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Vicki S. Conn, Julie Zerwic, Susan Rawl, Jean F. Wyman, Janet L. Larson, Cindy M. Anderson, Nancy L. Fahrenwald, Lazelle E. Benefield, Marlene Z. Cohen, Carol E. Smith, Robert Topp and Natalie E. Markis

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Abstract

Nursing doctoral programs prepare students for research-focused careers within academic settings. The purpose of this Editorial Board Special Article is to provide PhD students and advisors with suggestions for making the most of their doctoral experience. Editorial Board members provide their individual insights on the skills and attributes students must acquire during the course of their doctoral education in order to succeed. The authors provide practical tips and advice on how to excel in a PhD program, including how to

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select an advisor and a dissertation committee, the importance of attending conferences to increase visibility and develop a network of colleagues, presenting and publishing research while still a student, and balancing work and personal life. Students who take full advantage of the opportunities available to them during the course of their doctoral programs will graduate well prepared to take on the multiple responsibilities of research, teaching, and leadership.

Keywords

doctoral education, nursing, academic programs

Nursing schools are facing faculty shortages nationwide even as the number of nurses graduating with PhDs has remained relatively flat over the past decade (American Association of Colleges of Nursing, 2012). Nursing schools need every PhD-prepared faculty schools can get. For this reason, it is critical that those individuals who are entering or currently in PhD programs be properly trained to ensure that they will be successful in their subsequent academic careers. Nursing PhD programs typically provide students with multiple resources for them to develop the skills necessary to become effective researchers, educators, and leaders. However, whether students properly avail themselves of those resources is an important determinant of the overall quality of the training they ultimately receive. The purpose of this Editorial Board Special Article is to provide tips and advice to students on how they can maximally benefit from their doctoral experience. Several strategies are summarized in Table 1. Board members' guidance comes from their experiences in mentoring doctoral students as well as their own graduate school experiences.

Jean Wyman, PhD, RN, FAAN, FGSA, University of Minnesota

Preparing for a career as a nurse scientist begins on the first day of one's PhD program. Dr. Angela Barron McBride (2010) in her book, *The Growth and Development of Nurse Leaders*, highlights the importance of mentorship throughout all career stages, and it is particularly vital in the first stage of preparation for an academic or research career. An experienced mentor plays a crucial role in guiding a doctoral student through the design of a scholarly career development plan, assisting in navigating the challenges of doctoral education, and helping with professional networking that can lead to

Table 1. Strategies for a Successful Doctoral Education.

Theme	Strategies
Mentoring	<ul style="list-style-type: none"> Find an advisor with a vigorous active program of research (e.g., strong publication record) Select an advisor with a record of mentoring successful doctoral students Verbalize expectations in the advisor–student relationship; be willing to negotiate activities Become familiar with the advisor's substantive and methodological expertise Involve the advisor in decisions about committee members Select a committee with methodological or substantive expertise for the dissertation project; the committee may include individuals outside the field of nursing Meetings with mentors: <ul style="list-style-type: none"> Schedule with considerable lead time Provide written documents well before meeting Use an agenda to be sure all topics and questions are addressed Record important decisions and action plan If necessary, change mentors to optimize experiences
Career planning	<ul style="list-style-type: none"> Articulate career goals (e.g., research position in a clinical organization, faculty at a research extensive university, faculty in a teaching-focused institution) Develop career goals consistent with the desired position
Doctoral studies trajectory	<ul style="list-style-type: none"> Implement specific doctoral program activities to promote the career trajectory Design a doctoral studies trajectory to prepare for the intended career Develop timelines and milestones for doctoral program activities Reassess the trajectory each semester to record completed activities, monitor ongoing experiences, and develop new plans Specify activities outside the formal coursework to obtain valuable experiences Prioritize academic and nonacademic activities to achieve professional and personal goals Learn to relinquish activities that do not further professional and personal goals Devise strategies to avoid distractions from completing work Develop time management skills (Chase et al., 2013)
Coursework	<ul style="list-style-type: none"> Consider a full-time doctoral study to enhance doctoral experiences Focus on coursework assignments to complement research area Build a program of study to build both content expertise and research skills Seek publication opportunities related to course assignments

(continued)

Table 1. (continued)

Theme	Strategies
Valuable experiences beyond coursework	<ul style="list-style-type: none"> • Participate in informal and formal research seminars, webinars, and the like • Attend a research conference in the initial year • Present research (including collaborators' mentors' projects) at conferences in subsequent years • Attend both specialty conferences and general nursing conferences (Harpin & Gilmore-Bykovskyi, 2012) • Be a graduate research assistant • Seek research practicum experiences to build substantive and methodological experiences • Volunteer on research teams • Participate in research interest groups
Dissertation topic	<ul style="list-style-type: none"> • Explore possible dissertation topics early in the program of study • Pick a research topic overlapping with advisor's research expertise • Spend extensive time reading about the dissertation topic • Develop individual searchable database of the dissertation relevant literature • Select a topic with a high significance (i.e., affecting a large number of people, having significant morbidity/quality of life/mortality/cost outcomes) • Use course papers to build expertise around dissertation methods and substantive area • Undertake interdisciplinary coursework or courses outside of nursing • Design a research project that builds new knowledge • Build a dissertation that will have a scientific impact by affecting future research, practice, theory, or policy (Cohen et al., 2010; Conn, 2010) • Craft the dissertation to launch a research career • Select a research project that is feasible during the period of doctoral education
Grantsmanship	<ul style="list-style-type: none"> • Seek opportunities for funding early in the program (Rawl, 2014; Groves et al., 2012) • Develop applications for funding doctoral education/dissertation • Seek constructive criticism on grant application materials • Resubmit grant applications if necessary to achieve funding
Dissemination skills	<ul style="list-style-type: none"> • Assess skills for writing manuscripts and for delivering poster and podium presentations • Develop a plan to increase competencies for dissemination, such as <ul style="list-style-type: none"> ◦ preparing abstracts, PowerPoints, and posters for research presentations ◦ delivering presentations at research team meetings, campus research seminars, and at conferences ◦ developing manuscripts • Seek feedback about presentation and publication materials to further develop skills • Enhance writing skills

