Doctoral Nursing Education in Asia; Current Challenges and Future Directions: A Synthesis

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The editors designed this supplement to assess the state of doctoral education in the Asian region, mostly concerned with research-focused doctorates. Four countries participated: Japan, Korea, Taiwan, Thailand, although more were asked to participate. The editors and guest editor developed a general outline identifying topics to be covered; they further identified several nurse scholars from each country from different institutions to author a chapter on doctoral education in their country. The goal was to assure that authors did not succumb to the temptation of describing their own institutions, but rather, took a national perspective, and considered the broad picture in the country. In one instance, while two individuals were invited to serve as co-author, we have one author; this was due to a technical problem that was not discovered till it was too late in the process. The problem was that the second author never received our invitation. By the time the problem became apparent to us, the chapter was already prepared by the one author.

The outline suggested to the authors was as follows:

1. Provide a broad picture of doctoral education in the country. Involves an overview of doctoral programs, including some statistical information on number of programs, overall number of students, faculty, current status; model of doctoral education in use and areas of nursing science offered.

2. Any national or broader networks used to support and network with within the country or internationally; how such networks are used and what their impact may be.

3. Types of collaboration in place with institutions in other countries, and what their focus is; the extent to which faculty and/or doctoral student exchanges occur.

4. Marketplace for doctorally prepared nurses in the country.

5. Some challenges facing doctoral education in your country, such as funding issues, faculty shortages, research supervision and mentorship issues, extent to which emerging research is incorporated in the doctoral curriculum, the development of global standards for the program, others?

6. Future directions: what is the desired future for doctoral education in the country, in terms of education, programmatic directions, research, other?

Thus, it was not our intent to present an exhaustive coverage of doctoral education in the region, but rather, to describe a broad picture and emerging directions, engage in some comparative analyses, where feasible, and to make recommendations.

In this chapter, for each area listed above, we briefly summarize the authors' stated position for each country, occasionally preceded by or followed by comments of our own. At the end, items 5 and 6 above are treated together, for which we provide more

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extensive commentary and recommendations, at times addressing more than one issue at the same time, in an integrated manner. In view of how pervasive concerns on quality monitoring and evaluation were, we have devoted sections to that topic. Given this author's familiarity with international doctoral education, it was necessary to occasionally draw on that knowledge of the settings.

Demographics of Doctoral Education

All countries reported a recent and dramatic increase in doctoral education, as can be seen in the brief descriptions below.

Japan. This country developed its first doctoral program in 1988, and in 2010, the last year for which national data were available, it had 61 programs. Organizationally, some are independent entities or departments, whereas others are integrated in existing departments in health fields. The increase in doctoral education is consistent with the dramatic expansions that occurred in undergraduate and master's education in all prefectures. At the master's level students choose between advanced practitioner or researcher preparation. Those with researcher preparation can enter the master's program for clinical practitioner and become educators. Those with either type of master's degree can apply and pursue the doctorate.

Korea. The first nursing doctoral program opened in 1978, which stood at 32 programs in 2010. Given their "newness," 12 of the programs have not yet yielded any graduates. The remaining 20 doctoral programs have collectively yielded 474 graduates to date. This number does not take into account individuals who may have obtained their degrees internationally, or those who studied in Korea but now work elsewhere. Students enter doctoral study following a master's degree. The majority of students are enrolled in part-time study. Doctoral programs typically reside within nursing units in colleges or universities [these units may be schools or colleges of nursing, most of which also offer undergraduate and/or master's degrees].

Taiwan. Taiwan began its first nursing doctoral program in 1997, and currently nine institutions offer doctoral degrees. Organizationally, five of these are within nursing units, the remaining are within other health science programs and are collaboratively offered with other disciplines. All entering students must have master's degrees. More than half nursing doctoral students hold faculty positions; others hold supervisory positions in health care facilities. Most of the students study part-time and return to their posts upon graduation.

Thailand. In 1984 Thailand began offering a doctor of public health nursing. With the aim of preparing nursing faculty within the discipline, a collaborative nursing doctoral program was offered with support from the government. This program ran between 1990 to 1998, with four participating schools, and the degree offered was the doctor of nursing science (DNS). The program was closed after graduating 47 students; all participating institutions have subsequently developed their own PhD program (except for two nursing entities within Mahidol University, which collaboratively developed one PhD program that continues to this day). The main aim of the publicly supported doctoral programs has been to prepare nursing faculty to allay the nursing shortage experienced by the country. The government approved over 331 scholarships for overseas study in the 1990s. However, due to the financial crisis that enveloped the country, only 140 scholarships could be funded. To compensate for this situation, two of the prominent Thai universities were funded to develop collaborative relationships with leading doctorate-granting international institutions. The focus is for students to obtain a variety of research experiences to develop various aspects of their dissertation research. There are currently six publicly supported universities that offer doctoral study. All admitted students should have a master's degree in the field.

