Mentoring for Research Skill Development

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ABSTRACT

The nursing shortage is significantly affecting the nursing academic environment. A self-perpetuating cycle of insufficient numbers of faculty with inadequate preparation for academia could lead to a profound decline in the nursing profession. Institutions often implement mentoring plans for new tenure track faculty, and the challenge is even greater in environments that are not research intensive. This article describes the implementation of the research arm of an institutional mentoring plan for new tenure track faculty. The plan was designed to facilitate new faculty’s attainment of tenure, while expediting the development of a satisfying career in academia.

Doctoral education does not necessarily provide graduates with all the tools required to be successful researchers. However, specific guidance may be provided in the development of a research program; creating networks and selecting consultants; preparing presentations and publications; and developing grantmanship skills, particularly for institutions without established research centers.

Nursing education is facing a serious crisis of limited human resources. The average age of full-time nursing faculty members is now 49, and resignations and retirements are projected to reduce the current nursing faculty by one third by 2006 (American Association of Colleges of Nursing [AACN], 1999; Marshall, 2001). As the nursing faculty population ages, nurse educators must find ways to compensate for the retirement of a significant number of faculty by attracting and retaining new, doctorally prepared faculty members.

Doctoral programs were the only nursing degree track that did not demonstrate declining enrollments when surveyed in the fall of 2000 (AACN, 2001), and competition for doctorally prepared faculty is increasing, not only among academic settings but also between academic and nonacademic settings. In a 1998 survey, of the 411 graduates from doctoral programs in nursing who responded, only 43% were committed to the academic role (AACN, 1999).

Issues of recruitment and retention, along with increased competition for doctorally prepared nurses, could negatively affect institutional standards for quality and tenure attainment within the academic environment. At the same time, these new faculty often require considerable help in the early phases of their careers. Many new faculty lack teaching skills and, more important, well-defined and fundable research programs (AACN, 1999).

The significance of the problem is particularly relevant given the proliferation of doctoral programs that produce graduates within environments that are not research intensive. These issues are especially important today in the hiring of faculty for nursing programs without doctoral programs, with fledgling doctoral programs, and without established research centers. It is essential that methods be created to facilitate the development of a cadre of new tenured faculty who are fully equipped to lead the profession into the future.

Like many nursing colleges, the authors’ institution responded to these problems by developing a formal mentoring plan. The relationship between mentor and mentee must be dynamic and cooperative, with the goals being the transfer of knowledge and the growth of the mentee, both personally and professionally (Fox & Shephard, 1998). Attainment of tenure depends on the demonstration of specified performance levels in the areas of service, teaching, and scholarship.

Two tenured nursing college faculty members are assigned to mentor each new, tenure track faculty member. The mentors guide the new faculty members in the development of their leadership skills and service role, the technologies and nuances of classroom and clinical teaching, and their research program.
Prior publications have detailed issues such as:
- Philosophical bases and benefits of mentoring (Klein & Dickenson-Hazard, 2000; Vance, 2000).
- Needs assessments for designing mentoring plans (Riner & Billings, 1999).
- Institutional strategies for implementing and evaluating mentoring plans (Brown, 1999; Fullam, 2000; Genrich & Pappas, 1997).
- Targeted mentoring plans focusing on professional writing skill development (Baldwin & Chandler, 2002).

However, previous publications do not include the specific activities necessary for career development of novice researchers. This article describes the process of guiding the development of a research program for new faculty, including creating networks, developing grantmanship skills, and preparing presentations and publications.

**Developing the Research Program**

The selection of mentors to work with new faculty members must be carefully considered, as there are several approaches to the matching process. Matches can be based on factors such as:
- Content expertise.
- A mentor's access to specific populations.
- A mentor's methodological expertise.
- A mentor's expertise in an area in which the new faculty member's skills are limited.

Assuming the new faculty members are recent graduates of their doctoral programs, the mentors begin by reading their mentees' dissertations. It should be possible to derive at least two potential research foci from the dissertation. At their first research meeting, mentors share and discuss these options with their mentees, during which time other options may emerge. It is essential that the mentees be passionate about the choices made. Mentors may guide, but mentees do the work and must maintain enthusiasm for their scholarship selections.

The research plan design is based on institutional expectations for tenure attainment. Using the standard 6-year plan, explicit goals for each year should be identified. For example, first-year goals at the authors' institution are:
- One to two data-based manuscripts accepted for publication by refereed journals.
- One to two presentations accepted and completed at regional or national research conferences.
- One to two small grants submitted for pilot work.