(continued)

Table 1. (continued)

Theme	Strategies
Publications	<ul style="list-style-type: none"> • Develop a plan for multiple publications during the initial semester; reassess the plan and progress each semester • Consult with the advisor and course faculty regarding publication possibilities for course papers • Identify publication opportunities by participating in research practicums or research projects • Develop writing behavioral goals with timelines • Discuss publication possibilities for the dissertation with the entire committee • Select manuscript-style dissertation, if available
Networking	<ul style="list-style-type: none"> • Develop a list of experts on the dissertation topic; design strategies to meet experts • Attend conferences each year • Attend meetings with mentors when feasible; ask them to make introductions to experts • Review abstracts prior to conferences to strategically plan participation • Deliberately introduce self to experts at a conference; plan two to three specific questions to ask each expert • Participate in student groups focused on dissertation topics or methods • Build and maintain a relationship with other PhD students and recent graduates
Leadership and collegial skills	<ul style="list-style-type: none"> • Volunteer for student, school, and professional association committees (Harpin & Gilmore-Bykovskyi, 2012) • Observe leadership activities in research teams • Seek leadership opportunities in committees, task forces, and so forth • Provide constructive criticism of colleagues' and faculty's work
Teaching skills, if relevant	<ul style="list-style-type: none"> • Consider curriculum and instruction coursework • Participate in informal and formal seminars about teaching, instructional technology, and so forth • Serve as a graduate teaching assistant • Volunteer for teaching experiences
Become socialized to research culture	<ul style="list-style-type: none"> • Socialize with professional colleagues • Locate successful role models among professional colleagues; articulate the characteristics that make them successful • Learn persistence and tenacity • Expect challenges and occasional disappointments/delays • Develop an appreciation for opportunities to revise and further improve written work • Accept the reality that productivity is often measured by publications and grants • Welcome lifelong learning (Conn, 2014)

important career opportunities not just during the PhD program but in the following years as well. Although a mentoring team will be essential to help prepare a student for dissertation research, the academic advisor has a major role as the primary mentor.

How does one select a primary mentor? If you have a choice, and most doctoral students do get a choice to suggest initially or change their assigned academic advisors, it is important that you know yourself well and have realistic expectations for what you need in a mentor. Having an overnight turnaround on papers and email requests is probably not feasible for most faculty members. Reach out and get to know different faculty, their research interests, and how these interests might fit to your own. Negotiate for what you need in a mentoring relationship. For example, what is the best time you would want someone to provide feedback on your developing research ideas? Would you like someone to provide constructive critique on a manuscript for publication or a mock presentation you will be giving at a conference? How often would you like advising appointments, how far in advance do these need to be scheduled, and whether phone, Skype or in-person appointments are preferable? Ideally, students should meet at least once a semester or quarter to discuss their plans and progress with their mentor.

Second, identify individuals who have the characteristics of being a good mentor. These are faculty who are actively involved in the same type of research that you are interested in or are using the methodology you would like to use. A good mentor is someone who is concerned about students' success in the graduate school, and is interested in helping them to advance their short- and long-term academic and professional goals. Assess whether the individual faculty member has an opportunity for you to assist in his or her project as a paid or unpaid research assistant (RA); whether the faculty member sees any publication opportunities resulting as a first author or coauthor is important information to know. Select a mentor who has emotional intelligence, and is self-confident, skilled, and holds himself or herself at a high, ethical standard. In selecting a mentor, it is also helpful to choose someone you can get along with, although this individual is not expected to be a close friend. Good mentors will advise, guide, facilitate, support, and protect, but they will also challenge you at times to help you grow.

Key tips in working with your mentor include the following: (a) schedule an appointment with as much lead notice as possible; (b) identify time needed and the purpose of the meeting; (c) come prepared with an agenda, and summarize the action plan at the end of the meeting; and (d) follow up with brief meeting notes of key decisions. These tips will facilitate your mentoring relationship.

