Process and Outcomes Evaluation of Retention Strategies Within a Nursing Workforce Diversity Project

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ABSTRACT

A commitment to enhancing the diversity of the nursing workforce is reflected in the recruitment and retention strategies designed by Stony Brook University with support of a grant received from the Department of Health and Human Services, Health Resources and Services Administration. Three specific student retention strategies are evaluated in terms of their influence on student inclusion and promotion of student success. A review of the cultural competence of teaching and learning strategies and the promotion of cultural self-awareness underpinned these strategies. A mentorship program designed to provide individual support for students, particularly for those engaged in distance learning, proved to be challenging to implement and underused by students. Students found other means of support in their workplace and through individual connections with the faculty. Instructional programs that enhanced individual skills in the use of computer hardware and software were particularly effective in promoting student success.

The State University of New York at Stony Brook (Stony Brook University) is a public research university located on the north shore of Long Island, approximately 65 miles east of New York City. The School of Nursing was established in 1970, as one of five professional schools at the University's Health Sciences Center and is accredited by the Commission on Collegiate Nursing Education.

Computer-mediated distance learning programs were introduced in 1994. This curriculum dissemination strategy enabled the school to transcend geographical barriers and to greatly expand the diversity of its undergraduate and graduate program offerings. The School of Nursing offers two degree programs: a Bachelor of Science degree, and a Master of Science degree in seven graduate specialty areas, including Neonatal, Child, Adult, Family, Perinatal Women’s, Community and Mental Health, and Nurse Midwifery. A Doctorate of Nursing Practice (DNP) program has been recently developed and has admitted its second student cohort.

The School of Nursing also offers a Registered Nurse Baccalaureate program (RNBP) with a Master of Science option (RNBP-MS). The RNBP and the RNBP-MS are offered as traditional onsite programs or as distance learning programs.

Stony Brook University was awarded a 3-year grant from the Department of Health and Human Services, Health Resources and Services Administration in 2005.
The purpose of the project is to increase the number of underrepresented disadvantaged and minority undergraduate students enrolled in the RNBP-MS option who were interested in advanced practice nursing careers in Perinatal and Women's Health.

A wide variety of recruitment strategies were designed to engage the interest of disadvantaged and minority students in enrolling in the RNBP-MS program of studies. Project principals designed and conducted a survey of barriers that were encountered by currently enrolled minority students as they considered their own options for pursuit of further academic education, as a means of informing the manner in which these recruitment strategies could be enhanced. This survey was adapted from a model found in the literature (Amaro, Abram-Yago, & Yoder, 2006).

Three primary strategies were also proposed to support retention of enrolled students: fostering greater cultural competence within the curriculum of studies and among students and faculty, establishment of a mentorship program to support student professional development, and establishment of mechanisms to promote student success in the distance learning program. This included mechanisms for technology support and limited financial support for curriculum-related expenses.

This article presents the program’s experience with implementation of the three retention strategies in terms of student perception of need for this kind of support, and the documented evidence of their effectiveness as strategies for achieving the project goals of promoting cultural competence and increasing diversity in the nursing workforce (Institute of Medicine, 2004; Leonard, 2005b; Sullivan Commission, 2004).

LITERATURE REVIEW

The three strategies were selected for this program based on a review of the literature that discussed prior use of these approaches among culturally diverse student applicant and enrolled populations (Evans, 2007; Fletcher et al., 2003; Gardner, 2005; McNeal & Walker, 2006; Sutherland, Hamilton, & Goodman, 2007; Valencia-Go, 2005). Evidence was also sought for the effectiveness of these strategies within the context of a computer-mediated distance learning program.

Cultural Competence

The increasing racial, ethnic, linguistic, and cultural composition of the United States population has raised awareness within nursing of the need to acquire a deeper awareness of the influence of cultural beliefs and practices so health care services can be tailored in ways that are respectful and appropriate and therefore more likely to be well received. Schools of nursing have adopted two primary strategic responses: increasing the diversity of the applicants, students, and faculty, and promoting cultural awareness among them.

The literature is rich in its discussion of the core concepts of culture. There is both diversity and commonality in the definitions set forth for the core concepts. Nevertheless, culture has been generally defined as an integrated pattern of human behavior, leading to a shared system of values, beliefs, traditions, and verbal and nonverbal patterns of communication that hold a group of people together and distinguish them from other groups. Cultural competence can be defined as learning, accepting, and respecting the values, norms, and traditions of cultural groups and appreciating the differences and similarities within, among, and between groups (Salimbene, 1999; Smith, 1998).

