continuing education programs for new graduates in a variety of health care settings. For staff development planning, a VARK assessment could be completed with nurses on each unit. The unit educator then could plan programs to complement the staff learning styles. As identified in the literature review, a need exists for continued research on mentoring in nursing.

**References**