One of the most helpful planning tools for facilitating success in the doctoral program and preparing for a scientific career is the scholarly career development plan. Your mentor can be a great resource and should be actively involved in helping you develop this plan early in your doctoral program. Although the format for plans varies, it typically includes broad goals, expected competencies, coursework, and other activities (e.g., grant-writing conferences, writing manuscripts, submitting abstracts, attending research conferences, research or teaching assistantships, internships, attending journal clubs or research seminars, etc.) along with a time frame. As you develop your plan, it is helpful to identify goals in three key domains especially if you are pursuing an academic career: research, education, and leadership. Although you may not focus on taking formal courses in curriculum and instruction, you may want to look for opportunities that will help prepare you to be an effective presenter, such as noncredit courses in the use of instructional technology and active learning strategies as these increase your presentation effectiveness. In terms of leadership goals, if you have not been involved in professional societies at the local, regional, or national level, this is the time to consider being active to begin developing your leadership skills and your professional network. For example, you may want to consider getting involved as a student representative on a committee for your regional nursing research society or on a committee for a local or national specialty society. The career development plan should be monitored every semester in conjunction with your mentor to determine what competencies have been met, whether new goals or activities are desired, or whether there is a need to readjust the timeline. The activities and the resulting outcomes from this plan will help you develop the necessary competencies as a beginning scientist, initiate your program of research, and help you gain professional networks that could help in garnering later career success.

Janet Larson, PhD, RN, FAAN, University of Michigan

I have two types of advice, an advice to facilitate the completion of high-quality doctoral education and an advice to advance your career after receiving the doctoral degree. One of the primary purposes of a PhD degree is to prepare you to be an independent researcher and my advice is designed to promote the quality of your research and the trajectory of your research career.

The fit between a research advisor and a student is important to your success. Identify an advisor who is an expert researcher in an area of interest

that is closely aligned with your interest. Pick a research topic that you love or can love and one that is closely aligned with the expertise of your research advisor. If your advisor is an expert in your research topic, he or she will be able to guide you more effectively and efficiently. An advisor with expertise in the research that you are conducting will help you avoid many pitfalls in your research and will be able to guide and support you so that your research is truly cutting edge. Without this kind of expert guidance, you will make mistakes that could have been avoided, and your research will have less impact.

On the more pragmatic side, keep your dissertation to a manageable size. Remember that it is the beginning of your program of research and the dissertation should provide a solid foundation for future research. You do not have to answer all of the research questions that you have, so save some for later.

The dissertation is a major project, and you should commit as much time as you can, 5 to 7 days a week. Structure your time, set goals, and keep moving. Do not expect others to push you and do not drag out the process so that you lose your motivation. Your advisor will guide you, but you have to own it. You have to take charge and go for depth and excellence in your research.

During your doctoral program, you will be socialized to operate within a new culture, the research culture. Watch other successful researchers, observe their performance and note what they do well and what they could have done better. You will learn much about the research culture. Networking with classmates and other researchers will be important in promoting your academic career. To accomplish this, I recommend that each year students attend at least one scientific meeting that is closely aligned with their research area and a regional nursing research meeting. At the specialty scientific meeting, you will meet the experts in your specific area, and by networking with them, you will increase your visibility and your opportunities as you move forward with your research career. At regional nursing research meetings, such as the Midwest Nursing Research Society, you will meet a wide range of nurse researchers and this will increase your visibility and opportunities in academic nursing. Both are important. It may seem expensive at the time, but this is an important investment in your career.

Be prepared to compete in the academic job market. People will judge your future capacity by the work that you have done during your doctoral studies. So publish with your advisors; volunteer to work on one of their projects with the agreement that you will be part of a publication. It will take extra work, but it could be important in competing for a postdoctoral fellowship or faculty position in a research intensive environment.

Julie Zerwic, PhD, RN, FAAN, University of Illinois at Chicago

The best advice I can give to a doctoral student is to take advantage of opportunities outside those required for the doctoral program. Most institutions have outstanding visitors pass through their doors frequently, and many of them present seminars that are open to the public. Perhaps they are presenting a seminar as part of a job interview, or maybe they are visiting scholars. By attending these seminars, you not only gain knowledge but also learn presentation skills. Also, other doctoral students usually present their dissertations, and attending these will help you see what you need to accomplish in your doctoral program.

Your institution will likely have faculty that are scholars in their respective fields. Although these faculty members may teach courses outside your field of interest, you will benefit by studying with them. You can advance your understanding of theories, methods, and analyses from these experts. Additionally, engage in the research activities of others, even if these are volunteer activities. Do not wait for your own dissertation study to learn research techniques. Many of these skills require practice before you can become proficient. It is beneficial to learn the skills from others and practice them before engaging in your research. Relationships built with other faculty scholars will also be beneficial as you begin to develop the committee for your dissertation.

Attend professional meetings not only when you are presenting your completed research, but also throughout your program. The best experience is to attend meetings with your mentor and ask your mentor to introduce you to other scholars in your area. Seek opportunities to meet with the scientists who are doing research in your field. At presentations, ask questions after first introducing yourself and the institution you are affiliated with. This will begin to establish your reputation in your field.

Participate in professional organizations. Volunteer for leadership roles in graduate student organizations, or serve on college or university committees. Through these experiences, you will meet faculty, administrators, and students who will have the opportunity to get to know your potential. In addition, you will develop leadership skills that you will carry with you into your first position after obtaining your doctorate.

Take every opportunity to seek funding for your research and publish while in your doctoral program. These are the two areas where most students lack experience, and it will show on your CV as you apply for postdoctoral or faculty positions. If you did not make time to engage in these activities while you were a doctoral student, it will be unclear if you will make it a priority after you graduate.