Three of the countries experienced rapid expansion in doctoral education, with the exception of Thailand, which did not increase the number of programs, but did take steps to increase the number of nurses graduating with the credential. Thus, all countries were motivated by the incentive to increase the number of nursing faculty so that more nurses could be educated to meet the countries' need, and in all cases students entered doctoral study following the award of a master's degree. Comments made about the students suggest that many are studying part-time. Those who study full-time, especially in the case of Thailand, tend to be on leave from their positions, with the obligation to return to their job upon graduation. However, it is not clear if this meant that they were placed in the same position rather than being given responsibilities that are commensurate with their new credentials.

Program Objectives and Curricular Focus

It is of interest to note that in most cases authors did not specifically address the substantive areas of study within the curricula. Research courses and experiences are givens, but graduate education is intended to enable individuals to achieve specialization in a chosen area of the discipline. In addition, doctoral study prepares students for scholarly pursuits and for leadership roles in health and other enterprises in society. Many authors indicated that one of the program goals was to prepare students for faculty positions. To what extent content specific to this goal was included in the curriculum was not clear. During the program students are assigned to advisors with expertise in the areas of focus offered in the doctoral program. In this manner, the student becomes engaged in the advisor's research acquiring research and substantive skills, by developing her/his own dissertation in a related area, and obtaining experience under the supervision of the advisor/mentor. This is understood to be the ideal, but the extent to which this is the case in the real world seems to have been compromised due to the heavy part-time study preference of students. As well, this may also be due to the fact that program areas offered were too general, and too many. This raises the question of whether it is possible to find faculty experts to guide the students in all the areas within any one institution.

The following are summaries for each of the four countries regarding curricular elements.

Japan. Curricular focus can be chosen from a broad range offered. Examples were given: adult nursing, chronic illness, community health, health concerns related to living in the community. As to research methods in use, a mix of qualitative and quantitative designs were identified, such as development of measures, creating nursing care programs, randomized control trials. Students work mainly with assigned advisors to develop their research, and can access graduate level courses available in the institution, mostly those developed and available for master's level students.

Korea. Authors based their paper on their survey results from the 20 doctoral programs that were producing at least one graduate per year. All programs require varying number of credits for course work, and all require a dissertation. All programs are research focused. The courses are categorized in groups, as can be seen in Table 1 of Park, Kim and Lee's paper. Some of the required and elective courses are common to both master's and doctoral students. Students are urged to obtain research experiences by working on their advisors' research teams.

Taiwan. There are curriculum plan similarities across institutions, as can be seen in Table 1 of the paper by Lu and Dai. A set of courses pertain to theory- and conceptual framework development, some that pertain to research designs and methods, some to leadership and health policy. Students may take cognate courses in other disciplines related to their research, this is especially the case in programs that are embedded in other departments.

Thailand. Ministry of education and university regulations provide for the award of the doctoral degree via the "dissertation research only" option (as is common in Europe and Australia), or dissertation plus coursework, with 16 credits of coursework and the dissertation carrying an additional number of credits. The nursing schools offering the PhD in nursing require the second option (coursework and dissertation). There is no specified area of focus institutions offer; instead, students focus on their own research interests in selecting dissertation topics. The authors believe that in general the students' focus on one of three areas: Prevention and management of chronic conditions, health promotion, health system/nursing systems.

National/International Networks and Collaboration

Japan. Japan is a member of the East Asian Forum of Nursing Scholars (EAFONS) network; faculty and doctoral students from these countries convene annually to present their research and hold discussion on issues of interest to members.

Korea. Various forms of exchange relationships exist both within the country, as well as internationally. Relationships and types of collaboration vary, and involve faculty and student exchanges, long- and short-term training and study periods. Most countries with which the schools have relationships are in Asia, with the exception of the United States. Korea is also a member of EAFONS.

Taiwan. Many schools now require some form of international research experience for doctoral students; thus, students receive supervision of their research or hands-on research experience from international faculty. These types of placements open opportunities for faculty members to collaborate across borders; as well, in many instances students continue to work with these same international faculty upon graduation. Faculty and students are active in EAFONS.

Thailand. As in the preceding countries, Thailand is active in EAFONS and provides support to its faculty and students to attend the meetings. As well, Thailand has made a major commitment to international education and collaboration. Students are supported for overseas study for training that is generally research oriented, either by way of hands-on research, study by way of course-work and exposure to different educational programs and systems, lasting about eight months. Students also develop research proposals under international faculty supervision, who are then invited to serve on dissertation committees of the students; this subsequently leads to collaborative relationships across institutions upon the student's graduation.

The Marketplace for Nursing Doctoral Graduates

Japan. Most doctoral graduates assume teaching positions. A minority of them take nursing service positions.

Korea. Eighty percent of graduates go into teaching in research-focused institutions where they combine teaching and research; 12% assume positions with research as the major responsibility; seven percent assume clinical positions, combining clinical leadership and research.

Taiwan. Students return to their positions as faculty or supervisor/nursing director in health care institutions.