After the plan for the full 6 years is established, a detailed timeline for the first year is developed. At this point, it is important to consider the other institutional expectations placed on the mentees. Nursing colleges vary considerably in their teaching and service expectations of new faculty during the first year. When a timeline is established, mentors schedule "checkpoint meetings" with their mentees to monitor progress and provide encouragement.

**Creating Networks and Selecting Consultants**

Important to the success of the mentees' research programs is the development of appropriate networks. Networks foster relationships, which may ultimately lead to consultants for the mentees' specific research programs or mentored research grants from the National Institutes of Health (NIH). Together, the tenured and new faculty members identify the experts in the mentee's content area and methodology. Identification of consultants is facilitated by doctorally prepared faculty from nursing colleges in research-extensive universities. Potential consultants can be approached based on recommendations of other faculty, doctoral program colleagues, or contacts from research conferences.

The Sigma Theta Tau Registry of Nursing Research (Table) allows searching by name to locate the addresses, telephone numbers, and e-mail addresses of potential consultants. Keyword searches are also available. In addition, college Web sites may provide specific information related to faculty research, publications, and funded grants that may be available.

If the information cannot be obtained from Web sites, the mentors can identify the dean or department chair of another college and communicate directly with them. Selection of consultants should be based on appropriate qualifications related to NIH funding, a strong publication history in the mentees' specific areas (Mundt, 2001), and ability to provide quality critiques of mentees' work. The list is then further narrowed down until consultants who are content experts for the major variables in the mentees' research, and in the mentees' methodology, have been selected.

**Attending Research Conferences**

Attending a research conference in their first year is one of the most effective means for mentees to begin creating their networks. Having identified desirable key contacts, mentors select the conference. Fiscal support from the institution determines whether conferences at the state or national level can be considered. Mentors should review a list of the conference presenters and identify individuals with whom they can initiate contact.

After deciding on the specific purpose of the contact, mentees can communicate in advance to set up meetings with potential consultants at the conference. These meetings can be used to develop relationships or address specific tasks, such as reviews of articles in draft form or initial critiques of grant proposals. If specific tasks are to be performed, mentees should provide materials to the consultants at least 2 weeks prior to their meetings. As a final bit of guidance before the mentees go to the conference, mentors should offer their mentees advice concerning how...
to gracefully decline offers of assistance from those who do not facilitate the progression of their research program.

**Preparing Professional Presentations**

Given the lack of institutional resources, combining network development and consultant contact with presentations is ideal. After creating mentees' scholarship networks, it is wise to consider the usefulness of presentations. Although they are enjoyable experiences and a valid means of disseminating research findings and enhancing visibility, presentations are not regarded by most institutions as highly as publications in refereed journals. Many institutions believe each presentation should evolve into at least one publication. If presentations result in reduced production of publications or research, involvement should be limited to those regional research conferences (Table) that increase mentees' exposure to the quality work of the top researchers in their geographic areas.

Usually, new faculty are anxious and require considerable guidance as they prepare for their first presentation. Reference books are available (Briscoe, 1996) to ease this process, and support services in the institution should also be considered. If they have access to graphic designers, mentees should make an appointment with them immediately after acceptance, as posters and other presentation materials can require months to complete.

Mentees should also be encouraged, if not expected, to have their mentors critique their product. In addition, it is beneficial for mentees to rehearse their presentations for a group of faculty in advance, to address technique and test responses to questions.

If the mentors do not attend the conferences where meetings were arranged, they should contact their mentees during the conference. Mentors can not only provide support but also debrief their mentees and offer new information that can lead to further suggestions for meeting with potential consultants.

After their mentees return, mentors should schedule appointments with them to discuss the content of the conferences and mentees' consultant meetings. Mentees may return fascinated by new research findings, enmeshed in new theories, or discouraged by feedback obtained, and mentors can use these meetings to temper their mentees' reactions and refocus their efforts.

Mentors should always follow up with the potential consultants after the conference. It is important to continue to foster even those relationships that may not seem immediately valuable. Finally, as mentees continue to develop their networks, mentors should explore internal funding sources for external consultant fees. The authors have found that these consultant relationships can be very valuable for mentees and may even eventually lead to postdoctoral opportunities.

**Developing Grantsmanship Skills**

Grantsmanship is an essential skill in academic settings, and mentors begin the process by assessing both their mentees and their institution. Generally, many new graduates of doctoral programs experience grantsmanship through small local foundation grants or grants provided by chapters of professional organizations, such as Sigma Theta Tau.

If the mentees are inexperienced and their institutions do not have an established research center, mentors must identify and locate small, internal or external funding sources for the mentees. Teaching mentees how to seek funding sources is part of the learning process.