Most of all, enjoy the journey. This should be one of the most rewarding personal and professional opportunities you will ever have. The relationships you develop with students and faculty, as well as the knowledge you gain, will provide the foundation for your career.

Cindy Anderson, PhD, WHNP-BC, FAAN, University of North Dakota

As a graduate student, I received some advice that served me well throughout my career. I was advised that in graduate education, “you get out of it what you put into it.” This advice prepared me for the rigor that is necessary to provide the preparation to achieve goals of the PhD education program and individual goals to develop meaningful careers as nurse scientists.

PhD education is nothing, if not rigorous. The expectations for individual outcomes include development of novice students as nurse scientists who are prepared to further refine skills and knowledge postdoctorally, establishing productive research careers. Such transformation requires intrinsic motivation, intellectual curiosity, and persistence in order to fully commit to maximizing doctoral education and achieving professional goals. These characteristics provide the mechanisms by which students move beyond course requirements, driving the commitment to go above and beyond expectations. The students who possess these attributes not only develop the depth and breadth of knowledge to propel them forward in the next step of their careers after completion of PhD education but also imprint the habits that sustain them for the dynamic advances of the discipline as they develop their careers.

Opportunities for the application of strategies that involve motivation, curiosity, and persistence are many in PhD education. One basic approach is to read and read some more. Initially, a review of the literature provides opportunities to develop ideas and approaches to investigation, eventually evolving into a program of research (Green & Macauley, 2007). In addition to the topical area of research interest, exposure to a wide range of literature supports the articulation of the appropriate population, phenomenon, theory, and method best suited to dissertation research. An in-depth review of pertinent studies is essential to identifying the gap in knowledge that can be addressed in the student’s research, serving the critical purpose of contributing to the body of knowledge for the discipline (Cleary, Horsfall, & Hunt, 2012). An additional benefit of mastering the literature is the emergence of recognition of the leaders in the student’s field of interest, providing direction toward future collaborative or mentoring relationships. While the advantages of a targeted and broad review of the literature is essential during PhD education, the continued practice as a nurse scientist provides the path toward the

ability to keep pace with new approaches, statistical methods, or evolving areas that develop throughout one's career. A synthesis of the literature to identify novel areas of investigation or new approaches to existing problems provides an important advantage, increasing the potential for success in funding, publication, and collaborative activities.

Students' development into well-read and informed nurse scientists takes a tremendous amount of time, perhaps one of the most significant limiting factors in the achievement of literature mastery (Cohen, 2011). As with other aspects of doctoral education, using strategies that facilitate the practice of literature reviews can reduce the time required to search the literature and achieve the full benefit. The use of search engines that identify recently published manuscripts based on key words is a very useful way to automate the literature searches and prompt regular reviews. The organization of key references is also a time saver, allowing easy access to saved references. Many strategies may be used to organize the ever-growing number of references that accumulate, from simple organization strategies within files on computers to essential reference management systems that allow easy search and access. While reviewing the literature has many advantages, it is not without risks. Once begun, it is very hard to stop! Now, that is the true evidence of motivation, curiosity, and persistence, worth every minute (or hour).

Lazelle Benefield, PhD, RN, FAAN, University of Oklahoma Health Sciences Center

As a doctoral student, you can speed your progress by strategically focusing with a primary mentor early in your program. Facilitate your progress by aligning coursework assignments to complement your mentor's area of science. Read your mentor's work, engage in your mentor's research as a RA. Writing a state-of-the-science paper in an area of inquiry that overlaps or complements your mentor's area of science is a good way to identify gaps in the field, which will help to refine the focus of your own research.

In developing your dissertation research project, you will benefit from searching globally for experts in your area of science and pursuing opportunities through your mentor to add these expert(s) to the research team. Contacts should be more than through phone or email; make it a point to attend national research conferences for opportunities to meet in person. These brief face-to-face meetings can be to consult about the use of a tool or an instrument, receive input to refine a research question or methodology, or discuss research gaps or emerging issues in the field. Mentors often already have relationships with these key experts and can assist students in setting meetings.

You will also benefit by adding interprofessional members to your research team. Scientists in other disciplines add an additional cross-disciplinary perspective in framing the research questions. You can also gain cross-disciplinary perspectives by participating in research interest groups either on your own campus or other campuses via phone or video connection.

During the course of your program, you can expect that learning will occur at an uneven pace, with periods of accelerated success as well as occasional setbacks. Accept ups and downs and understand that being constantly challenged is part of the doctoral education process. Keeping yourself focused, seek wise counsel from your mentor for wisdom when feelings of frustration or angst arise. Learn to pace yourself in a manner that enables you to dedicate the necessary time to be successful. Practice this daily so it becomes second nature to focus intently, then step back to refresh, and then return to focused work. Given the time commitment necessary to be an excellent PhD student, working in a full-time paid position is usually incompatible with full-time doctoral study.

Finally, an important aspect of the PhD experience is building and maintaining professional relationships with fellow doctoral students and recent graduates, particularly those who share your area of science. Attend regional research conferences to meet and network with students. You will be cultivating relationships with the very people who will become professional peers once you have graduated.