Providing culturally competent care requires that the individual attain a certain level of cultural awareness, which includes a certain degree of knowledge and understanding about the beliefs and practices of cultures other than one's own. It requires exploration of personal attitudes and biases about these beliefs and practices, where they differ from one's own. It also requires certain skills, including skills in interpersonal communication and the willingness and ability to adapt approaches to service delivery to accommodate the best interests of the recipient of care (Callister, 2001; Callister, 2005; Shultz, Fongwa, Tanner, Noone, & Philion, 2006).

An exploration of barriers to acquiring cultural competency revealed several actions that could be taken to promote the acquisition in the context of health professional education and health service delivery (Carter & Xu, 2007; Pacquiao, 2007; Purden, 2005; Taylor, 2005). These included, among others, the promotion of diverse personal experiences and training opportunities (Anderson, Calvillo, & Fongwa, 2007; DasGupta, Meyer, Calero Breckheimer, Costley, & Quilten, 2006; Upwall & Bost, 2007; Webb, 2003; Wood & Atkins, 2006) and giving didactic instruction by faculty and clinical supervision by preceptors who themselves have diverse cultural experiences (Kardong-Edgren, 2007; Smith, 2001).

Mentorship

Mentorship is yet another concept that is multifaceted and multidimensional, and perhaps not well understood in relation to process and intended outcomes. The word mentor derives from the Greek root meaning to think or to counsel. A mentor for students is an individual who offers advice and guidance to learners, providing support, challenge, and vision (Doloz, 1999). Mentorship typically occurs between a novice and an expert.

Mentorship has been largely studied in the workplace context, where mentorship needs to be clearly distinguished from related concepts, including clinical supervision and preceptorship (Benson, Morahan, Sachdeva, & Richman, 2002; Greene & Frostner, 2003; Mills, Francis, & Bonner, 2005). Lessons learned from workplace mentorship can be applied to programs designed to recruit and to retain students in nursing education programs (Leners, Wilson, Connor, & Fenton, 2006; Zucker et al., 2006).

Benefits of mentoring have been identified to include increasing student motivation, fostering their independence, stimulating critical thinking, and enhancing a com-
commitment to learning. Mentorship has served as a means of socialization of students into the nursing profession, as mentors may serve as role models for the acquisition of professional behaviors (Becroft, Santner, Lacy, Kunzman, & Dorey, 2006; Hurst & Koplin-Baucom, 2003; Schubbe, 2004). Mentors have also provided support for the promotion of academic success (Candela, Kowalski, Czyckiel, & Warner, 2004). Mentorship has been noted to have a particularly supportive effect in promoting the retention of African-American nursing students (Fletcher et al., 2003; Fox & Broome, 2001).

The literature suggests that a commitment by both parties to allocate time for the purpose of giving and receiving mentorship is a critical factor in success of the relationship (Zachary, 2000). Some studies suggest that compatibility of personalities and interests between mentor and mentee is also critical (Fox & Broome, 2001); others suggest that random pairing may be equally effective (Cohen, 1999).

Technology Support for Distance Learning Students

The nature of educational pedagogy has changed dramatically over the recent quarter century, as rapid advances have been made in the incorporation of technology-supported curriculum dissemination strategies into traditional programs of academic studies. These technologies have prompted the growth and development of programs that serve students who acquire some or all of the program components from off-campus sites. Distance learning is a generic term used in reference to these academic educational styles.

The factors that serve as barriers and facilitators to student success within these distance learning programs has been studied extensively (Kreideweis, 2005). Students who access program components using computer-mediated technology commonly report personal facility, or level of comfort, with using computer technology as a major factor in their personal satisfaction with the course of studies and as a major factor that affects their academic success (Davis, Sollecito, Shay, & Williamson, 2004; Edwards, 2005; Mash et al., 2006).

### STRATEGIES AND OUTCOMES

The academic recruitment and retention strategies designed for this program were based on the most effective activities reported in the outcome evaluation literature. Model strategies were refashioned, where necessary, to reflect the particular circumstances of the Stony Brook University School of Nursing resource environment.

The commitment of the School of Nursing and the specific success of these grant-supported recruitment and retention strategies are reflected in the students' demographic profile. The Table depicts the demographic diversity of grantees compared with the profile of New York State, Stony Brook University, and the School of Nursing. The retention rate of 100% for minority students who participated in grant-supported activities is admirable and compares favorably to the 97% overall retention rate for students admitted to the School of Nursing's upper degree completion programs. However, there is only modest evidence to suggest that this success was influenced by specific grant-supported recruitment and retention strategies.

### Cultural Competence

The School of Nursing has a longstanding commitment to the philosophy and values of cultural competence. Nevertheless, an academic review of the health-focused courses taught in the undergraduate and graduate programs of
study was undertaken to identify the degree to which the School of Nursing's commitment to cultural competence was already visible and prominent within course objectives, course content, and course materials.

