



Philippine Maritime and Nursing Education: Benchmarking With APEC Best Practices

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The Philippines is recognized as a world leader in the supply of personal services. For instance, it supplies almost every vessel that sails the seven seas with Filipino marines and marine engineers on board. In the health services sector, it likewise provides a bulk of the medical staff, e.g., doctors, nurses, medical technologists and physical therapists, in almost all hospitals in the United States, United Kingdom and Saudi Arabia.

The demand for such services is seen to increase further in the coming years. Specifically, for nursing, the total of 16,240 professional nurses deployed by the Philippines from 1998 to 2000 is expected to further rise in

view of the escalating demand for their services brought about by:

- * an increasing elderly population;
- * the growing number of older and more acutely ill hospitalized patients;
- * the expanding opportunities for nurses in settings such as home care, outpatient surgical centers, frontline primary care and others as health care moves beyond the hospital to sites throughout the community;
- * the increased recruitment of nurses by managed care firms, pharmaceutical companies and information technology companies;
- * the technological advances requiring more highly skilled nursing personnel; and
- * the high number of registered nurses' retirement projected in the next 10 to 15 years (News Releases, February 2000).

Meanwhile, with global trading continuing to grow, the maritime industry is likewise projected to thrive. Thus, more officers and deck hands will be needed. The Philippine Overseas Employment Agency (POEA) reports that in 1995, the total number of employed Filipino seafarers among BS Marine Transportation and BS Marine Engineering graduates from 118 maritime schools through-

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out the country reached 153,815. With the trend in maritime business, this number may further swell.

The above scenarios present a challenge to our educational system: if we want to gain more international respect and recognition in particular in these two fields, we should aim for higher international comparability and standards in the kind of training and education that we provide our students in these areas.

It is therefore useful to identify and present the best practices in maritime and nursing institutions in the APEC region to see where and how we stand. The benchmarking will help determine the comparative advantages and weaknesses of our local institutions, thereby informing both decision- and policymakers in the education and industry sectors. This *Policy Notes* looks into these best practices.

Best practices in APEC nursing institutions

General picture

On the whole, the APEC institutions (as differentiated from the Philippine local institutions) require a passing mark in the national examination such as the Scholastic Aptitude Test (SAT) and Hong Kong Advance Level Examination (HKALE) for interested nursing students. The number of students increases every year by at least 10 percent in APEC institutions. Enrollment varies from 153 to 2528 students. Hong Kong Polytechnic University, for one, maintains a maximum of 50 students in its bachelors program and 120 in its diploma program. Seoul

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and Japan have high foreign student populations albeit the fact that they are only second to the United States (US) whose classrooms are highly multicultural. The faculty roster shows that in Australia, US, Singapore and Hong Kong, the composition of the teaching force is likewise multiracial. Full-time teachers in the APEC institutions have teaching experiences ranging from four to 10 years and with either a masters degree or PhD.

Curriculum

Most of the APEC institutions require three years of study for the bachelors degree, with total units varying from 72 to 180. Some institutions, such as those in Korea and the US, require general education and elective courses. Hong Kong requires four years of study composed of all nursing courses without general education. Hawaii, on the other hand, requires one year of general education and three years of nursing proper. Recently, Hawaii has introduced some interesting new courses in its curriculum like Essential Oils and Aromatherapy, Meditation, Healing Touch, Yoga for Health and Wellness, Consumer Health Online, Women and Health, Pain Management, Nursing in the Multicultural Milieu, Nursing Care for HIV-infected Client, Chronic Illness in Children and Adolescents, and Management for Health Professionals. In both its bachelor science and certificate programs, self-directed learning is essential to their skills-based curriculum.

In the US, majority of nursing practitioners have completed 18 months of nursing programs such as Public Health Nurse Certification before they are licensed by the State Board of Registered Nurses. After said training, they are easily absorbed into nursing work. This practice is widely accepted because aside from satisfying the high demand of society for nurses, it also provides employment. The downside, however, is that it limits the nurses' education into skills training under a skills-based curriculum.