Marlene Cohen, PhD, RN, FAAN, University of Nebraska Medical Center

Many Choices

PhD education is very individual—what is helpful for one student may not be useful to another. This leads to necessary freedom of choice for students. Having freedom and fewer guidelines may make a PhD program “harder” than other programs. Successful students put in more of their own directed choice. Those who do not succeed in graduate school do not fail, they just do not persist. Students regularly need to get out of their comfort zone and go down different roads. This is a perfect time to try new things. Graduate students need to make many important choices, and the lack of clear guidelines can provoke panic. Do not panic—decide for yourself.

Additional choices involve how you spend your time. Plan your life as much as possible to have the time to invest in your education. Students sometimes think they can fit in getting a PhD without changing anything in their

lives. This seldom works. Carefully plan what you can stop doing while you are in school so that you have time to attend classes, to read, to write, and most importantly, to think about what you are learning. You will get out of your program what you put into it.

Students—Your Peer Group

It is a very good idea to keep in close touch with other students. The best information about faculty comes from your fellow students. It is both helpful and fun to spend time with fellow students. Planning time regularly is important, as is sharing other activities. For example, attending research conferences together makes the meetings more fun and also helps with sharing expenses—driving, sharing hotel rooms, and so forth. Students are also a great source of information. Some of this information comes from reading notices and emails. Many universities have bulletin boards, daily or weekly publications, and often email, about free and available lectures. Read all these sources, and share them with your fellow students. Many opportunities for jobs, scholarships, and lectures are missed without information from this kind of networking.

Advisors

Faculty members do not agree on everything—which is a good thing. Students have choices not only about personality but also about philosophy when deciding with whom they will work. Students should never feel obligated to continue to work with a faculty member past the time when that relationship is educationally fruitful for the student. Obviously, there are limits to this—course instructors cannot be dismissed in the midst of a semester, but this “rule” is very important for selecting and retaining advisors. Students choose their advisors, and when they no longer are helpful, the student really has to go find someone else. Students sometimes get the idea that the initial advisor assigned to them was selected with care and precision, and they are required to stay with that assigned advisor. Assignments actually are made based on what your major interest was on your application. Graduate education ought to change you and you should gravitate to those faculty members who can guide you best in those interests to which you are committed.

Faculty advisors are there to help you get started in pursuing your own course of study—not theirs. Advisors should be able to give you different kinds of information: information about requirements, opportunities (for work as well as study), what is new, getting financial aid, who you should

see for what you need; they should be able to help you in getting through the bureaucracy, and give aid and comfort when you do not know where else to go.

While advisors are assigned, mentors cannot be assigned and are of immeasurable value. Effective mentorship is widely recognized as an essential aspect of research training and a research career. With luck, you will have more than one mentor—both during your doctoral program and throughout your career. A mentor helps with career development—learning how to be a productive scholar—and with psychosocial aspects of acculturation of values and practices of research. Mentorship requires regular one-to-one meetings between the mentor and mentee. Cultivate these relationships.

Selecting a Dissertation Committee

Do not be bashful about going to see faculty with whom you suspect you may share an interest. They will not come to you. Faculty members are paid to, among other things, help you get an education. This is primarily done outside of formal classes for PhD students. Spend time, especially during your first year, making appointments with faculty members to discuss matters of mutual concern.

Hopefully at the point you are ready to select a committee, you will know a number of potential faculty members. It is wise to select faculty members who you know well, who you can talk openly and honestly with, who you trust and who trust you, who know and like one another, and all have complementary expertise which bears on your problem. This is the ideal, and may not be accomplished in every way.

Once you have a draft of a proposal, go “shopping” to find faculty to serve on your dissertation committee. It is useful to leave this draft of your proposal with the faculty member, give the faculty member time to read it, and ask for an appointment to discuss it. This is better than walking in with vague ideas to discuss verbally. This gives you a chance to see how interested each person is in being on the committee. How quickly you can get an appointment can help you gauge the time you will be able to get with this faculty member. However, some very busy faculty members always make time for their doctoral student committee responsibilities.

Dissertation Chair

The ideal chair will be a bit critical and push you to do your best work. Since the chair is usually the first to see your drafts, when your work is of high

quality, everyone else on your committee may well be satisfied when they see your drafts. This will save you time and trouble!

Writing—an Essential Skill

One of my advisors in my doctoral program, Loren Barritt, regularly noted that research is a rhetorical skill. Being able to write a convincing narrative is vitally important. This applied to all types of research. If you know you do not write well, do something about it. Writing is the most important research skill you need. Writing courses are a useful addition to any program of study, regardless of the skill you have as a writer. Those who are not able to write acceptable prose should hire a professional editor.

My advisor also noted that research is a social process. Scientists are obligated to communicate with others about their research. One of the groups with who you must communicate is your dissertation committee.

Relax and Enjoy the Process

Students are often stymied by the idea of a “dissertation.” A dissertation is your best try. It is only a study—what you did, why you did it, what happened, and what you think it means. A good dissertation is creative, and is written in the voice of the author. When you complete your dissertation, you know more about the topic than nearly anyone, so relax and enjoy yourself so others can learn from you. The whole doctoral program process is one of discovery, growth, and exploration, and since your dissertation research is among your first studies, it is unique as most “first time” experiences are. Enjoy every moment of the process (which of course also applies to later research as well!). A PhD allows you to make a difference in your work and continue learning. Finally, it is best to do what you love and love what you do.