Thailand. Most PhD students are on leave from their teaching positions and return to them following graduation.

Program Features and the Marketplace

A clear tendency is evident on the part of institutions to gear students to go into teaching in order to meet country needs for nurses. It further appears that most students begin doctoral study on leave from their positions, and are obligated to return upon graduation. This may be limiting for new graduates, and may not make use of new competencies

acquired during doctoral study. It also shows an emphasis on quantity; it is not evident that there is a commensurate emphasis on quality and diversity of students' experiences or the quality of research (both that of students and faculty), in terms of conceptual or methodologic strength or in terms of selection of research topics that the country may need. The issue of quality has been identified as a concern by most of the authors, but it is not clear what is being done about it. Several steps are recommended for consideration:

a) Schools need to specify a select number of research priorities in which their faculty has expertise, and admit only those students who are interested in those topics. If carefully developed, these priorities should reflect the areas of knowledge the country urgently needs to have to improve care and its systems of care.

b) Require that only faculty members who are active researchers mentor doctoral students from admission through graduation.

c) Reduce the number of admitted students each year, if necessary, and require that all students begin working with their faculty advisors on research from the very beginning, in an internship for specified number of hours per week. In some cases, the student numbers may need to be increased in order to have a group that can have meaningful dialogue in the classroom. If full-time study is not feasible, develop and implement timetables for both full-time and part-time study so that students do not take an unnecessarily long time to graduate. Once policies are established about internships, it is the student's responsibility to arrange other commitments to find time to do this. Whether or not formal credit is assigned for this type of experience depends on institutional policies. However, assigning credit makes it a legally binding formal requirement.

d) Develop a plan to orient junior faculty to research supervision and other mentorship activities so that they gradually learn the process.

e) Open opportunities for postdoctoral research training in the more experienced faculties, beginning with a small number. These can even begin by partnering with other related disciplines on a campus and working with a colleague in another field to co-mentor a postdoctoral fellow in an area of urgent national need. An example of this can be found from the Horiuchi paper where she identifies issues related to the care and living arrangements of the elderly and caregiver needs. Multiple disciplines could be found with interest in such topics.

These strategies, while not easy to implement, will enable a better match between faculty advisors and students, hone students' skills in research, become socialized early in the values of science and of the profession, and learn that having personal interest in a topic has no value by itself if society cannot benefit from its outcome. These strategies collectively may balance long-term and short-term goals; they will also increase faculty productivity, since they will have a team of students and junior colleagues working with them, so that while the junior individuals learn they at the same time participate in scholarship by conducting research, co-authoring articles and grant proposals.

From comments of some authors it appears evident that in an effort to meet country needs for educating more nurses, doctoral programs may be overproducing graduates of questionable quality, and some programs are running without sufficient number of students, or taking very long to complete the program. The above strategies can help tighten the operations and make programs more productive by helping close those with insufficient students or faculty, or those who do not meet criteria for high quality. Thus, the issue of optimal number is difficult to generalize as it will vary across settings. Some will need to increase their student number so they can become more efficient, and to create a scholarly community for dialogue; while others may need to reduce their student number in order to achieve a better teacher-student ratio and improve quality.

In most cases graduates of doctoral programs appear to return to their teaching or supervisory positions. This expectation does not allow any freedom for graduates to look far and wide to determine where else they might make a contribution in the broader society, and also, does not educate the marketplace about the breadth and depth of preparation these graduates receive, or the intellectual competencies they develop. Redman and Chenoweth[1] have provided an analysis of the dynamics in the marketplace and opportunities for PhD graduates (see Note 1).

Current Challenges and Future Needs

Japan. Numerous challenges are identified as a result of major demographic shifts, with 25% of the population being 65 years and older, and changes in science and technology. These include: the need to learn different skills; generate research on disease prevention, acute and palliative care for the elderly; and address the challenges that patients and their families face to make care for the elderly more effective, and lessen the stress of caregivers.

The author addresses the gap between research evidence and its translation, and advocates evidence-based practice [EBP], highlighting the need for guideline development based on research-based evidence. Funding students' dissertation research is a major need, as well as the importance of teaching students the skills of grantsmanship. The author identifies two national tasks: the first is creation of a third party, objective evaluation system; such a system and criteria have been set up, to audit and evaluate programs every 7 years, but indicates that they are not specific to nursing. The second task mentioned is improvement in the quality of dissertations. Also, the author expresses concern that both dissertations and published articles are in Japanese, which makes the scholarship inaccessible to the wider world. She advocates the use of the English language for scholarly writing, which, in her view - as well as the view of many others - has become the language of science. She discusses the importance of cross-cultural comparison of scientific works, and the need to improve the quality of dissertations and scientific publications.

The author identifies the need for creating and funding postdoctoral positions for new graduates, and the need to expand continuing research and opportunities for its conduct and funding, introducing the concept of sabbatical leaves for faculty. She expresses concern about the fact that most teaching occurs from textbooks, which do not reflect new and up-to-date knowledge. She believes nursing education needs to accelerate globalization, and its quality improved, with the key being high quality doctoral education.