Teaching approaches and facilities

In Taiwan, Japan and Korea, the medium of instruction is in the native language. Meanwhile, in the US, Aus-

tralia, Hong Kong and Singapore, the medium of instruction is English just like in the Philippines. Problem-based learning is also widely practiced in these countries. The preference therefore is for case studies, field work and research, and very little use of lectures, lecture-discussion, inquiry and experimental approaches in class is made. In Hong Kong, simulation facilities are available for student use in the first semester of study. Rubber mannequins, virtual reality and computer simulations are found in student laboratories. Selected readings, unpublished research, worksheets and pertinent problems are used as teaching materials. Reading assignments are numerous and self-instruction and self-directed learning are encouraged throughout the semester. Computer-assisted instruction is optimized in Singapore and Hong Kong. Some classes are given through the internal website that the students can easily access to since each one gets a computer through student loan.

Moreover, APEC institutions' nursing schools use the university hospital for laboratory and clinical practice. In Seoul, Korea, aside from the usual school facilities, the nursing schools also have experimental farms and veterinary hospitals. Hawaii, meanwhile, maintains a learning laboratory, simulated hospital, clinic, student lounge, online registration, tennis court and student services office.

Faculty and faculty development

All of the administrators surveyed have PhDs in Nursing and were mostly educated abroad. All are teaching more than one nursing course, are involved in institutional research projects and have administrative experience locally and abroad. Teachers in the APEC institutions are evaluated yearly through student feedback and once every three years at the macro level by the department. In Singapore, external evaluators and representatives of the Ministry of Education are involved in school evaluation. All of the respondent institutions in the Asia-Pacific have been accredited by ISO 2002 standards.

To regularly update the faculty on latest trends and developments, the APEC institutions send faculty mem-

bers to local and international conferences related to nursing as organized by the government and international nursing associations. As these institutions are government-funded, they also get grants for research projects. Institutional funding is linked to research output which is ultimately used by the government and local industries to improve the state of nursing in the country. Research grants go to faculty members who undertake research and to the nursing school. Hong Kong, in particular, publishes its faculty's research outputs, together with other health professors in other Asian countries, in the *Asian Journal of Nursing*, a publication printed in English.

Funding and administration

For many APEC institutions, 43 percent of the institution funds come from state general funds, 20 percent from federal funds, 15 percent from tuition, 2 percent from private grants and 20 percent from other sources. Besides government subsidy, various scholarships are awarded through private benefactors, alumni associations, organizations affiliated with the institution and some internal scholarships such as academic, faculty and department scholarships. Hospitals and special nursing organizations also offer scholarship to students.

Among the APEC institutions, Nanyang Polytechnic is affiliated with local medical associations and collaborates with the University of Sydney. The Australian Catholic University has collaborative arrangements with the University of Incarnate Word College in Texas, USA, West Virginia University in West Virginia, USA, Lund University in Sweden, and Georgian College and State University, again in the US. Our own Silliman University in Dumaguete City, Negros Oriental is affiliated with the Johns Hopkins International Education for Reproductive Health while the UP College of Nursing is designated as a WHO Collaborating Center for Nursing Development in Primary Care.

Employment

As a result of all these positive practices, the Hong Kong Polytechnic reports that 100 percent of its graduates are employed within their areas of specialization, excelling in innovative projects, research and computer

skills. In Seoul, 55.7 percent of the nursing graduates are working within their areas of specialization, 24.3 percent are not and 20 percent are unemployed. In Australia, 74.20 percent of its graduates have full-time employment while 10.40 percent are taking higher studies on a full-time basis.

Comparative advantages of nursing education in the Philippines

How do we compare with the above practices?