Nancy Fahrenwald, PhD, RN, South Dakota State University

Stay Focused

After beginning a doctoral program, it does not take long to discover that there are numerous interesting areas of study. The topics pursued by classmates will at times seem more appealing than the topic you selected. Successfully completing a program requires focus on the breadth and depth of a topic that is relevant to nursing science, is competitive for extramural funding, and has the potential for collaboration across disciplines. Try not to become distracted along the way.

Accept Challenges

Every doctoral student will hear, “You should submit this for publication.” Take the challenge and make it a priority to submit your scholarly work for external peer review in the scientific literature. Publish quality papers that are related to your research focus. This will help you build a strong basis for future research funding.

Select a Strong Dissertation Committee

A doctoral committee is meant to be a team of supportive mentors who can advise you on the most appropriate coursework to prepare for the dissertation research and your future role as a nurse scientist. Choose these committee members wisely. Expect advice and help from seasoned professors with study planning, study implementation, data analysis, and interpretation, and even dissemination of your work.

Pursue Training or Dissertation Grants

The other line that every doctoral student will hear is, “You should apply for funding.” Take the challenge. This is a time when you have a supportive environment to assist you with writing and submitting a strong and competitive proposal for funding. And, if at first you do not succeed, respond to the comments and resubmit. A resubmission is the easiest grant application to write!

Susan Rawl, PhD, RN, FAAN, Indiana University

Congratulations! Pursuing a PhD is one of the most rewarding and challenging career paths that one can choose. For many, this decision involves much more than making a long-term educational commitment. It also involves thoughtful discernment of one’s long-term career goals, selecting the right school, identifying the right mentor, completing the application process, and rearranging one’s life to ensure the availability of adequate time and energy, and financial and social support. Although the list is not exhaustive, some of the best advice I can offer to PhD students is provided below.

Select Your Research Topic Early

First and foremost, it is essential to select your dissertation research topic as early as possible in your program, certainly no later than the end of the first year. Students who are the most “successful” (i.e., efficient and productive)

are those who come into their PhD programs with a clear vision of the research program they wish to develop and understanding that the dissertation is a small part of, but hopefully the launching pad for, their program of research. Knowing what one wants to be “famous for” in 10 years can be extremely helpful. While fame is not a primary goal for most PhD students, the majority do aspire to develop expertise that prepares them to conduct research that generates important new knowledge in a specific area. Therefore, spending some time thinking about life after the PhD is necessary. Answering questions such as “What do I want to be known for someday?” or “In what scientific area do I want to be recognized as the expert?” can help students determine where their passions lie and position them to achieve their career goals.

Work With the Best Mentor You Can Find

Ideally, PhD students choose an experienced scientist who conducts research that is of interest to the student as their mentor. The ideal mentor has content and/or methods expertise that matches the student’s research interests along with an active program of research that will provide hands-on learning opportunities. Students who are willing to match their research interests to the work of their mentor have a significant advantage over students who pursue research that is unrelated to their mentor’s work. PhD students are strongly encouraged to “stand on the shoulders of giants” to build upon or expand their mentor’s existing research program.

Double-Dip in Every Course

Every paper a student writes to meet a PhD course requirement should be directly related to the dissertation research. By making an early decision about the dissertation research topic, students are well positioned to become immersed in the most relevant literature in every course and build sections of the dissertation proposal along the way. By the time coursework is finished, much of the written material (intro, review of the literature, and methods) and expert knowledge needed for the dissertation will be developed.

Full-Time Study

Study full-time and work part-time as a RA on a funded interdisciplinary research team. Clearly, full-time study is not an option for many PhD students who must maintain full-time employment. If possible, however, pursuing full-time study will enable focused attention and shorten time to

graduation. Obtaining real-world experience by working part-time as a member of an interdisciplinary research team will bring science to life for students. Experiential learning helps students understand that conducting research is challenging, exciting, and never perfect.

Publish Along the Way

It has become increasingly common for new PhD graduates to have published several manuscripts. Whether the next step is an academic position, a clinical research position, or a postdoctoral fellowship, having publications in a focused area shows beginning expertise, potential for success, and makes one a more competitive job applicant. During the PhD program, students should look for opportunities to coauthor papers with mentors and consider all papers written to meet course requirements (state-of-the-science papers, conceptual model/theory papers, methods papers) as publishable. Take the time to submit well-written papers to the appropriate journal as soon as possible as most papers are time sensitive; the literature review quickly becomes outdated if submission is delayed. It is helpful to students when schools have dissertation formats that are publication ready. The options for dissertation formats to include publishable papers are increasingly common and serve to jump-start students' publication track records.

Grants

Apply for small grants to support your dissertation research. Just as important as building a track record of success by publishing, obtaining small grants to support your dissertation research demonstrates one's grantsmanship ability and potential for a research career. Perhaps more importantly, they provide funds to offset out-of-pocket expenses to conduct the dissertation research. These funds can be used to help pay for printing, postage, surveys, lab costs, participant incentives, travel to conferences, and so forth. Small grants are typically available from intramural (university, graduate school, and school of nursing) sources. Extramural funding is available to support dissertation research from most professional organizations, including the Midwest Nursing Research Society.