Korea. The following challenges are identified: faculty shortage and aging of faculty both of which are exacerbated by the rapid expansion of nursing education generally and doctoral education specifically. A long-term challenge identified is the overproduction of doctorally prepared faculty with low quality. In the area of students, mention is made of the preponderance of part-time students and lack of full-time students which has meant that students are not available to work with senior faculty on their research to obtain valuable experiences; the impact on the faculty is that they are unable to obtain sufficient help to move their research forward. Lack of fluency in the English language was also identified as a challenge for both faculty and students; greater facility in the language would enable them to study and stay up-to-date on emerging literature, as well as to be able to publish in English with greater ease.

The authors state that the rapid increase in doctoral programs did not consider the ability of the marketplace to absorb the graduates. The system needs accreditation bodies to evaluate nursing doctoral programs in the country; such a process will assure high quality students, faculty and adequate resources. The authors also advocate greater diversity in program goals and areas of study offered, viewed from a

national perspective, to meet the needs of a dynamic and rapidly changing society.

Taiwan. The following challenges were identified by the authors of the Taiwan paper: pre-doctoral and postdoctoral level training are not adequate; attention needs to be paid to faculty development, especially for those who are junior; heavy emphasis by university administrations on publication in high impact factor journals has meant that faculty focus their energies on this requirement to attain promotion and remuneration, and do not pay sufficient attention to their teaching and service responsibilities. The country has too many part-time doctoral students that both limit the quality of their experience, and limit the faculty's ability to locate student assistants for their research. Further, there is a need for research-based knowledge on the quality of mentorship, the optimal student-faculty ratio, resource needs for doctoral programs, and a host of other areas. The country also needs a platform to enable collegial dialogue on experiences with colleagues across the country for mutual sharing that can also serve a national coordinating function on program features.

Thailand. Authors identified shortage of qualified faculty, especially for research supervision and teaching in the doctoral program. The Thai Nursing Council requires that faculty hold the rank of associate professor at the minimum to carry these critical functions in the doctoral programs. Whereas, the situation that prevails now is that some senior faculty are retired or retiring, while others are too new to qualify for associate professor rank. It is estimated that within 10 years 51% of faculty who are now active in teaching and research supervision will retire when they reach age 60. Another issue, also faculty related, is the insufficient scholarly engagement of faculty, with research and resultant publications in peer reviewed journals (both nationally and internationally) being very low (in quantity). The authors also indicate the need to enhance the quality of dissertations and pay attention to selection of topics in order to assure that the outcome of research, both in quality and substance, have relevance to health problems of the country and can guide policy within the country. Most students are full-time and technically have the opportunity to work with faculty on research to obtain valuable experiences, but this does not seem to happen, due to lack of sufficient research funds. The institutions can get around this constraint by establishing research internship requirements whereby each student must work with a faculty member for scholarly experiences; they can rotate between several faculty members during their study period if indicated, to experience different types of research.

Future Directions and Recommendations

In this section we address areas of concern that were reflected by the authors, providing some directions for consideration. However, it is well-nigh impossible to give due attention to all the concerns that were mentioned.

Impact and Quality

Concern was expressed about quality by all authors, explicitly or implicitly. Quality elements mentioned related to inadequate faculty qualifications and insufficient numbers, lack of diversity in areas of study offered, viewed from a national perspective, and teaching approaches that do not focus on critical thinking and analysis, and reliance on textbooks rather than scientific journals that carry more up-to-date research reports. As well, quality has many elements, some of which are objectively expressed in the INDEN international quality criteria, standards and indicators (see for example http://www.nursing.jhu.edu/inden); others relate to ways in which other components in the education process impact on quality. These factors influence whether the products of research (the graduates) are having an impact on policy and on care of patients or populations. An example of this is the extent to which choice of topic for research on the part of faculty and doctoral

students can affect quality and its perception; if the research being conducted is on topics that are viewed as inconsequential, or the approaches chosen, or analytic techniques employed are simplistic, even if technically accurate, the work would be viewed as inconsequential and as not being "impactful." Similarly, lack of diversity in program goals, objectives and content, viewed nationally, or lack of diversity, intellectually and in other ways, in the student body or among the faculty, are matters that affect quality of the students' preparation, as surely as factors such as faculty qualification, their mentorship of students, or the absence of critical library or technological resources.

Regarding program content, the authors of the Korea paper identify the similarities that exist across the country in the curricular foci of study offered. Further questions need to be raised as to whether medically organized specialty areas of study are appropriate for PhD level study, where students should be investigating relevant phenomena of interest to nursing to advance disciplinary knowledge and improve patient care. It is unfortunate that this type of organization which has been common in nursing historically, has been difficult to dislodge and to introduce innovative and creative ways of examining practice and identifying phenomena that nurses deal with.