The four-year requirement imposed by our local institutions for students to earn a bachelor's degree in nursing is certainly an advantage. In order to produce safe, capable and productive practitioners, it is the responsibility of the nursing profession to require a BS Nursing as an entry level of education for a professional nurse. This four-year curriculum for BS Nursing is a combination of competency-based and community-oriented courses. This kind of education offers much more than what a skills-based curriculum does. It includes a two-year general education program grounded in liberal arts that strengthens the character and values of a person as a caregiver, thereby giving an advantage over a purely skilled worker. Moreover, the medium of instruction in all of the local institutions—English—not only prepares students for licensure examinations, both nationally and internationally, but also gives them access to the ever-growing literature in health sciences. The students' communication skills, competence and confidence in the use of the English language certainly contribute to effective health care in any setting. As a result of the person's educational formation, the nursing graduate acquires positive qualities such as the capability to participate in research in nursing and other health sciences, flexibility in and openness to the use of new teaching ap-

proaches, and "people skills" gained through active involvement in extension work that reaches out to various sectors.

Best practices in APEC maritime institutions

General picture

Like in the nursing field, the APEC institutions also require a passing mark in the national examination such as the Scholastic Aptitude Test in the US and Advance Level Examination in Hong Kong before interested students may enroll in maritime education. However, except for Australia which has its AMSA Certificate of Competency, the APEC institutions surveyed do not require maritime students to take any licensure examination to be able to practise their profession. A big contrast between APEC and local institutions is seen in the number of enrollees. Local institutions have students numbering from 767 to 4572 whereas APEC institutions accommodate only up to 510 students.

Curriculum

In terms of curriculum, courses other than BS Marine Transportation and BS Marine Engineering are offered in the APEC institutions. These include BS in International Shipping, Naval Architecture, Ocean Engineering, Maritime Science and Nautical Science. The Polytechnics in Singapore do not grant a bachelors degree. Instead, they offer a three-year Diploma in Shipbuilding and Offshore Engineering as well as in Marine Engineering. To earn an Advanced Diploma, one has to take an additional year of studies.

As a result of the person's educational formation (a BS in Nursing), the nursing graduate in the Philippines acquires positive qualities such as the capability to participate in research in nursing and other health sciences, flexibility in and openness to the use of new teaching approaches, and "people skills" gained through active involvement in extension work that reaches out to various sectors.

At the Australian Maritime College, meanwhile, aside from MBA and PhD in Marine Management, several majors are offered under its bachelor's degree program. These are: BS Engineering in Naval Architecture, Ocean, Maritime and Offshore System; Shipping

Technology and Management; Marine Engineering Technology; Management in Maritime Transportation; and Marine Transportation. The Advanced Diploma course in Maritime Transportation is a two-year course granted to those who have a three-year Diploma in either Maritime Transportation, Nautical Studies or Marine Engineering. The number of units required for major courses range from 78 to 150 for bachelor's degrees. Eighteen to 34 units of core courses are required. All require a three-unit computer course and additional units for other courses such as accounting, economics, law, organization and management, and office communication and interviews. In terms of engineering ethics and humanities, meanwhile, only the California Maritime Academy offers units on them.

Teaching approaches and facilities

In China, Malaysia, Taiwan, Japan and Korea, the native language is used as the medium of instruction. Australia, the US, Singapore, Hong Kong and the Philippines have English as the medium of instruction. Students are comfortable with technology since the institutions provide each student with a computer through student loan. There are also numerous computer stations around the campuses.

Students are required to do apprenticeship during summer breaks or to have 14 weeks of "industrial attachment" with local or overseas shipping industries. Hong Kong Polytechnic sends its students either to mainland China or to the United Kingdom.

Faculty and faculty development

APEC institutions have between 19 and 70 full-time faculty members who *all* specialize in at least one area of maritime studies. There are PhD degree holders in Shipping Economy, Maritime Law and Port Economy. Most of them have obtained MA or MS degrees in Maritime Law, Maritime Electronics Engineering, Maritime Education and Training, and Shipping Management. After their studies in their respective institutions, they are sent abroad for further studies mostly in the UK, Norway and Germany. The teachers who have bachelor's degrees are

working towards their MAs in maritime studies. No one is allowed to teach any course that is not his specialization.