Initially, mentors must provide significant support to their mentees in writing proposals, particularly if their institutions do not have an established research center with samples of successful grants. If consultants have been previously identified, they may be able to provide these models.

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<td><strong>International Institute for Qualitative Methodology</strong></td>
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Mentees are moved through the steps of budget development, and that essential step of tailoring the goals of the proposal to those of the funding source. Knowing those individuals within the institution who are skilled in the grant review process for professional organizations and agencies, mentors can initiate their mentees in the essential process of internal review.

This process is not complete, even after the first grant is submitted. For at least the first year, mentors should continue to review funding sources found by their mentees to ensure congruence with the established goals of the research plan, as well as those of the funding agency. Mentors must also teach their mentees how to secure two small grants for one project and how to build on small grants to develop the basis for larger ones. Mentors should encourage open, accessible relationships and provide critiques related to both the grants and the overall direction of the research programs. Mentors provide guidance in broad strokes, depending on the needs of their mentees.

Faculty members new to academia will likely need assistance to access potential research participants in an unfamiliar geographical area.
Mentors' contact with key individuals within community organizations, as well as within state, regional, and national systems will prove invaluable for mentees.

Mentors should alert their mentees to workshops about writing grants and about the role and function of institutional review boards. Dialogue is kept open, allowing mentors to challenge their mentees' assumptions about the process, including those regarding access and funding. An important role for the mentors is in reducing the barriers met by new faculty members unfamiliar with academic settings, ranging from simply obtaining supplies to more complex issues such as attainment of equipment and access to key people within the institution.

Preparing Publications
During the careful reading of mentees' dissertations, mentors should also compile a list of potential publications. Each dissertation should provide at least three to four manuscript ideas. They may include:

- The theoretical basis of the dissertation.
- The research results.
- The method.
- The clinical, educational, and institutional applications.

After the list is compiled, mentors should encourage their mentees to decide where they will begin, selecting one topic they feel most confident about, as this will increase the quality of their work and the likelihood that it will be published.

Mentors should initially select appropriate journals for manuscript submission, considering issues related to review time and publication rates, as well as institutional values about certain journals or whether publications are data based. There are several references available for individuals considering recommending journals with which they are unfamiliar (Bradigan, Powell, & Van Brimmer, 1998; Daly, 2000). As mentees' research programs grow, their consultants will also provide guidance in journal selection.

As mentees write and eventually submit their manuscripts, their mentors retain an active role. Drafts require multiple critiques to facilitate growth in both writing skill and the ability to accept analytical comments. After they have submitted their manuscripts, mentees wait, while mentors prepare to provide support if the manuscripts are rejected and to teach their mentees how to leverage success while celebrating it if the manuscripts are accepted.

Planning Long-Term Careers
While the mentors' goal is their mentees' attainment of tenure, this is only one step toward a successful career. Ultimately, the skills and knowledge gained during this time allow mentees to reach new levels of proficiency as nurse researchers. If not explored previously, this may be a good time to consider options for postdoctoral study, and relationships established with consultants may prove beneficial.

Resources are also available from the National Institute of Nursing Research (Table). A Research Training: Developing Nurse Scientists workshop is available annually to improve participants' knowledge of the NIH, funding mechanisms, and development of research proposals. Although only 40 participants per year can be accepted for the week-long program, the research training content is now available online at http://www.nih.gov/ninr/news-info/nurse_scientists.html. The Web training is free of charge to participants. Videotapes are available for purchase.

Summary
The history of professional nursing is marked by many crises. Issues of licensure, scope of practice, health policy, access to care, and educational preparation have interplayed within shifting social contexts, such as priorities for funding, advancing technology, and the shifting demographics of society. Fortunately, there have been leaders within the profession who have used these opportunities to transform nursing, continuously advancing the art and science of the discipline. Today's crisis, the projected shortage of practitioners, will require interventions at many levels. More students need to be attracted to nursing, particularly to baccalaureate and higher degree programs. Certainly this will require increased student recruitment, as well as expanded funding opportunities. But to teach students and to conduct the research and disseminate knowledge essential to the profession, doctoral-prepared faculty are indispensable. According to a survey by the AACN (2001), more than one third of the responding schools indicated faculty shortages as a reason for not accepting all qualified applicants into their baccalaureate programs. However, recruitment alone cannot adequately address the problem. Novice faculty members must be guided in their professional growth, to achieve satisfaction and success in their chosen career path.

References


Neuroscience Nursing, 30, 153.