Faculty workloads. Despite resource constraints mentioned, it was evident that inefficiencies existed within systems. For example, work overload, whereby faculty were expected to teach students at all levels of study, or evidence that there were limited number of doctoral students per program, or the number graduating per year were few (or none) in a number of schools, indicating inefficient use of faculty. Faculty is the most important and expensive resource on a university campus and they have to be used with efficiency; deploying them in the best and economical manner is a critical role of academic leaders and administrators.

Institutions need to review faculty workloads and their overall responsibilities to find ways of making their workloads such that there is room for them to conduct research and develop research programs of significance to their country. Those faculties who are not engaged in research might be assigned to heavier teaching to allow those who are interested and qualified to engage in scholarship to do so along with a lighter teaching load. Further, those who do not have the inclination to do scholarship might be assigned to undergraduate students.

In one case, that of Thailand, where there is an initiative under way to offer a practice-oriented doctorate, from an outsider's perspective, it is difficult to justify such an initiative given the existing faculty shortage, heavy faculty work-loads, and the scarcity of faculty scholarship.

Translational research. It has long been recognized that findings from one research study are not ready to be applied; rather, we need replications, many studies addressing the same questions in different populations and different settings, and meta-analytic studies that summarize and distill the collective results of many studies before it can be determined whether and exactly what findings, can be applied, and become incorporated into daily practice. Translational research is gaining prominence and momentum in the United States, as the approach that can enable the evaluation and application of findings based on research to specific patient populations. It may be worthwhile for the nursing communities in Asian countries to examine the relevance of this approach to research in their countries, and incorporate research on this area into doctoral programs.

Quality criteria, standards and indicators. All authors stated the need for the establishment of criteria to enable external evaluation and/or accreditation of nursing doctoral programs, several indicating that their institutions did have criteria but that they were not specific to nursing. In such instances it should be possible for the nursing faculty to

adapt and translate the existing criteria to meet their needs. Further, we call attention to the INDEN[2] quality indicators which were developed with the engagement of numerous members of that organization, representing many of its international members. The goal was to assure that the document that emerged is accessible and applicable to doctoral programs using different models and orientations across the world (www.nursing.jhu.edu/inden). Faculty also need to clarify for themselves the areas that require ongoing student and program assessments such as student performance in coursework, activities that need to be done annually, such as by advisors and program chairs reviewing the students' overall progress, and activities that can be performed every 5-10 years, with the engagement of external visitors.

Is knowledge culturally specific? Several papers have raised the interesting issue by suggesting their belief that knowledge may be culturally specific, and that research produced elsewhere is not applicable to their country. This notion has surfaced in the recent past and a few words on the subject may be indicated. A few examples will clarify the scope of the problem. This author's research program has revolved around ethics and ethical decision making in nursing and health care. The Code of Ethics of the American Nurses Association[3] is used to frame policies and practices related to nursing care in the U.S. and is therefore the central document in any inquiries and research studies related to ethics. The Code reflects the ethos and values in the U.S. Autonomy and respect for persons are central concepts in the Code. Thus, any research investigating treatment choices and decisions regarding same has to contend with patient autonomy and to ascertain that the individual's autonomy is not violated, and each person is given due respect. Any research of this nature that used the ANA Code of Ethics as its foundation would not be useful in cultures where the value and cultural norms are on the collective, the community, the family, where the family might make collective decisions or where the most senior person (elder) might be accorded the task of deciding. In an alternative example, when investigating the effects and interactions of multiple medications that are administered to patients with AIDS, there would be much that could be found of relevance regardless of the cultural context in which a study may have been conducted. In fact, it is this very generalizability feature of some types of research-based knowledge that has enabled AIDS research and treatment protocols found to be effective in one country to be applied in many other countries, saving numerous lives. Thus, the answer to the question posed in this section is "It depends…," and is not a categorical yes or no.

A few examples are also relevant from a recent research study where a team of investigators addressed questions related to environments for scholarship and use of journal impact factors[4]. Two of the five countries in that study are the same as the two of the four represented by the papers in this issue. Five experienced scholars from each of the five countries (Brazil, Taiwan, Thailand, United Kingdom and the U.S.) participated. The questions were relevant to knowledge development and factors that influenced it, and what the effects were of any national or institutional policies requiring or not requiring that faculties publish in journals with high impact factors. Some respondents held a negative view of publishing in international journals in pursuit of high IF journals in which to publish, expressing the view that their country would not benefit from such publications, since those journals were not interested in problems in their countries, and further, that this meant that the scholars who published in such journals were studying problems of interest to the journals rather than to their own countries. However, others stated that: "health problems are global; research should be generalizeable and needs to be shared globally; quality assessments need to be based on the usefulness of research in meeting national needs…"[4] (p. 348). Those who did not

have international journals, and did not have many colleagues who published in high IF journals tended to state that their current research, published locally, was responsive to health needs of their country, and that their research framed the practical applications of research for health problems of their country; further, that their research involved replications of work done elsewhere for their relevance to local needs[4] (p. 347). Other respondents answered in more nuanced ways, rejected dichotomizing their answers. For example: "The aim of scholars should be to publish in high quality journals, that research can have global implications even if done locally"[4] (p. 349). As well: "Well-known researchers are able to achieve a balance between topics that are publishable in high IF journals and at the same time, be useful to local populations"[4] (p. 349).

