

Doctoral Nursing Education in Taiwan

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Introduction

Taiwan started its first doctoral nursing program in 1997 at the School of Nursing, College of Medicine, National Taiwan University. At present, there are nine doctoral programs that recruit nursing students with a variety of research interests in nursing; of the total number, five programs are under the auspices of schools of nursing (Table 1, programs A to E); three programs are under the auspices of schools of clinical medicine, public health, or medical science (programs G to I), and one program jointly offered collaboratively by faculties of physical therapy, nursing, occupational therapy and clinical psychology (program F). The doctor of philosophy (PhD) degree is awarded in all programs, reflecting that these programs are research-focused. Currently, no professional nursing doctorates are awarded in Taiwan. More than half of the student population are faculty members in colleges or universities, serving as lecturers or clinical preceptors. Most of these individuals plan to return to their positions upon graduation. Some of the students hold positions as administrators at teaching medical centers.

This paper describes curriculum patterns of nursing doctoral programs, and discusses issues and challenges faced by nursing doctoral education in Taiwan based on the quality criteria suggested by AACN¹ and Kim, McKenna & Ketefian² which include qualified faculty and academic leadership, qualified

students, sufficient resources, as well as a comprehensive, systematic, and ongoing evaluation plan.

Curriculum of Nursing Doctoral Education

We compared the objectives and curricula listed by the five free-standing nursing doctoral programs (programs A to E in Table 1). Four objectives could be identified as commonly shared, including: developing student's competencies of academic scholarship, leadership/policy-making, cross-cultural and international perspectives, and teaching, although this last was reflected in only a few of the schools' materials³⁻⁷. These programs required coursework ranging 10 to 27 semester credits of core courses, nine to 21 credits of cognate courses, and 12 credits for dissertation work. In total, students have to fulfill 43 to 48 credits before they complete their PhD program of study. To build students' competence on academic scholarship and critical analysis, all programs required the course of philosophy of science and/or theory development, research methodology and statistics. All students have to conduct and complete a research project to fulfill the requirement of dissertation. The credits earned from research-related courses or experiences account for about half to two thirds of the total credits. All five programs have set progression and graduation indicators that need to be fulfilled to meet degree requirements (Table 1).

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Table 1. Comparison of characteristics of doctoral nursing programs and nursing-related doctoral programs in Taiwan

| | Independent nursing program | | | | | Joint | Under doctoral program of other health disciplines | | | | Notes |
|--|-----------------------------|----------------|----------------|----------------|-------------------|-------------|--|-----------------------------|---------------------------|---|--|
| | A (Nursing) | B (Nursing) | C (Nursing) | D (Nursing) | E (Nursing) | | F (PT*, OT*, Nursing & CP*) | G (Clinical Medicine) | H (Medical Science) | I (Public Health) | |
| Doctoral program set in School of | | | | | | | | | | | *PT: Physical Therapy, OT: Occupational Therapy, CP: Clinical Psychology |
| Program since Course requirement (Credits) | 1997 18 | 2003 10 | 2005 21 | 2001 27 | 2006*(2001) 22 | 2003 19* | 2003 18* | 2008 19* | 2011 6* | *Joint program between 2001-2006 Core courses including philosophy of science, theory development, nursing theories, research methods, leadership, health policy analysis, curriculum development. | |
| Cognate courses | 18 | 21 | 15 | 9 | 12 | 9*/6 | 6*/6 | 3*/3 | 13* | Cognate including statistics, courses related to student's study subjects *credits received from nursing courses | |
| Dissertation | | | | | | | | | | | |
| Objectives of PhD program: | | | | | | | | | | | |
| Academic Research | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | | |
| Leadership/policy making | V | V | V | V | V | V | V | V | V | "V" indicates the item of objective or work is required in that program. | |
| Cross-cultural, international perspective | V | V | V | V | V | V | V | V | V | | |
| Teaching | | | V | | | V | | | | | |
| Progression indicators: | | | | | | | | | | | |
| 1. Pass qualifying Exam | V | V | V | V | V | V | V | V | V | | |
| 2. Study abroad (Optional) | 6 mo | 6 mo | | 6 mo | | | 6 mo | | | 6 mo. =6 months | |
| Graduation indicators: | | | | | | | | | | | |
| 1. Original article published in SCI/SSCI journals | 1 | 1 | | 1(1) | 1 | 2 | 1(1) | 2 | 2 | Number in parenthesis indicating one more article is required if the student not study abroad | |
| 2. Scholarly presentation in international conference | 1 | | | 1 | 1 | 1 | | | | | |
| 3. Dissertation (public presentation) | V | V | V | V | V | V | V | V | V | | |
| Minimum study years to graduation | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | Full time student after master's program | |
| Doctorally prepared nursing faculty members (2012) | 22 | 19 | 33 | 23 | 24 | 16 | | 2 | 12 | These faculty have responsibilities for teaching in MS and BS programs as well | |
| Number of first-year students enrolled in 2011 | 8 | 11 | 12 | 10 | 8 | 8(2) | 35(8) | 7(2) | 8(2) | Number in parenthesis indicating the number of nursing students in the program | |
| All nursing doctoral students graduated by 2011 | 31 | 9 | 6 | 15 | 15 | 3* | 10* | ? | 0* | *Include only nursing | |