The curriculum review process led to the conclusion that all curricula acknowledged the importance of cultural competence, but some courses provided more support for assessing and enhancing the concept through specific academic and clinical exercises and assignments. Faculty were encouraged to share their teaching and learning approaches and to adopt or adapt the educational best practices that had proved to be most useful (Buchbinder, 2007). The concepts of cultural competence were noted as a philosophical thread that would be tracked in the ongoing, periodic curriculum review process. School of Nursing course evaluation forms were revised to specifically request feedback about the manner and degree to which the course content, teaching methods, and clinical practice experiences demonstrated respect for diversity. This feedback was incorporated into course planning and revision.

A self-assessment process was also undertaken to highlight for both students and faculty, the degree to which they were themselves culturally aware. A number of self-assessment tools were extracted from the literature and reviewed for their best fit for the program's purpose (Arthet al., 2005; Doorenbos, Schim, Benkert, & Borse, 2005; Laclad, Lin, Flores, & Magrane, 2006). The cultural competence self-test developed by the National Center for Cultural Competence was selected and adapted (Goode, 2000). The self-test was administered to all faculty and to all students who participated in grant-funded activities. The intended purpose of the self-assessment was to raise self-awareness. Individuals were asked to reflect on the issues that are addressed in each content item. Individual scores were calculated, but neither recorded nor reported elsewhere. Periodic reassessment was encouraged, and forms were provided for this purpose at a number of appropriate faculty and student gatherings.

However, project and School of Nursing administrators thought it appropriate that a stronger commitment be made to keep the issue prominent. The plan for the future is to use Campinha-Bacote's (2002) instrument to measure cultural competence among faculty, students, and preceptors. The tool demonstrates strong evidence of validity and reliability and is widely used among nursing and other health professionals. Opportunities will be structured for discussion of findings among School of Nursing personnel and student peer groups.

**Mentorship**

The mentorship program was anticipated to be a strong asset in support of student retention. The intentional strategy designed at baseline was that the total number of mentors recruited would be two to three times the number of students admitted to the RNBP-MS program. The intention was that each student would have the opportunity to engage with multiple mentors and have the option of choosing a single or a primary mentor from among them.

It was also intended that the mentors who would be introduced to students would be matched by ethnicity and by the Advanced Practice Nurse specialty that had been selected by the student.

Mentors were asked to offer academic advice, support, and encouragement to students and to link their mentees to academic and community resources where such need was identified. There was no compensation associated with the role, which was offered as a professional service.

Some difficulty was experienced in recruiting a sufficient number of mentors so all students could have a choice, or even an exclusive mentor-mentee assignment. In addition, the majority of students undertaking undergraduate coursework had not yet selected the graduate nursing specialty to which they intended to apply. The method actually implemented by the program was to conduct a series of introductory meetings attended by all potential mentors and all students. Students and mentors were urged to make their own connections, based on common interests.

A number of qualified and committed nurse mentors enthusiastically agreed to serve in this role, were present at the introductory workshops, and offered several pathways (telephone, e-mail, personal presence) for making themselves available to students. These mentors represented a wide variety of nursing roles and advanced nurse practice specialties. Nevertheless, students did not avail themselves of these opportunities to any notable degree. Few second or higher order contacts were made, and no longer-term relationships were established.

Mentors noted that they refrained from contacting students, as they did not wish to seem to be imposing a relationship when it may not be desired by the student. Students stated that they had found other means of social support and role mentorship, often in their workplaces, sometimes in the fashion of an online "study buddy," with whom they could chat, and also in the grant director, who was also the major advisor for students in the RNBP-MS program. Students indicated that development of a new or additional relationship was simply perceived as requiring too great an investment of time and emotional energy.

A third design for the mentorship program was set in place for the future. Students who participated in the project during their period of undergraduate enrollment and who have progressed to graduate-level studies are now asked to serve in a student-to-student support role. These individuals have had very recent experiences similar to those that the newly enrolled students will encounter as they balance work, family, and education challenges, and therefore might be perceived as a more connected mentor, with whom a relationship might be more easily established. The effectiveness of this strategy will be assessed over time.

**Technology Support**

All students were surveyed about the Internet connectivity and hardware to which they had personal access.
and about the degree to which they were comfortable with using the technology. Students were also asked to rate the degree to which they were confident in the use of selected word processing and presentation software.

Student support strategies were designed based on information obtained from this baseline survey. Specific courses were designed to address identified competency gaps. Students expressed a particular need for skills enhancement in means of accessing the library remotely and then searching bibliographic databases. Courses designed to teach both basic and advanced features of presentation software were also developed.