National and International Networks

A number of authors indicated the need for national networks of doctoral educators that can be used for sharing and mutual learning. This is indeed necessary and can benefit all involved. While a certain degree of competition among schools is natural, it is important to transcend those for the greater good of the country to be able to engage in coordination with peers in other institutions. The countries represented are not large, and it should be possible for leadership level individuals to travel to a central location for networking purposes, once or twice each year. Having national networks in place is significant from an important programmatic standpoint; there is a tendency on the part of institutions to copy one another's approaches or subject areas offered. Whereas through coordination, it would be possible to identify significant areas of national priority and different schools can agree to offer different substantive areas of study, complementing one another; this would make use of resources more efficient and effective for the country.

Forums for international alliances and collaboration have become an important arena for learning and discussion for all levels of students, including those at the doctoral level. Collaborative relationships require time and energy and other resources to develop and maintain across borders; at the PhD level the focus should be on research, both for faculty and students. Yet it is critically important to decide in advance the focus of the experience being sought, what benefits will accrue to those who participate and how it fits into the student's overall plan of study. All authors have indicated membership in EAFONS; this group is an offshoot of the International Network for Doctoral Education in Nursing (INDEN). Each year members from participating doctoral nursing programs from the East Asian region convene on a rotating basis to hear student and faculty presentations of their research and discuss substantive topics that may arise from the presentations. Some of the countries represented in the articles have a substantial number of nursing faculty and doctoral student members in INDEN, this is especially the case for Thailand, and the student members have taken advantage of the international programming organized by its board of directors.

Exposure to international research and educational experiences have great value and can take many forms, though it is difficult to isolate the two from one another since they overlap in significant ways. In the form of **educational strategies,** short-term and long-term visits could be made to work, depending on goals to be achieved and available resources; whereas **research** experiences with faculty from the host institution expose students to different ways of approaching research, types of health care issues of interest in the host country, and establishes valuable collaborative relationships across the institutions and participating individuals. Specific examples of areas that require attention in cross-cultural research are: instrument development and/or translation, designs that may be unique to a subject area in the host country, and testing and comparing results of hypothesis testing in several countries[5].

Short-term visits, from a few weeks to a few months, or longer term visits from 6 months to a year, can serve both educational and research purposes. Such visits can be arranged to a doctoral program in another country, where the international student is mentored by an experienced investigator, participating on his/her research team. On the education side, such visits afford students the opportunity to learn about the health care system of the host country, the health problems and about the areas of research being pursued as a result of the health issues. The students need to have exposure to fellow students to interact with them so they can benefit mutually from each other's experiences as doctoral students, compare each others' doctoral programs, and work together even if for a short time. These types of relationships expand the students' horizons, and set the stage for future collaboration.

As well, INDEN has been offering periodic seminars for its doctoral student members [and others as well], usually in connection with its biennial conferences which are held prior to or following major international conferences, such as that of the International Council of Nurses or Sigma Theta Tau International. It has also organized workshops and seminars in collaboration with doctoral programs in various parts of the world, which have been most productive and highly valued by students who have taken part. Thus, doctoral programs interested in collaborating with INDEN on such ventures should contact the president for dialogue on these possibilities. The contact information can be located from the INDEN website [www.nursing.jhu.edu/inden]. The topics need to be around specific scientific subjects of general interest or specific methodologic issues.

We provide examples of additional types of research activities and learning that can take place during either short-term or long-term international placements: (a) testing research hypotheses or conceptual models in different settings can yield strong research with external validity, whereby results can apply to more than one setting and larger populations; this type of strategy needs to be coordinated with faculty involvement and guidance; (b) how design issues are handled in different countries, type of design chosen and reasons, sample selection, choice of instruments or instrument development or translation from another language, and many more methodologic issues could be highly valuable learning experiences; (c) opportunities for collaborative publications can open up, and need to be welcomed. Journal editors are looking for international scholars who might be added to their editorial boards or manuscript review panels, as well as individuals in similar areas of interest who they might collaborate with. Thus, student exchanges can lead to the opening of multiple opportunities for faculty collaboration and institutional partnerships[5].

Program Evaluation Matters

A number of authors explicitly mentioned the need for accreditation by external bodies or self-examination motivated by a desire to improve quality. In some countries such as the United States there is no formal accreditation of PhD programs, beyond examination that occurs via institutional accreditation that takes place every 10 years by regional accrediting bodies, and is not specific to disciplines. Specific evaluation of PhD programs is left to the institution and its "graduate school," the entity that sets policies and provides ongoing monitoring, and organizes periodic intensive reviews of programs every 7-10 years whereby the program being reviewed prepares a self-study based on established criteria, with the review taking place by visitors from peer institutions. Note that graduate schools use established criteria that apply to all disciplines under their aegis and are not discipline-specific.