All data abstracted from Proceeding of Forum for Doctoral Nursing Programs in Taiwan, 2011 (see Chen, 2011 reference).

In order to foster the competency in leadership, one to two required courses (2 to 4 credits) in policy and leadership are available. Courses in pedagogy are offered to ensure the students' competence in teaching. For competence in cross-cultural and international perspectives, studying abroad for 6 months has been the requirement to meet this objective. The high proportion of research related courses such as research methodologies, research seminars in the doctoral curriculum are indicative of the research-oriented program designs that exist in the country.

Accreditation of Nursing Doctoral Education

Prior to 2006, university accreditation that assessed all disciplines had been conducted by the Higher Education Evaluation and Accreditation Council of Taiwan (HEEACT), an organization funded by the Ministry of Education. In order to facilitate an integration of goal, objectives, curriculum design for different levels of nursing education and to improve the quality of nursing education, Taiwan Nursing Accreditation Council (TNAC) was established in June, 2006 with the support of the Ministry of Education⁸. The objectives of doctoral nursing education listed by TNAC are to prepare nurse scholars to conduct nursing research independently, to generate nursing knowledge, and to contribute to the advancement of the nursing discipline and quality health care. The PhD graduates are expected to have insightful vision and leadership ability to lead the nursing profession for continuous development nationally and internationally⁹. Nursing programs receive an assessment every six years. Only the five independent nursing doctoral programs are included in the first cycle of the accreditation evaluation of TNAC. In addition to the TNAC accreditation, one of the author's university has additional self-initiated discipline-specific accreditation whereby national and international scholars from prestigious universities are invited to conduct an assessment once every five years.

National and International Networks

To facilitate students' international competence, four programs have developed 6- month programs of study abroad that can be substituted by other scholarly work such as writing an additional manuscript for publication. To demonstrate research competency, students in all programs except one have to publish at least one peer-reviewed original paper in journals that are listed by Science Citation Index (SCI) or Social Science Citation Index (SSCI). Four programs require students to present their scholarly work at an international conference.

The East Asian Forum of Nursing Scholars (EAFONS) has been the significant platform for exchanges between doctoral programs in Taiwan and programs in other Asian countries and convenes each year in a host doctoral program. The International Network for Doctoral Education in Nursing¹⁰ has been an important resource in nursing doctoral education internationally, and EAFONS was developed as a regional off-shoot of INDEN. Doctoral students are encouraged to attend its biennial conferences.