Finally, strategies were designed to promote success in navigating the distance learning environment. All distance learning students receive extensive personal orientation and written instruction at the time of entry into the program concerning the use of the IBM Lotus Notes® platform through which the distance learning programs are distributed. These materials have been refined over the decade of program experience, and the lessons learned have been incorporated into the refinement of the informational materials, which now address solutions to commonly encountered problems, and self-help measures that can be taken to resolve these difficulties.

Nevertheless, computer technical support is available on a call-in basis to all students in the School of Nursing. When the volume of calls is exceptionally high, students may be placed in a wait queue. Students who identify themselves as grant participants receive a priority status that allows them to be moved to the head of the wait queue, at their request. Additional technical support time was scheduled in the second project year, as increased enrollment led to increased demand during evening hours.

Student project participants were no more likely than other students to use the technology support services, although the baseline survey indicated that the majority of students did not have an established relationship with someone (family member, friend, or computer technician) who could help them address a problem they might encounter. On the other hand, the software skills building sessions proved useful to students, and these programs were consistently rated as very effective and very helpful.

**DISCUSSION**

The approach taken by the Stony Brook University program to promote and enhance the concepts and content of cultural competency within their didactic and clinical education strategies is consistent with strategies undertaken by other health professional education programs. The "prescription for cultural competence" promoted by Kriplani, Bussy-Jones, Katz, and Genao (2006, p. 1116) specifies the need for visibility of the theme within course materials. Eashleman and Davidhizar (2006) and Sienand, Groves, and Brager (2004) suggested the importance of reinforcement of the theme through replication of successful teaching methods throughout the formal curriculum. Wachtler and Troein (2003) noted that when the theme of cultural competency was visible in the course objectives and written materials (the intended curriculum), it was more likely to be present in the taught curriculum and more likely to be identified by students as having been received. The teaching models offered by Hobgood, Sawning, Bowen, and Savage (2006) included a process of curriculum review and revision to raise educator consciousness about the many opportunities that exist within programs of study to reinforce the theme.

Mentorship has been an integral component of programs designed to enhance retention for minority undergraduate nursing students (Hess, Pond, Lewis, & Abbott, 1996; Sutton & Claytor, 1982). Evans and Greenberg (2006) noted the need to create an atmosphere of trust, caring, and cultural congruity to recruit and to retain ethnically diverse students. Mentorship programs have been documented as an effective means of offering support to minority students who are enrolled in graduate nursing education programs (Washington, 1999).

The mentorship program designed for the Stony Brook University RNB-P-MS program was less effective than anticipated. Patchell (2006) cautioned that the success of a mentorship program is greatly dependent on the individual context. She noted that generational history, family belief systems, cultural archetypes, individual learning styles, and physical challenges (i.e., personal barriers that limit the extent to which one can reach out to another) all confound the degree to which any single individual is able to incorporate the opportunities that mentorship might offer into the personal life frame. Beeckor et al. (2006) suggested that a successful relationship between mentor and mentee requires adequate time for the connection to grow through face-to-face meetings on a regular basis. Dickelmann and Mendias (2005) suggested that this can be accomplished as effectively using the Internet as it can in a face-to-face encounter. Nevertheless, although prospective mentors offered the use of the Internet as a means for making connections with students in this distance learning program, these connections were not established.

The pragmatic support that was provided to students with the use of grant funds had the most notable influence. For example, financial support was provided to students for the purchase of textbooks and review materials. Students expressed particular appreciation of this assistance. The computer technology support strategies offered to students were also particularly effective. These short-course education programs were thoroughly grounded in data that supported their importance to the particular cohort of adult learners enrolled in this distance learning program. A reassessment will need to be conducted among each new cohort of students because variability among cohorts is expected and technology continues to advance.

**SUMMARY AND CONCLUSION**

Findings from this evaluation of three specific minority student retention strategies must be enfolded within an understanding of the successful and overarching efforts
of Stony Brook University to recruit an ethnically diverse student and faculty body. The options that are represented by the mix of onsite and distance learning curriculum dissemination methods offer several opportunities for adult learners. The continued dedication to ensuring a culturally competent environment for academic and clinical learning promotes the sense of inclusion among students of all ethnicities and cultures. The lessons learned from the decade of experience with distance learning strategies have been successfully translated into self-help materials that support students who select the distance learning options. Nevertheless, the technology skills enhancement methods supported by this grant proved to be particularly effective in furthering the individual success of distance learning students. The mixed success of the mentorship program suggests that a broader variety of student-to-other (other students, faculty, or other individuals interested in promoting student success) outreach strategies need to be explored, particularly among cohorts of adult learners engaged in distance learning programs.

REFERENCES