On the other hand, in cases where an institution offers a professional degree such as the DNP (Doctor of Nursing Practice) in the US, these are accredited by the usual

accrediting bodies that also review and monitor undergraduate and master's programs (see Note 2).

There is likely to be great variation in this regard across countries. In any event, there is urgency in having an organized system for engaging in program review, and self-review/examination, is an indispensable part of this process.

Examples of self-examination processes. We invite the countries in this report to engage in self-examination, renewal and innovation, and assess if indeed they need to engage in reform. In making such a recommendation we recognize that there is no single solution or any measure that works for all countries, or indeed, for all institutions in the same country. Thus, we posit two different processes that could yield innovations and ideas for reform that would fit the ethos of a country and its traditions. They are both derived from the recent history of doctoral education in the U.S.

In the case of the U.S., graduate/doctoral education dates to 1861 when Johns Hopkins University began offering doctoral education based on the system in Germany, and it took off after World War II, when returning service members from the war entered universities in large numbers, funded by the Federal Government. Major expansion of facilities accompanied increased student enrollment. In nursing, the first two doctoral programs were offered at Teachers College, Columbia University and New York University in the early 1930s. Since those beginnings, the doctorates – both generally and those in nursing – have expanded dramatically, and have evolved as the result of societal and disciplinary changes. The lengthy periods since those beginnings make it possible to take the long view and observe and comment on the stages that institutions and programs have gone through. However, given the short time that has elapsed since the establishment of doctoral programs in the countries being considered here, the phases that can be observed are initial establishment and growth, and the second phase, which is present in varying degrees, is expansion, to some extent linked with research funding, and funding for students' fees and their research (through either faculty's research or specifically targeted for students).

From the papers it can be noted that expansion was more dramatic in Japan than in other countries. While this may meet the demands of students who wish to enroll, and that of the country, sudden expansion requires credentialed and experienced faculty members to teach in those programs; other issues can be exacerbated, by unplanned, rapid expansion, such as needs for research funding, support for students, and space and facilities resources.

Of the four countries, Thailand has maintained a relatively stable size, although the need for experienced faculty members to provide mentorship was noted. (It is possible that Thai schools may have increased student admission in the existing programs – data are not clear on this issue). The nursing community has been successful in securing funding, or enabling avenues for existing funding to open for nursing, to support faculty and student research, and student tuition within the country, or support for international study for an academic year. This is a major commitment of the country to global exposure, while many other countries feel constrained by resources in sending students overseas.

Regardless of phase of development it behooves those who manage and lead programs to take stock from time to time and examine all program elements, and do these with the engagement of all stakeholders in the doctoral education enterprise.

We briefly describe two recent national efforts that were used to good effect in the U.S. Both projects are interdisciplinary in nature and not specific to nursing.

Re-envisioning the PhD Project

Over the course of two decades various national groups and studies by individual investigators raised questions about the validity of the approach to the PhD within research

universities. There have been criticisms across these reports that addressed various areas of the PhD. These included: overspecialization during PhD study, disconnects that existed between scholarly preparation and expertise, and the graduates' mobility or lack of interest in applying their expertise to societal problems, changes in the marketplace for PhD graduates, lack of attention to the pedagogy of teaching, among others[6].

Despite the collective sense of dissatisfaction and the conviction that existing methods and traditions in research universities needed re-examination from time to time, a national forum for dialogue was missing. Thus was born the Re-envisioning the PhD project under the leadership of educators at the University of Washington and the Pew Charitable Trusts[6]. The project brought together multiple constituencies and stakeholders to re-envision the PhD to meet the demands of a Twenty-First Century society.

Extensive interviews and focus groups resulted in a series of recommendations, following which a conference was held for representatives of all relevant groups to convene to discuss the issues of concern to them. Multiple resources were developed to continue the dialogue along with publications and websites to enable ongoing dialogue, both for US and international participants. Ketefian and McKenna[7] have invited Woodford and Nyquist, who directed this project from the University of Washington campus, to contribute an essay to their volume on international doctoral education, detailing the specifics, and giving an example on nursing engagement from their own institution[6].

The Formation of Scholars Project

This project, initiated and led by the *Carnegie Foundation for the Advancement of Teaching,* was motivated by similar reports and concerns as the re-envisioning project, but differed in the approach taken[8]. They took a disciplinary approach, and invited departments from six disciplines from all doctorate granting institutions. After an initial contact, formal application materials were sent, that required departments to respond to five questions. The final departments were selected by project staff on the basis of selection criteria established by staff. The disciplines chosen to participate were chemistry, education, engineering, history, mathematics, and neuroscience. The number of departments selected per discipline ranged from 11 to 19, and were selected on the basis of departments rather than overall university. The focus of the project was on self-examination by constituencies of the departments, involving identification of issues to be addressed, planning, and developing ways the plan is to be implemented and implementation. It was a five year project. Reports and testimonials provided evidence that the project resulted in self renewal for participants and departments, and was a most positive experience. It was funded by both the Carnegie Foundation and several additional foundations. Participating departments were partially funded through these avenues, along with some support from their home institutions[8].