International doctoral programs from English-speaking countries, especially USA, UK and Australia are preferable for collaboration for student experiences to meet requirements established by some doctoral programs in Taiwan. The collaboration mainly consists of mentoring on a research project by a faculty member in the host institution. In order to expose doctoral students to global scholarly activities, scholars of high repute from these institutions may be invited to Taiwan; while few faculty members in Taiwan conduct collaborative research projects with these partner institutions, the opportunity to send our students for research experiences opens wider avenues for continued collaboration between students upon graduation and their mentors overseas; further, opportunities open up for faculty to faculty collaboration between Taiwan and international schools.

Challenges and Future Directions

Lack of funding for pre-doctoral scholarships is the most significant challenges for doctoral education in Taiwan. The financial burden causes doctoral students to study part-time while working full-time. These constraints significantly limit students' learning capacity, and their full engagement, and minimize their participation in academic exchange opportunities. As a result, inadequate opportunities for students to become involved in research projects of senior faculty such as in research proposal writing and project management have been noted. The overall shrinking research funding in recent years has been observed while reportedly less than 50% of submitted grants to the National Science Council (which is the main funding support for academia) were funded; the proportion of grants funded has decreased annually, as Taiwan has experienced economic down-turns. Thus, the opportunities for students to partake in research projects are reduced. Another issue of concern has been that institutional support such as the establishment of a research center or an appointed research director has not become a reality in any of the nursing doctoral programs in the country. These programs need to compete with other stronger disciplines and departments on university campuses for a variety of resources such as statistical consultation, funding for research, or support post-doctoral training. As a result, students' competence as independent research scholars may be greatly compromised. The study by Polit and Beck¹¹ which analyzed published papers in eight international nursing journals during 2005-2006 indicated that the characteristics of research from Taiwan tend to be quantitative in nature and focused more on evaluation of interventions. Based on these authors' work and analysis of their own data, Ketefian and Dai¹² concluded the presence of "a strong cadre of researchers in Taiwan who are conscious of the need to publish in international publications" (p. 195). Despite these positives, the authors of this current

paper are concerned about the lack of diversity in terms of types of research methodology to foster comprehensive scope of research interests; there is also a need to enhance quality of nursing practices, which means attention to translating research findings to improve practice. In addition, funding for pre-doctoral and post-doctoral scholarships is a compelling need to enable graduates to attain excellence while developing programs of research.

The above constraints also mean that there are limited opportunities for junior faculty to become involved in policy-making at various levels of government; this in turn may diminish the faculty's ability to nurture student's competency in leadership in the policy domain. Most of the nursing doctoral programs have not yet developed a good mechanism for mentoring junior faculty to transform into competent members for doctoral education. The heavy emphasis that university administrators place on SCI and SSCI publications; favoring such venues with high impact factors has meant that faculty members are unwilling to devote significant time to teaching, professional and community service¹², further limiting the faculty's ability to expose their students to valuable educational and other leadership experiences. The requirements of presentations at international conferences and internships at English-speaking doctoral programs, while of value by themselves, pose challenges to knowledge production by nursing doctoral students that have local and culturally specific focus on Taiwan. It is crucial to incorporate into one of the program objectives the identification of the trends of health and health care system in Taiwan in order to reflect the directions for nursing knowledge development.

Nursing doctoral programs in Taiwan have had a relatively short time during which experience could be gained for a definitive assessment of various factors critical to quality at this level of education. These include identification of factors that affect the quality of mentoring doctoral students, optimal student/

faculty ratios, intensity of interaction that is optimal, sufficiency and type of resources, among others. Absence of a platform to dialogue about program objectives, faculty preparation and ongoing faculty development, resource requirements, ongoing evaluation systems for doctoral programs are among the challenges facing doctoral education in Taiwan. A first meeting on nursing doctoral education to share current status was held in 2011, 10 years after the establishment of the first doctoral program. The establishment of consensual platform is needed to identify quality criteria for doctoral nursing education specific to Taiwan.

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