Submit an Individual National Service Award (F31) Application

PhD students who can commit to full-time study and have an experienced research mentor should seriously consider submitting an individual National Research Service Award (F31) application to the National Institute of Nursing

Research (NINR). While writing a competitive F31 fellowship application is challenging, these fellowships provide up to 5 years of financial support for PhD students. Strategies for writing successful applications have been published in this journal (Rawl, 2014). The first step, of course, is to discuss this opportunity with your mentor.

Keep Your Eye on the Ball

The goal is to complete the PhD in a reasonable timeframe, and learning to say “no” to professional opportunities that will interfere with accomplishing that goal is an essential skill. This is often one of the most difficult things for students to master. Students must be careful about what types and how many “opportunities” they agree to during their program. A simple rule to remember: Every time you say “yes” to something, you are saying “no” to completing your PhD program.

Carol Smith, PhD, RN, FAAN, University of Kansas

The career of a researcher includes maintaining rigorous inquiry into nursing problems. The single most useful strategy for seeking experiences in a doctoral program for preparing for a career of inquiry is to determine a problem to study that lies within a sustainable area of research.

Sustainable inquiry encapsulates various challenges or problems within the area of study. For example, many students begin with a goal of studying adaptation of healthy lifestyles, which encompass maintenance of mental, physical, and social health. Within these aspects are numerous researchable challenges, such as management of mental stressors, adherence to appropriate exercise, being able to obtain low-cost, low-sodium foods, and maintaining safety in social environments. It is an important strategy to think through how to narrow each aspect of the problem and determine its potential for research.

The second important strategy is to then find a researcher who has a career conducting research in the student’s long-term area of interest. Ideally, this person would be on the faculty and currently conducting this research. However, retired faculty, others in the same university or other university doctoral faculty, or those who are familiar with or appreciate this area of study can work with students.

The next strategy is to collect the research publications of these faculty members and review the research in students’ selected area. Reading these works will identify the research skills the students must obtain in their doctoral education to sustain their career of inquiry. These skills should be placed

in a checklist and the ultimate strategy throughout the doctoral education is to build these skills. Thus, the student will graduate with a skill set specific to their area, including problem delineation/description; protection of research subjects; diversity and vulnerability of subjects; research design selection and procedures; measurement validity and reliability concerns, data collection, quality control approaches, and appropriate statistical tests and assumptions; data results reporting within known limitations; possible sources of research funding; authorship and grant writing; and research team building. Graduating with these skills and a lifelong area of inquiry allows your career as a researcher to flourish.

Robert Topp, PhD, RN, Marquette University

I am writing to the ubiquitous “doctoral student” intending my advice to be consumed by students currently engaged in their terminal degree of study. My advice is based upon my own experiences as a graduate student, mentoring graduate students through their programs of study, and chairing over 50 dissertation and thesis committees. My advice is also grounded by my successes and failures in working with graduate students. I have three pieces of advice for doctoral students that I have observed, and, if followed, they directly contribute to a successful doctoral education experience.

Finish

The first piece of advice I would like to give you is, “The most important thing you will do in your doctoral program is finish it.” A common challenge many doctoral students exhibit is not keeping their “eye on the prize” when it comes to completing their doctoral program of study. Learning opportunities, scholarly activities, and other interesting pursuits outside of the prearranged program of study are abound for doctoral students. These opportunities include representation on school, university, and professional organization committees, opportunities to guest lecture, coauthoring presentations and publications, work on faculty research, teaching, or service projects. As attractive as these opportunities may be, they commonly do not directly contribute to your academic progress through your doctoral program. My reply to students who have asked me my opinion on their participation in activities outside of their program of study is “Do you have the time to engage in this opportunity and maintain your progress?” or “How will engaging in this opportunity contribute to your progress through your program?” At times I have advised doctoral students who wish to pursue an opportunity beyond their program of study by explaining to them “Every minute you spend

pursuing this activity is one minute longer you'll spend completing your program of study and one minute by which your graduation will be delayed."

Learn What You Need for Your Next Position

The second piece of advice I am offering is to imagine your future employment position following graduation with your doctoral degree and to identify the skills you will need to be successful in that position. Once you have identified these skills, obtain experience practicing these skills, using the resources within the university while still in your doctoral program. For example, if you imagine your future employment to be a faculty position at a research intensive institution, then you need to obtain practical experience working with a successful faculty member at a research intensive institution. This experience needs to be directed at obtaining specific skills that contribute to the faculty's success. These skills may include time management, writing, leadership, delegation, authorship and coauthorship, and goal setting.

My third piece of advice may appear to contradict my first piece of advice which is a phenomenon not uncommonly experienced by my doctoral students. Allow me to reconcile these two pieces of advice. Adhering to these two pieces of advice can be realized by selectively engaging in learning opportunities that contribute to completing your program of study while providing you with the experience and skills you will need to be successful in your future employment. For example, you may be able to obtain practical experience working with a successful faculty at a different institution by completing a practicum experience for credit toward your program of study. Another opportunity is to obtain an appointment as a teaching assistant with a master teacher if your future employment ambitions include teaching. This opportunity not only provides you with the necessary experience for your future employment but also supports you progression through your program of study by providing a stipend and tuition remission as benefits of the position.