Concluding Remarks

Among the noteworthy qualities of doctoral education are that scientific inquiry be the approach during the educational process, and further, that faculty conduct research to expand the science[8]. These features were true at the beginnings of doctoral education two centuries ago, and they continue to be so today.

Regardless of the phase of development of doctoral education in a country, conducting self-reviews/assessments are appropriate; these can be ongoing and/or be of broader magnitude, occurring every 5-10 years, it is instructive to summarize the essential message of the Carnegie Foundation- sponsored study[8]: The educational process should be conducted within an intellectual community, and the faculty should aim to provide experiences for students that gradually shape and form students as scholars; these will enable students to become-form into-*stewards of the discipline;*

having acquired the intellectual and ethical values of their discipline, they will be ready to succeed their mentors in discharging the responsibilities attendant to stewardship, and lead the discipline[8] as the next generation.

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[Note: Readers are referred to the following website that contains various resources related to the Re-envisioning the PhD project: http://depts.washington.edu/envision/resources/studies.html]

Notes

Note 1: Those interested in learning more on the marketplace for doctoral graduates are referred to the essay by Redman and Chenoweth, referenced in this paper. We paraphrase a few thoughts from their essay: These authors state that graduates of research-focused doctoral programs are providing new types of services to advance research/scholarship, leadership, and are playing important roles in social and health care policy formation. In addition, these graduates are exploiting entrepreneurial avenues opening up, and are entering hitherto new areas for nurses.

These include private businesses offering consultancies and services in leadership, management, quality assurance, and various areas of personnel training. The authors claim that given the limited number of qualified nurses, upon graduation the opportunities open to them in the marketplace will be extensive (p. 91).

Comments from the Guest Editor: Given the trends internationally on the production of graduates, nursing needs to be mindful of quality concerns, and reduce its focus on quantity and numbers. Otherwise we might see the marketplace flooded with graduates with less than stellar quality, which can devalue the hard-earned reputation nursing has built for trust and excellence. As well, faculty need to make students and graduates aware of the new opportunities open to them and help them acquire the qualities that may be required by the new businesses. Yet, as we have seen, in a number of the countries considered here, many students are on leave from old positions, and are expected to return to them – a situation that does not encourage openness to new and innovative opportunities.

Note 1 references used by Redman and Chenoweth in the above paraphrased section:

Atwell RH. Doctoral education must match the nation's needs and realities of the marketplace. The Chronicle of Higher Education. 1996:43(14);B4-B6.

Horn M. A practical turn in PhDs. U.S. News and World Report. 1999:126(12)114.

Williams BS. Opportunities in nursing. The Black Collegian. 1996:26(2),48-52.

Note 2: Doctor of Nursing Practice: "On October 25, 2004, the member schools affiliated with the American Association of Colleges of Nursing (AACN) voted to endorse the Position Statement on the Practice Doctorate in Nursing. This decision called for moving the current level of preparation necessary for advanced nursing practice from the master's degree to the doctorate-level by the year 2015. This endorsement was preceded by almost three years of research and consensus-building by an AACN task force charged with examining the need for the practice doctorate with a variety of stakeholder groups.

"The DNP is designed for nurses seeking a terminal degree in nursing practice and offers an alternative to research-focused doctoral programs. DNP-prepared nurses are well-equipped to fully implement the science developed by nurse researchers prepared in PhD, DNSc, and other research-focused nursing doctorates." Extracted from the website of the American Association of Colleges of Nursing, www.aacn.nche.edu/media-relations/fact-sheets/dnp. retrieved on March 14, 2013.

Comments from the guest editor: Interested individual can explore, download and read the extensive materials on the DNP from the above website. A few comments: To date there has not been an evaluation study of national scope to determine whether the goals established for the DNP at the outset are being realized. Anecdotally, there are concerns on a few fronts: many schools are now meeting the current and coming faculty shortage by hiring DNP graduates or establishing DNP programs so that they can hire their own graduates; it is not clear to what extent these individuals are

prepared to assume educator roles; as well, this trend is clearly contrary to the goals of the DNP degree. Further, many institutions are now attempting to recruit new baccalaureate graduates into their DNP programs; this means that these individuals will have had only a minimal amount of practice experience; they will obtain some supervised practice experience with advanced practice nursing courses during their program of study; upon graduation this type of graduate cannot be considered to be an expert in nursing practice, although those hiring such individuals will expect expert practice performance.

AACN reports, in the above website, that in 2012 there were 184 DNP programs, with 101 additional programs in the planning stages. Readers are invited to compare this growth figure, which occurred in about a decade, to 125 PhD and other research-focused doctoral programs in place now, which developed over a period of 80 years (1932-33 to the present).