As these APEC institutions are partially government-funded, they are expected to produce as much research as they can every year. Institutional funding is linked to research output which is ultimately used by the government and local industries to improve the state of shipping and maritime in their respective country. Faculty members are very much involved in research on topics such as instrumentation of the diesel engine, ship/boat safety, intelligent pipe measuring system and causes of failure of ship structures. Only some institutions, however, have institutional publications since the faculty prefer to publish in international journals.

Funding and administration

All of the nine APEC maritime institutions surveyed are partially government-funded (public). In Singapore, students are required to pay only 10 percent of their tuition. In the Australian Institution, 65 percent of the institution funds come from government subsidy, 15 percent from students' tuition and 20 percent from commercial industries. Eighty five percent of the budget allocation goes to salaries and professional fees, 10 percent to equipment and upgrading of facilities, and the rest to teaching materials.

Between 10-30 scholarship grants, besides government subsidy, are awarded in the different APEC institutions every year. In the US, several scholarship grants from private benefactors associated with the academy are given.

Employment

Graduates of APEC maritime institutions easily get employed as evident in the statistics regarding their work deployment. Between 75 and 98 percent of said graduates are employed within their areas of specialization. The number one area for their employment is shipyard work, followed by work in the military.

It is undeniable that our immediate concern is internal efficiency. The Commission on Higher Education (CHED) is the best government agency to provide the guidelines and mechanisms for the improvement of our nursing and maritime institutions. Once internal efficiency is achieved, our higher education institutions can aim for a higher level of accreditation and recognition by international accrediting agencies.

Comparative advantages of maritime education in the Philippines

The 3-1 bachelor's degree program of our local institutions is certainly an advantage. It consists of general education, specialization courses and one-year apprenticeship. *General education* strengthens character and values necessary for students who serve locally and internationally. The emphasis on discipline, hard work and team work are essential characteristics of servicemen in the industry. *Specialization courses* equip students with the necessary skills required in the field while the *apprenticeship program* provides the students with first-hand experience in the different departments of the shipping industry. English as the medium of instruction enables them to communicate and participate in discourse and exchange of ideas. It also gives them access to the growing literature in the industry.

However, it is sad to note that most of the present and foreseen needs of the maritime industry are addressed by courses beyond those being offered by our local institutions. For instance, the more developed regional economies like Hong Kong, Singapore, Australia and the US have already transformed what they used to offer as maritime courses into *offshore and sea-based courses*. One example is Naval Architecture, which is basically oriented towards the construction and production of high-technology-driven naval vessels. Our courses, on the other hand, remain inclined to produce the manpower needed to man the operations of these naval vessels.

Conclusion

Despite the presence of state-of-the-art facilities and use of high-tech equipment in nursing and maritime education in the APEC institutions, our local institutions prove to have certain comparative advantages. However, it is undeniable that our immediate concern is internal efficiency. The Commission on Higher Education (CHED) is the best government agency to provide the guidelines and mechanisms for the improvement of our nursing and maritime institutions. Once internal efficiency is achieved, our higher education institutions can aim for a higher level of accreditation and recognition by international accrediting agencies.

A study on the competitive advantage of our maritime graduates can also be done with those from other developing regional economies such as Malaysia, Vietnam, Indonesia, and Thailand which compete with the Philippines in supplying the lower-end manpower needs of the industry. Likewise, a study on the competitive advantage of our nursing graduates can be done with those from the US, Japan, Korea and Thailand which similarly supply care providers and nurses.

Finally, our local accrediting bodies should aim at regional accreditation and certification to pave the way for local professional associations to enter into mutual recognition agreements with the other economies' institutions within the APEC region. 📄

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