Always Remember the Most Important Things in Your Life

Doctoral study can be an all-consuming vocation in which I have observed that some students sacrifice their mental, physical, social, and spiritual health. While in doctoral studies, as well as throughout your life, you need to clearly identify what is important to you. I commonly ask doctoral students "What is the most important thing in your life?" hoping their answer will provide them with some clarity regarding their personal priorities and where doctoral studies fit within those priorities. When my insightful

doctoral students ask me this same question, my answer is “Being happy is the most important thing in my life. If I’m doing something that doesn’t contribute to my overall happiness I really need to search for a good reason why I’m doing it.” In answering this simple question, you are forced to place in perspective your doctoral studies with all of the other activities in your life. This prioritization *will not* remain static over your entire doctoral program. In fact, realizing that your personal priorities change with time is an important developmental milestone for being successful. Thus, I believe this final piece of advice is the most important of the three. Frequently identifying, prioritizing, and working toward what is important to you will contribute to your overall success as a doctoral student, but more importantly your success as the person you want to be.

Vicki Conn, PhD, RN, FAAN, University of Missouri

Although getting the PhD may appear to be an endpoint, it is really the jumping-off point of one’s future career. With this in mind, students and their faculty mentors should initiate their work together by identifying goals for the doctoral experience that take into account the student’s career plans. Planning should go beyond the more immediate objective of completing requirements for the PhD program to identify the specific types of education and training that will increase the likelihood of success in that first job out of the graduate school.

Once goals are identified, students should work on acquiring skills that will permit accomplishment of both short- and long-term goals. One skill is learning to see opportunities in required educational activities. For example, with some foresight and planning, it may be possible to convert a course paper into a publishable manuscript. The doctoral program is also the ideal setting in which to hone time management skills (Chase et al., 2013). Setting deadlines for accomplishing goals and completing tasks during the course of the dissertation research will help facilitate research productivity throughout the course of the subsequent career.

The central focus of doctoral education is learning how to conduct research: framing significant and feasible research questions; selecting measures; determining subject eligibility; securing subjects; designing and delivering interventions; collecting and managing data; and interpreting results. But what is just as important is acquiring project management skills in order to bring research activities to completion in the form of publications. Besides time management, another important project management skill is learning how to handle unforeseen or unexpected events that can impede or even stall project progress. Examples include sudden loss of a key staff member or

unexpectedly high subject attrition rates. Although formal coursework may provide students with information on how to handle such events, this skill is best acquired through first-hand experiences in a real-life project setting. Participating in a research practicum, working as a RA, or volunteering on a faculty research project can provide valuable experiences that prepare students for handling problems that will inevitably crop up during their dissertation research or research projects they supervise after they graduate. Students who limit their doctoral education to required coursework and their own dissertation research will miss out on incredible opportunities to develop project management skills that will be necessary for subsequent career success.

Making connections is another important component of doctoral education. Students should search for linkages among content and methods in coursework. Discovering relationships between course experiences and the proposed dissertation research can add depth to the work or even take it in a fresh direction. Connections with people are also important. Connections with mentors, committee members, research collaborators, and fellow PhD students will enrich the doctoral experience and be the basis for a growing network of colleagues after graduation. Doctoral students should make attendance at nursing- and research area-specific conferences a priority, as meetings offer incredible opportunities not only to hear the latest research but also to connect with the experts in their fields.

During the course of their education, PhD students tend to develop behaviors that persist long after the degree is granted. Those who learn the good habits of goal setting, problem solving, time management, and networking will be the ones who will be more likely to experience ongoing professional success. Through careful initial planning and by fully availing themselves of the diverse opportunities available during graduate school, nursing PhDs will be well prepared to take on the challenges of contributing to the scientific knowledge base, educating future nurses, and leading the way to improved health care.

Summary

The purpose of doctoral education is to transform students into independently functioning scientists able to juggle the multiple responsibilities of an academic career, including research, teaching, mentoring, committee work, grant writing, and publication. This paper delineates a number of strategies that individuals can employ to facilitate their metamorphosis from students to scholars.

Important initial activities are finding an experienced mentor with compatible research interests and working with that mentor to develop an educational plan that takes into consideration a student's long-term career goals. Selection of

dissertation committee members should be made with as much care as choice of a mentor. Reading journal articles is another activity that students must undertake as soon as possible in order to develop a mastery of the literature. Students should make every effort to develop their writing skills by preparing grant proposals and manuscripts for publication. Graduate students can learn research project management skills by assisting faculty members with their research, and they can develop leadership capabilities by serving on committees of professional or community organizations. Attending research conferences provides students with the opportunity to develop working relationships with experts in the field. In this way, students will begin to build a network of colleagues with whom they can consult and collaborate over the course of their careers.

Perhaps the most critical skills to acquire during graduate school are those of time management, the ability to manage multiple activities, and the capacity to set priorities. Apart from helping students complete their doctoral programs within a reasonable time frame, these are skills students will use in managing multiple responsibilities for the rest of their professional lives.

With its unpredictable pattern of successes interspersed with frustrating setbacks, doctoral education can be a bumpy road, but employing the strategies outlined in this paper can make for a smoother ride overall. Students will be more likely to persevere to complete their PhDs, and they will come out of their doctoral experience well equipped to begin a productive career in nursing research.

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